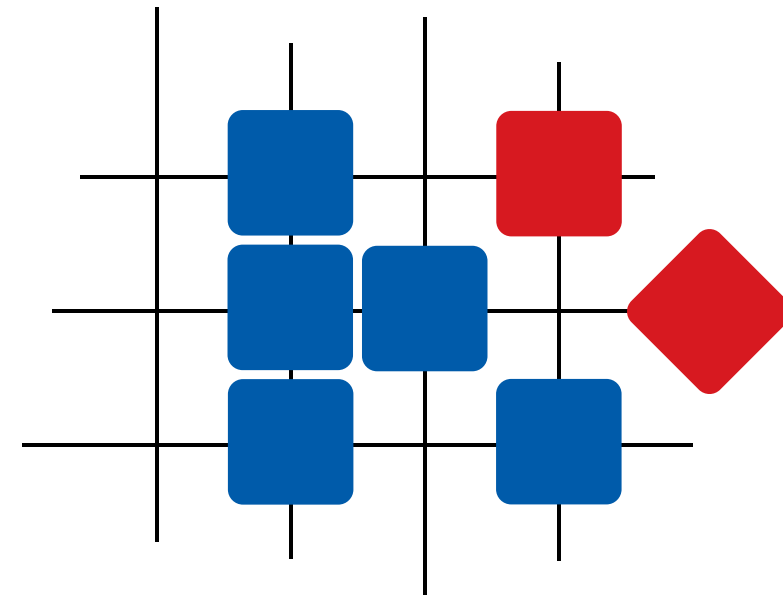




2024 ANNUAL ACTIVITY REPORT

ZAGREB, OCTOBER 2025





Pursuant to the Electronic Communications Act, the Croatian Regulatory Agency for Network Industries (HAKOM), hereby submits to the Croatian Parliament and the Government of the Republic of Croatia its Annual Activity Report for the year 2024. The financial statements and final statement are integral parts of this Report.

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A WORD FROM THE COUNCIL



Council of HAKOM: Marko Jukić, Mislav Hebel, Tonko Obuljen, Nikola Popović, Ante Milas

In 2024, Croatia's electronic communications market in Croatia was marked by significant infrastructure developments, in particular as regards investments in very high capacity networks and 5G networks. Almost half of rural households now has access to gigabit networks and 5G coverage has reached 94 percent of the population. With a significant increase in the number of optical fibre connections (35 percent), the revenues of the electronic communications sector rose 7.2 percent to stand at EUR 1.88bn. The postal sector saw a further decline in traditional services and strong growth in parcel delivery (22 percent), with total revenues rising to EUR 364m. Railway traffic registered a slight increase in passenger numbers, but also challenges related to the modernisation of the network. After the World Radiocommunication Conference, activities in the field of radiofrequency spectrum management focused on the implementation of results, and preparations started for the next conference to be held in 2027.

HAKOM's regulatory activities were oriented towards the improvement of market efficiency and the protection of consumers, especially vulnerable groups, with a strong focus on digital accessibility and service quality. Particularly important was the decision on setting new wholesale prices for internet access service providers and the decision on designating the universal service operator, which includes raising the minimum internet access speed from 7 to 14 Mbit/s. As regards the postal area, analyses were conducted on the deviation of the key pa-

rameters of the price cap for a basket of services and the postal network access and the Ordinance on the provision of universal service was amended accordingly. Also analysed were the railway infrastructure manager's Network Statement and the system of freight transport quality indicators. In the regulatory decision-making process, 8 regulatory impact assessments (RIA) were conducted in accordance with the methodology adopted in 2023 following the participation in a project financed by EU funds. HAKOM also carried out preparatory activities to take over the role of the Digital Service Coordinator.

The previous year was marked by the chairmanship of BEREC, a European body composed of independent national regulatory authorities for electronic communications, but HAKOM also actively participated in many other international activities, often in cooperation with other institutions from the Republic of Croatia. We are happy to say that we fulfilled the tasks of the Annual Work Programme and that we successfully completed the year in financial terms. We are grateful to all employees and the executive director of HAKOM for their contribution.

Council of HAKOM

A WORD FROM THE EXECUTIVE DIRECTOR



Miran Gosta, Executive Director

In 2024, HAKOM continued to implement activities in line with its regulatory authority, with a focus on strengthening consumer protection and ensuring market conditions and the functionality of the infrastructure for network activities. Special attention was devoted to operational efficiency and a systematic approach to addressing challenges within HAKOM's overall scope of work.

In the area of consumer protection, priority activities included resolving disputes between users and operators and informing users about their rights. The year 2024 saw the resolution of 715 disputes in electronic communications, 305 in postal services and 8 in railway traffic. Despite a slight increase in the number of disputes in electronic communications, the quality of operators' activities improved to some extent. All planned educational activities were carried out in full, including cooperation with consumer associations, educational content for children and young people and the further development of digital tools for users. Particularly important were activities related to increasing the accessibility of services, aimed at addressing the challenges faced by persons with disabilities.

HAKOM's regulatory and supervisory tasks were performed through inspection supervisions carried out in all sectors: 48 in electronic communications, 67 in postal services and 8 in railway traffic. In most cases, the irregularities found were remedied following administrative measures issued. In particular, the focus was on the respect of end-user rights, universal service, infrastructure maintenance and adhering to legal obligations when concluding distance contracts.

As part of radiofrequency spectrum monitoring, more than 5,000 measurements were conducted from control-measuring stations and vehicles, comprising interference analyses, electromagnetic field

levels, mobile network coverage and transmitter operation checks. Measurements were also used for frequency planning, international coordination, and the monitoring of compliance with legal and technical requirements. There was an increase in the number of cases when permitted EMF levels were exceeded and the irregularities established were eliminated on the basis of the decisions issued.

At the organizational level, HAKOM's information systems were upgraded during the year with the aim of improving digital operations and system security, including e-Agency services, and measures were implemented to strengthen cybersecurity. Quality management was successfully implemented using the CAF methodology, project management was improved and numerous trainings were carried out for employees in order for them to acquire competences required for work in rapidly changing and developing network activities. A comprehensive job audit was carried out and a modern job systematisation adopted. In doing so, HAKOM successfully responded to the challenges arising from the large scope and diversity of regulatory tasks while providing the flexibility required by rapid changes in network activities. The organisation was fully involved in the development of a constructive organisational culture, laying the foundations for continuous development and adaptation to future regulatory challenges.

Miran Gosta

SUMMARY



ELECTRONIC COMMUNICATIONS

The electronic communications market gained new momentum with deregulation, with investments in very high capacity networks (VHCNs) and the use of already deployed optical fibre connections stepped up. Investments in VHCNs, which offer gigabit speeds, reached EUR 116m, which is an increase of 22 percent from the year before. New VHCNs became accessible to about 79 percent of households and the availability of these networks to rural households also increased significantly: almost half of rural households were covered by VHCNs at the end of 2024. Investments in 5G networks continued and the 5G signal coverage was expanded. Total 5G coverage in the HR reached 94 percent and rural area coverage about 86 percent.

Total market revenues amounted to EUR 1.88bn in 2024, rising at an annual rate of 7.2 percent. As in previous years, the bulk of revenues came from the internet access service, which generated almost half of the total amount. The number of internet users with VHCN connections rose to almost 516,000, with more than two thirds of them now realised by means of the optical fibre technology. The number of optical fibre connections grew at an annual rate of 35 percent and increasingly high access speeds were contracted. At the end of 2024, almost half of end-users had access speeds exceeding 100 Mbit/s and more than one quarter of them had access speeds exceeding 300 Mbit/s. As regards other services, the pay-TV service was still on the rise, as was the mobile voice service. The only decrease was recorded, as expected, in fixed voice services.

The security of electronic communications networks and services was satisfactory throughout the year. There were 17 incidents, 2 of which were computer security incidents and 15 security incidents. Only a single incident was significant for a large number of users and was related to a software error that caused difficulties in the mobile and fixed networks for the internet access service. The quality of services is generally satisfactory and operators comply with the prescribed parameters. Net neutrality as regards the internet access service is consistently adhered to.

During the year, several implementing regulations were adopted in the area of access to and the use of the electronic communications infrastructure in order to speed up and facilitate construction. Based on the updated cost model, new wholesale prices were defined to be applied in the following three years in order for regulatory predictability to be ensured. HAKOM also set new one-off fees for the activation/deactivation of wholesale services. Other regulatory activities concerned the introduction of the Equivalence of Input model and the margin squeeze test methodology, the analyses of the wholesale dedicated capacity market and the market for wholesale trunk segments of leased lines, issuing opinions on standard offers for access to networks whose construction is co-financed by EU funds and roaming. Highlights in 2024 include the decision designating the universal service operator, which extends the categories of users entitled to socially sensitive packages, as well as raising the minimum universal internet access speed from 7 to 14 MBit/s.

POSTAL SERVICES

Driven by digitalisation and e-commerce, the postal services market is changing, continuing the trend of previous years. The number of printed matter and letters is falling as information is sent electronically in a faster, cheaper and more environmentally sustainable way, while goods bought in online stores are increasingly finding their way to customers in the form of parcels delivered to them by postal service providers. The number of parcels delivered in 2024 grew by almost 22 percent, exceeding 57 million, while the total number of services, due to a 10 percent drop in printed matter and a 6 percent drop in letters, decreased by 1 percent, standing at 254 million. Over the past year, providers increased the number of parcel lockers by 71 percent, to a total of 2,103, and the number of various pickup locations by 13 percent, to 2,419. The number of postal offices remained unchanged at 1,016.

A higher number of parcels and value-added services as well as an increase in the prices of certain services compensated for lower revenues from letters, so that the total revenues on the market amounted to EUR 364m and were 18 percent higher compared to 2023. Revenues from parcel services grew by 19 percent in 2024, with parcel delivery services, although accounting for about 22 percent of the total market, making up 55 percent of total revenues. The market shares of the Croatian Post (HP) in relation to other providers, by the number of services provided and by revenues, has remained almost unchanged: HP still provides 83 percent of all services and holds 58 percent of the revenue share. This indicates that market competition is especially strong precisely in the package segment of the market.

Universal service is losing its significance and its share in the total number of postal services continued to fall, standing at 45 percent at the end of 2024. Despite a lower number of services, revenues from universal service did not fall, but grew to EUR 126m due to an increase in the prices of certain types of services within the scope of universal service. The measurements of the quality of universal service in domestic traffic have shown that it is within the prescribed limits and at a satisfactory level.

Many of HAKOM's regulatory activities in the postal services market in 2024 dealt with universal service: the deviation of key parameters of the price cap for a basket of services was analysed, the price and quality of universal service were controlled, monitored and regulated, including the availability of postal offices, the accuracy of HP's accounting separation of revenues and expenses was verified, which included the audit of the RFS, the amount of reimbursement of the net cost of universal service provision for HP was determined, access to the postal network was analysed and the Ordinance on the provision of universal service was amended accordingly.

RAIL SERVICES

After several decades of stagnation in restoring the rail ecosystem, the modernisation of the rail services market with EU funding is now expected to ensure a smart, safe and resilient rail network, thus contributing to the green transition. Under such conditions, 18 freight undertakings and 2 passenger undertakings were registered in the market in 2024, of which HŽ Cargo (HŽC) and HŽ Putnički prijevoz (HŽPP) were incumbent undertakings. The 2,617 km long railway infrastructure, of which 1,013 km of tracks are electrified, is managed by the largest service facilities operator – HŽ Infrastruktura (HŽI). Of the total length of tracks in 2024, only 39 percent were electrified, while double-track lines are currently only 278 km long.

Despite extensive works on modernisation in 2024 and numerous traffic jams, 24.6 million or 3 percent more passengers were carried than a year earlier, with almost the same number of passenger kilometres. Freight transport, however, recorded a weaker result with 14.7 million tonnes of cargo carried, or 2.5 percent less than in 2023, but the number of tonne kilometres increased (long haul transport). The total share of cargo transported by new undertakings in total goods transported decreased by 2.2 percentage points compared to the previous period, but their share in tonne kilometres increased by 2 percent and exceeded half of all tonne kilometres achieved in the HR. In 2024, the revenues of the infrastructure manager HŽ from rail service charges grew by 12 per cent to EUR 19.8m.

The most important regulatory activities carried out in 2024 were related to the infrastructure manager's Network Statement, service facilities and related charges, the analysis of regulatory financial statements, service quality, the control of charges for the minimum access package, the system of quality indicators in freight traffic, issuing an opinion on the business plan of HŽI and a greater accessibility of train travel.

CONSUMER PROTECTION

In 2024, 715 disputes were resolved in electronic communications, about 3 percent more than a year earlier, but fewer disputes were resolved in favour of users than in 2023. In order to timely detect changes in the market, monitor the quality of operator services and solve the observed problems, the results of dispute resolution were analysed twice in the year. A significant part of the activities was related to ensuring the preconditions for better user protection, including informing and educating users, monitoring the work of operators when dealing with complaints, cooperation with the representatives of consumer complaints commissions, cooperation with consumer associations and the analysis of price lists as well as general terms and conditions and

special conditions. Particular attention was paid to the protection of the most vulnerable groups of users, in particular children and persons with disabilities. The following free applications were available to all users throughout the year: HAKOMetar, HAKOMetar plus, Cost Estimator, Privacy Calculator and Do Not Call Register.

In 2024, 262 dispute resolution requests were filed in the postal services market, 11 percent more than in the previous year. The largest number of requests concerned universal service, mainly regular parcels and registered mail. Users complained more about domestic postal traffic services, with 82 percent of all requests related to this area. According to the type of complaint, most of them were related to failure to provide a postal service, then to the damage/loss of contents and the loss of a postal item.

In 2024, 13 rail passenger complaints were received and 8 decisions were taken: 4 passenger complaints were dismissed, 1 complaint was rejected, 2 complaints were granted in full and 1 was partially granted. The bulk of complaints was related to the implementation of the EU Regulation on rail passengers' rights and obligations and to the General terms and conditions of the transportation contract (tariff for the transport of passengers in domestic traffic – Tariff 101), including ticket refunds, quality standards, timetables, assistance to persons with disabilities, frequent delays and passenger information. At the same time, HŽPP received 7,480 passenger complaints in the first instance. The most common causes of complaints were refunds and train delays, while the rest concerned staff performance, timetables, train composition, Tariff 101, the working order of cars, ISPRO sales system and cleanliness.

Attention was also paid to the most vulnerable consumer groups – the elderly, persons with disabilities and children. As part of the accessibility project, cooperation with the Faculty of Electrical Engineering and Computing of the University of Zagreb (FER) continued, involving the participation of interested associations for persons with disabilities. In 2024, the project focused on improving rail transport accessibility for persons with disabilities. Paying special attention to children as users of electronic communications services via workshops and school lectures, HAKOM, together with its partners, also marked the Safer Internet Day.

RADIOFREQUENCY SPECTRUM MANAGEMENT

Following the allocation of the spectrum for public mobile networks and 5G technology in 2023, as the spectrum amount and frequency allotment in the new licences were different from those in the previous ones, amendments to the licences were agreed in the second quarter of 2024, in cooperation with operators, with a view to a coordinated transfer of operations to new frequen-

cies. Given the complexity of the procedure, the transfer took place in several phases between May and October 2024. At the end of 2024, three national operators reported the operation of 4,865 5G base stations (including the NR 700, NR700DSS, NR2100DSS and NR3600 technology), with a total of 35,585 base stations operating at all assigned frequencies. At the beginning of 2025, Hrvatski telekom (HT) completely shut down the 3G network and started using the released radiofrequency (RF) spectrum for new technologies. The 5G technology enabled the use of the RF spectrum for own-use broadband networks, i.e. networks operating in limited geographical areas, such as industrial sites, industrial parks, university and research centres - campuses, exhibition venues/fairs as well as agricultural and forest areas. After the adjustment of regulations for such spectrum use, the first licence for the 2575-2615 MHz band was issued in early 2024.

At the end of 2024, there were 155 analogue (FM) radio networks in the HR: 11 public networks (HRT – 3 at state levels and 8 at regional levels) and 144 commercial networks. The DAB+ digital radio platform, which has been transmitting in the VHF III frequency band since 2021, saw new broadcasters entering the existing multiplex M1 with a network of 40 transmitters, thus gradually creating a need for a new multiplex. Also operating were 4 terrestrial digital television networks with national coverage and 2 networks with local coverage. All national and local free-to-air networks transmit DVB-T2, H.265/HEVC encoded signal in HD quality. Two national pay-TV multiplex networks transmit DVB-T2 signal with H.264/AVC encoding.

The procedure for the entry of the use of radio frequencies of the CroCube satellite network with the International Telecommunication Union (ITU) via the ITU's electronic system for the registration of satellite networks was carried out, with the previous selection of operating frequencies performed by the International Amateur Radio Union (IARU). Croatia's first satellite, CroCube, was successfully launched on 21 December 2024 from the US Vandenberg base as part of SpaceX Bandwagon-2 mission and was placed in the LEO orbit at an altitude of 510 km.

Spectrum control and monitoring, in addition to regular measurements, included interference protection and protection against unauthorised levels of electromagnetic fields (EMF). Daily and periodic measurements and all planned measurement campaigns were carried out successfully, while measurement campaign reports and EMF measurement reports were made public. During the year, an independent survey was conducted on key performance indicators of mobile telecommunications networks, which showed a satisfactory level of quality of all three Croatian mobile networks.

BROADBAND COMPETENCE OFFICE (BCO)

All activities planned to fulfil the main task of the BCO, which is to foster broadband access development at all levels, were implemented in 2024. They primarily included encouraging infrastructure investments using available co-financing resources, monitoring the realisation of declarations of commercial interest, stimulating demand for VHCNs and cooperation with all interested stakeholders, mainly focused on the use of funds from the Connecting Europe Facility (CEF Digital). The BCO also provided support to the Ministry of the Sea, Transport and Infrastructure and the Ministry of Justice, Administration and Digital Transformation on behalf of HAKOM as a member of the working group for the Path to the Digital Decade national policy programme. Cooperation with the European Commission (EC) and international bodies continued as well as work in international working groups. All relevant broadband-related information was regularly published on the BCO website and all user inquiries were answered.

HAKOM'S OTHER ACTIVITIES

In mid-February 2024, HAKOM was appointed as the Digital Service Coordinator pursuant to a decision of the Government of the Republic of Croatia pending the adoption of a relevant act implementing the EU Digital Services Regulation (DSA)¹. Upon the adoption of this act, this task was assumed on the basis thereof. All the tasks of the national coordinator for the DSA implementation, including coordination during the European Parliament elections and the 2024 presidential elections, were successfully carried out. Under the new cybersecurity legislative framework, HAKOM became the national competent authority in the digital infrastructure sector for entities providing public electronic communications networks and/or services. During the year, a total of 13 acts, policies or action plans were drafted with different ministries.

International cooperation was last year marked by the chairmanship of BEREC, but HAKOM experts also regularly participated in the work of other international bodies, organisations or working/expert groups. Domestic cooperation involved all relevant stakeholders, including ministries, agencies, the scientific community and associations dealing with consumer protection, the rights of persons with disabilities or child protection.

Inspectors in electronic communications, postal services or rail services performed all planned activities according to the inspection plan and carried out inspection supervisions whenever an

¹ The Act on the Implementation of the Digital Services Act was adopted on 17 April 2025.

infringement of sectoral regulations was detected or suspected. All inspection decisions were made public as well as all other decisions adopted by HAKOM.

HAKOM continued to undergo optimisation as an agile and modern organization and various activities related to its operations were completed: an organisational culture project, an organisation strategy, plans and reports, an internal quality system, project management, process management, digital services for users within the e-Agency and those related to competence development.

FINANCIAL STATEMENTS

In 2024, revenues totalled EUR 15,920,763.49 and were largely generated by fees for the radiofrequency spectrum management, fees for the performance of HAKOM's other activities in the electronic communications area and fees for the addressing and numbering space management. The increase in revenues from the previous period was due to increases in collected fees for the use of the radiofrequency spectrum for the public electronic communications network, for which invoices, issued in the second half of 2023, fell due and were collected in 2024.

In 2023, expenditures were recorded at EUR 13,867,823.96 and used for the performance of HAKOM's activities and its development. As the realised revenues exceeded expenditures, a current year revenue surplus was recorded, resulting in an increase in the revenue surplus carried forward from previous years.



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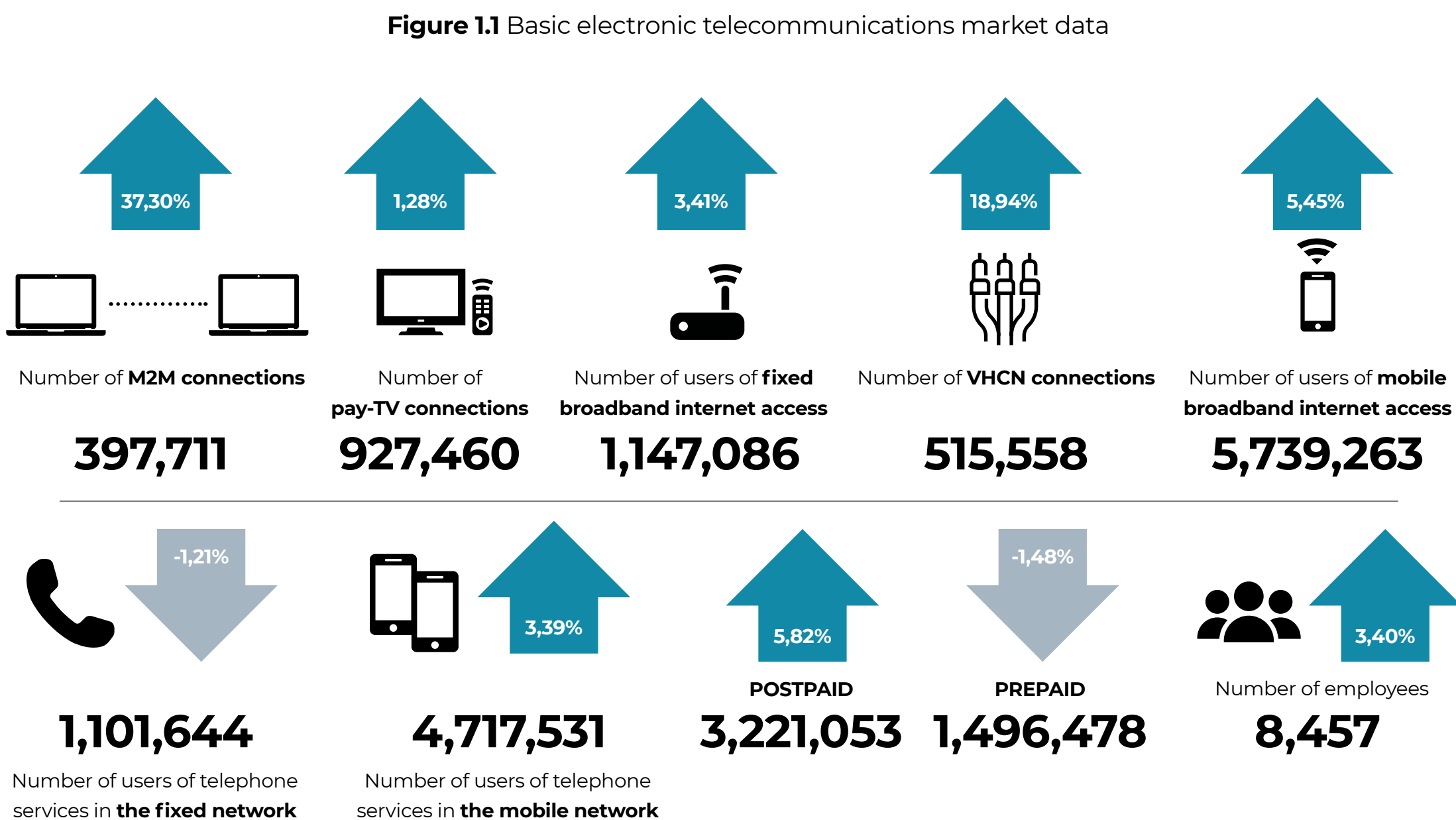
ELECTRONIC COMMUNICATIONS

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ELECTRONIC COMMUNICATIONS

The electronic communications market gained new momentum as a result of a HAKOM's decision to deregulate part of the VHCN market adopted in 2023. This spurred investments in VHCNs, which reached EUR 116m, and the utilisation of already built optical fibre connections, which increased in number by 35 percent. Regulated wholesale fees for the following three years were reduced, which should additionally stimulate the construction and use of optical fibre networks. The decision on the universal internet access service was revised last year, minimum speeds were increased and the right to universal services adjusted to the socially vulnerable group of users was as of 1 January 2025 extended to more categories.

Together with other EU Member States, Croatia continues to devote great attention to the security of networks and services and the implementation of the NIS2 Directive as well as to facilitating the construction of the electronic communication infrastructure. In 2024, new ordinances related to the area of infrastructure were adopted with a view to fostering the construction of new generation networks and meeting the targets of the EU Digital Agenda.

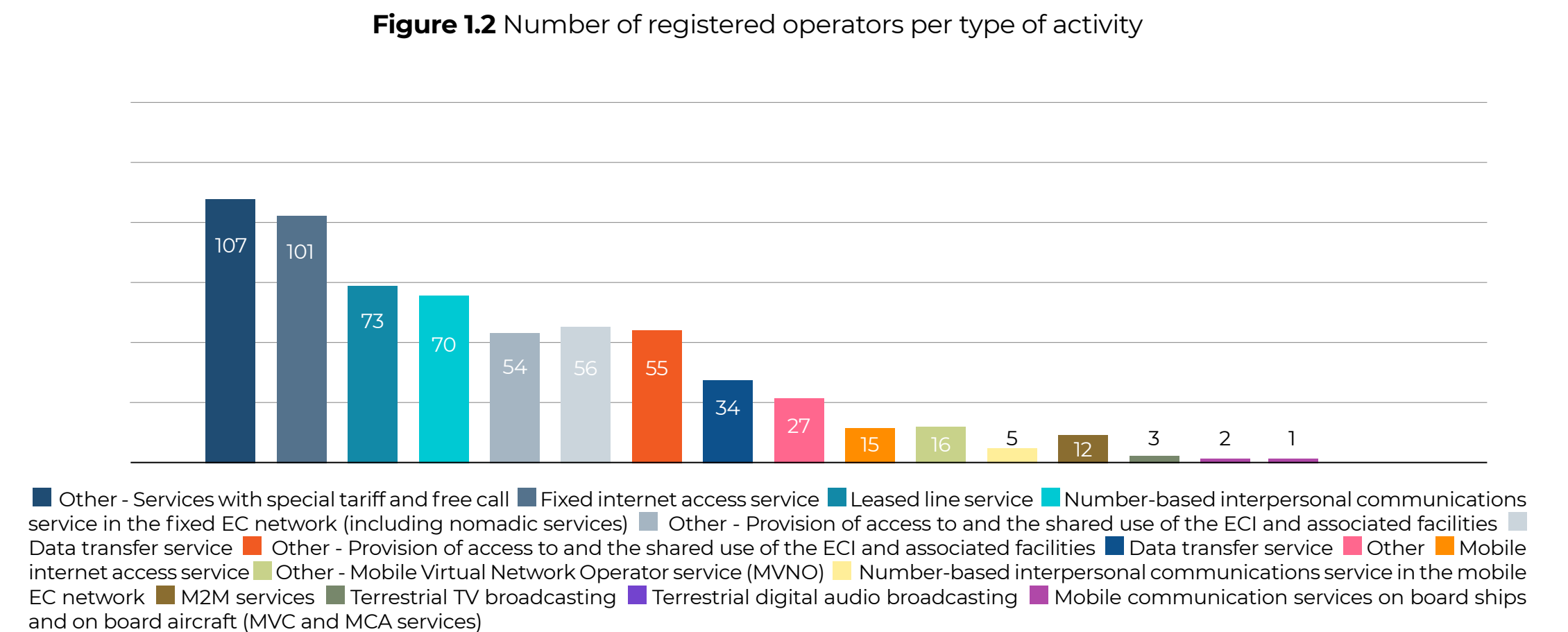


HAKOM regularly collects data and indicators on electronic communications market conditions and publishes these data on its website. In 2024, HAKOM expanded the scope of indicators published in quarterly reports. The values of some indicators in this report may deviate from previously published values due to subsequent corrections in the reports submitted by some operators.

MARKET OVERVIEW

Operators

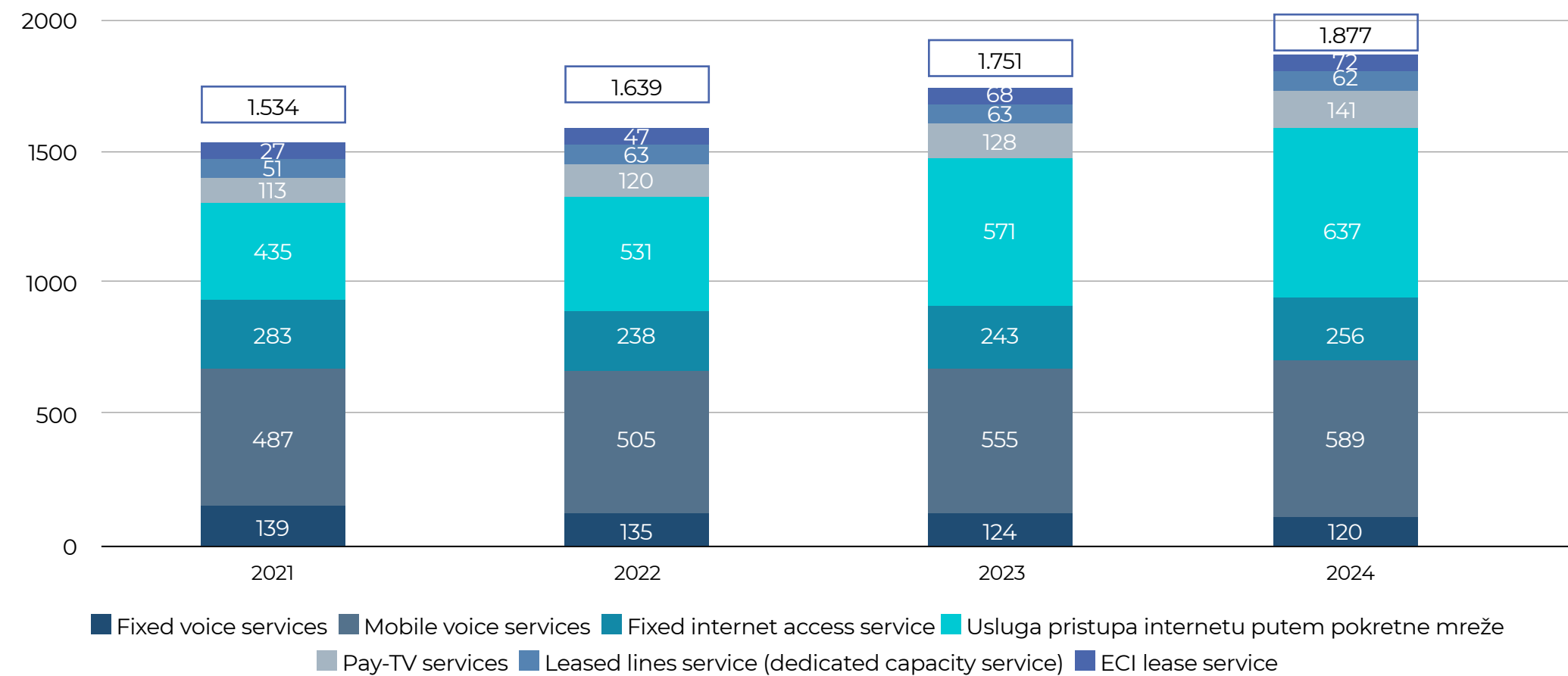
The operators of public electronic communications networks and publicly available electronic communications services must notify HAKOM of the start, changes and completion of the provision of activities of electronic communications networks and services. Requests are digitalised in the [e-Operator](#) system. In 2024, 31 new notifications of the start of the provision of services were received and 112 prior notifications of the completion of activities were submitted. The e-Operator system currently comprises 223 registered operators, providing a total of 629 electronic communications services and activities in the HR territory.



Market revenues

Total revenues in the electronic communications market reached EUR 1.88bn at the end of 2024, which is an increase of 7.2 percent from the previous year. As in previous years, the bulk of revenues came from the internet access service, accounting for 48 percent of total revenues. The highest individual rise in revenues was once again recorded by the mobile internet access service, the largest revenue driver in the electronic communications market in the last three years. In line with expectations, revenues from the fixed line telephone service continued to decline, whereas revenues from the pay-TV service continued to grow.

Figure 1.3 Total revenues of the electronic communications market (in EUR million)



If revenues from the leasing of the ECI are excluded, as these are services used for the construction of both mobile and fixed networks, revenues from services provided via mobile networks accounted for 68 percent of total revenues. HT continues to hold the largest market share in revenues from services provided via fixed networks and in revenues from services provided via mobile networks.

Figure 1.4 Operator revenue shares in the fixed network market and fixed network revenue shares in total revenues

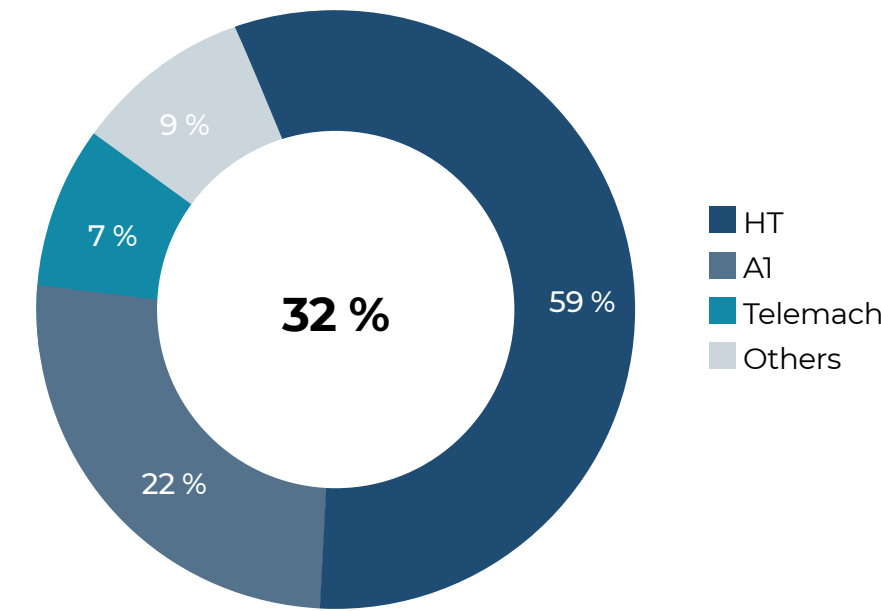
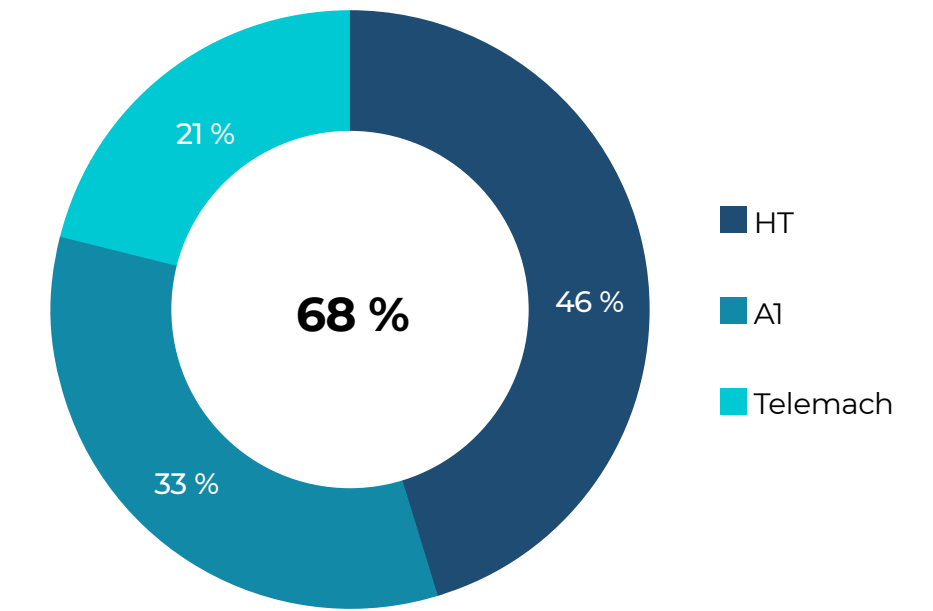


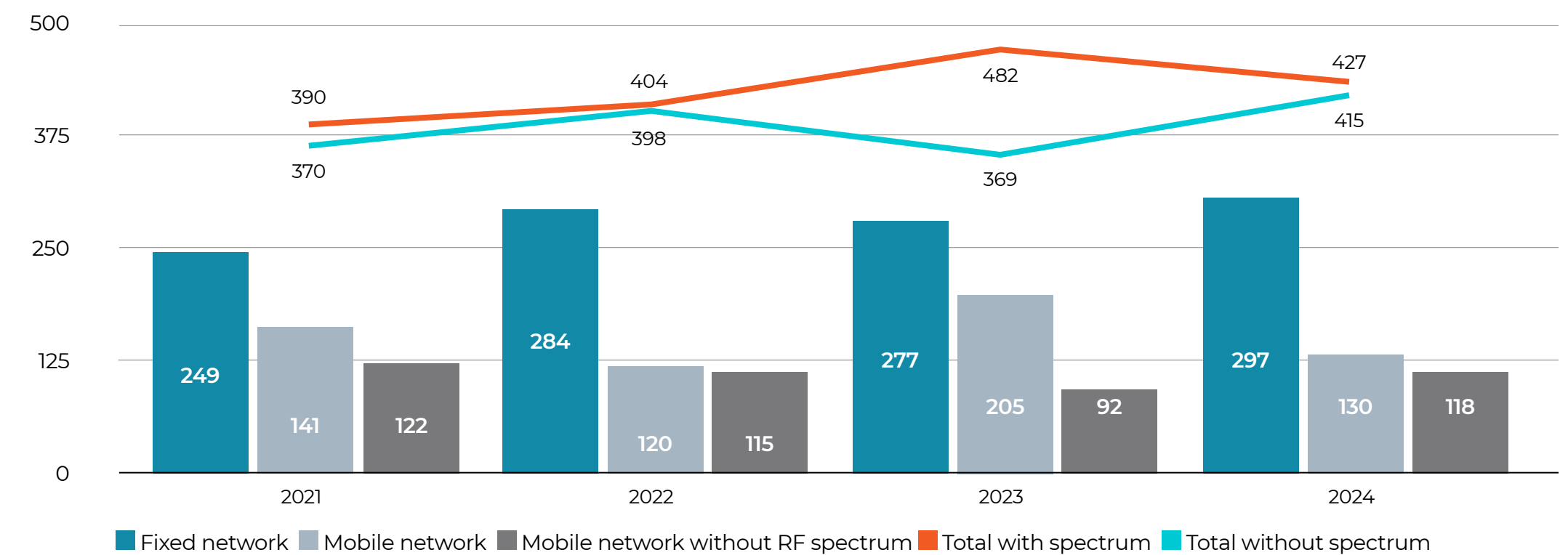
Figure 1.5 Operator revenue shares in the mobile network market and mobile network revenue shares in total revenues



Investments

In 2024, total investments of electronic communications operators stood at EUR 427m. With investments in the radiofrequency spectrum excluded, given the fact that there were no RF spectrum allocations in 2024², investments grew by 12 percent from the previous year.

Figure 1.6 Total investments by electronic communications operators in the HR (in EUR million)



¹ In 2023, over 50 percent of investments in mobile networks was accounted for by investments in the RF spectrum.
 Note: Some operators record paid fees for the RF spectrum use as capital expenditures (CAPEX) and some as operating expense (OPEX).

Fixed network investments grew by EUR 20m on the back of continued investments in new VHCNs, amounting to EUR 116m in 2024.

Figure 1.7 VHCN investments (in EUR million)

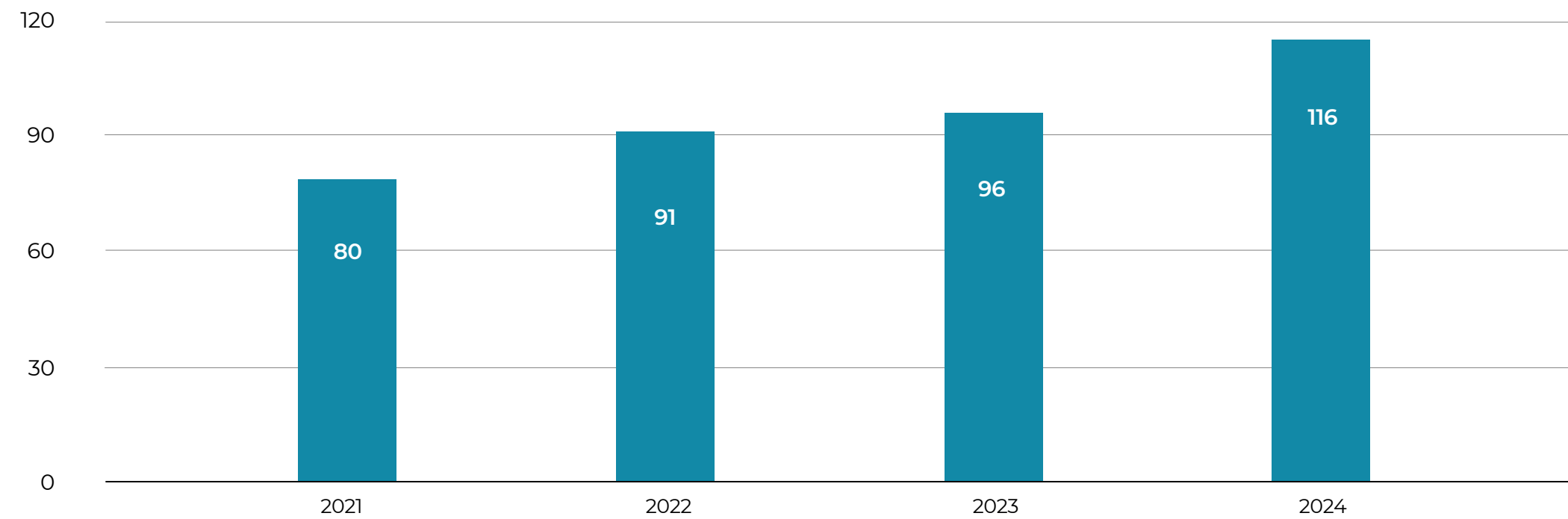
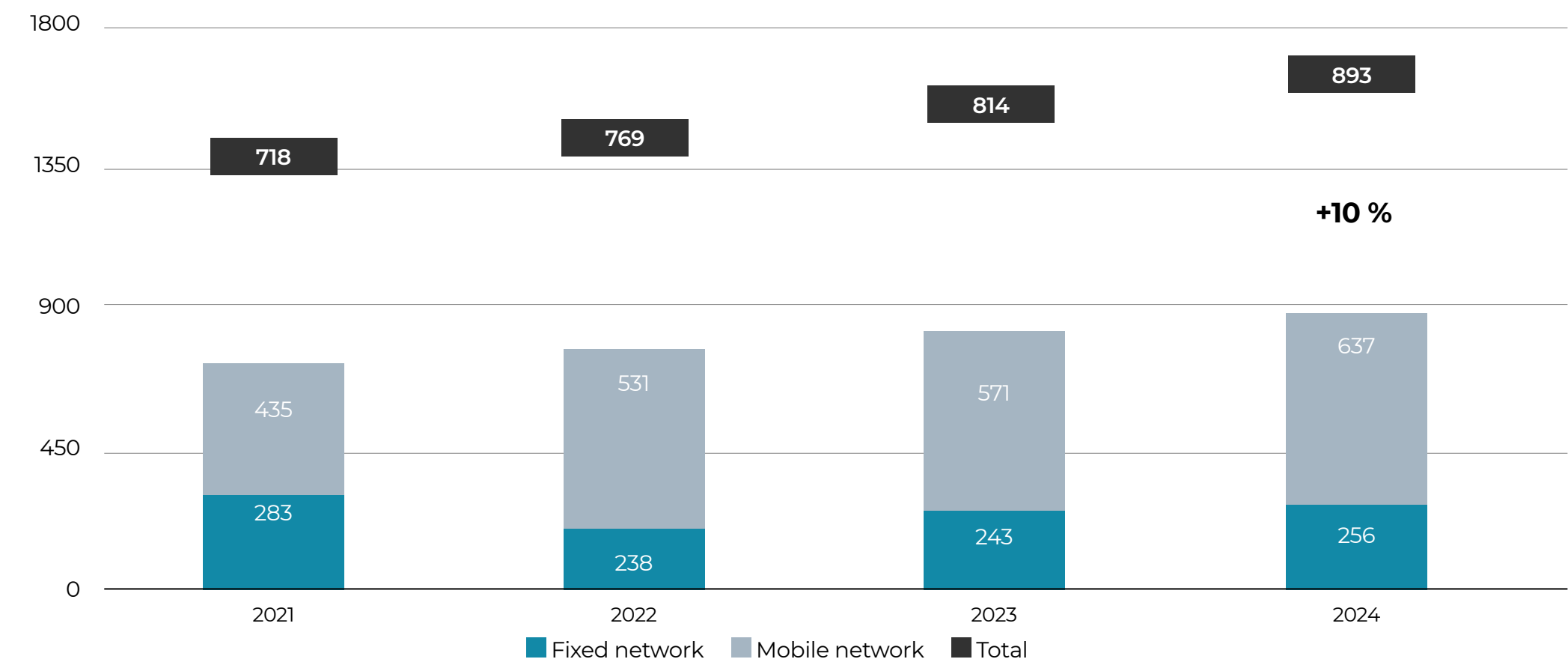


Figure 1.8 Total revenues of the broadband internet access market (in EUR million)



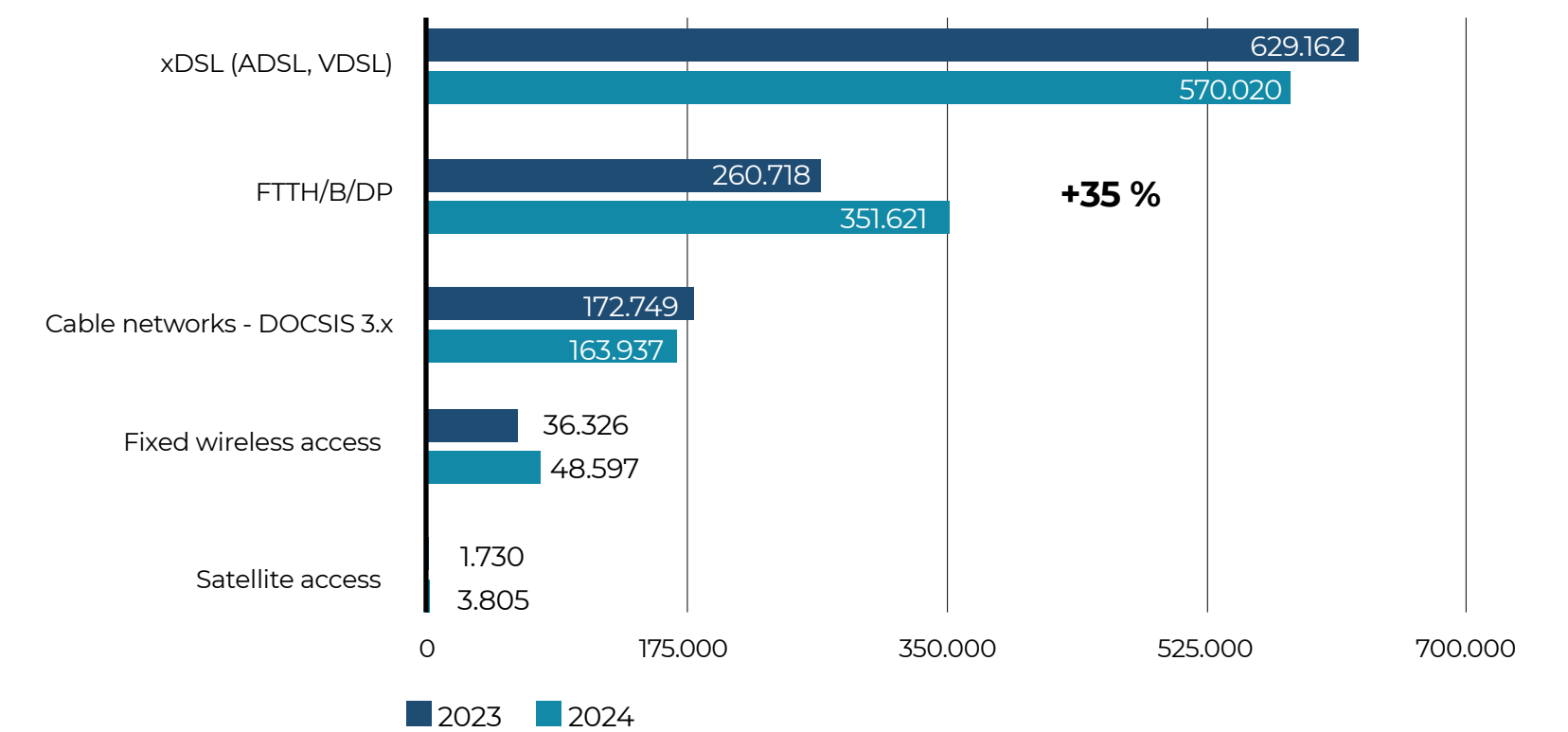
Half of fixed internet access connections is still provided by means of the xDSL technology. However, users increasingly migrate from the copper network to VHCNs, which resulted in a drop in xDSL connections and a rise of 35 percent in FTTH/B/DP connections from the previous year.

SERVICES

Broadband internet access

Revenues generated by the broadband internet access service rose by 10 percent from 2023 and continued to rise steadily. In 2024, this service generated revenues in the amount of EUR 893m, almost half of market revenues. This increase in revenues was primarily aided by the mobile internet access service, whose revenues rose by EUR 66m relative to the previous year.

Figure 1.9 Connections by the access network technology



Availability of VHCNs

The main strategic development objectives of the EU's broadband internet access include the maximum possible coverage by 5G networks and VHCNs (FTTH, FTTB, FTTP and DOCSIS 3.1), which currently enable minimum download speeds of 100 Mbit/s and, with a simple upgrade, 1 Gbit/s.

Operators have invested considerable funds in deploying 5G networks and VHCNs over the last few years, as evident from a continued increase in coverage.

Figure 1.10 VHCN coverage (% of households) Source: EU

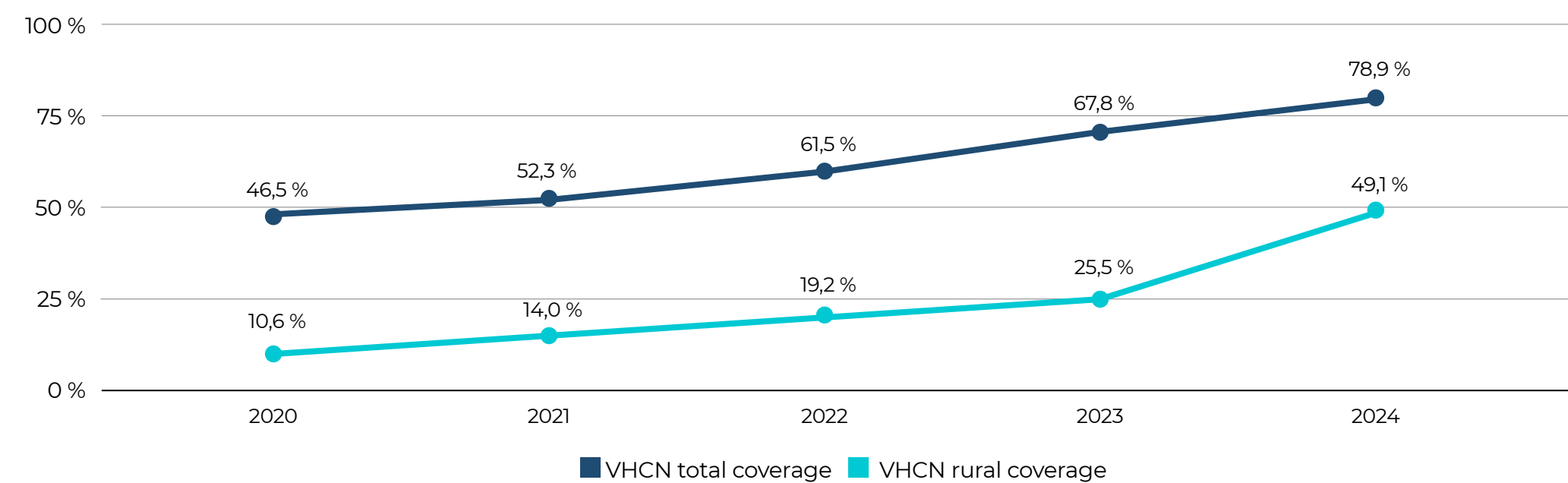
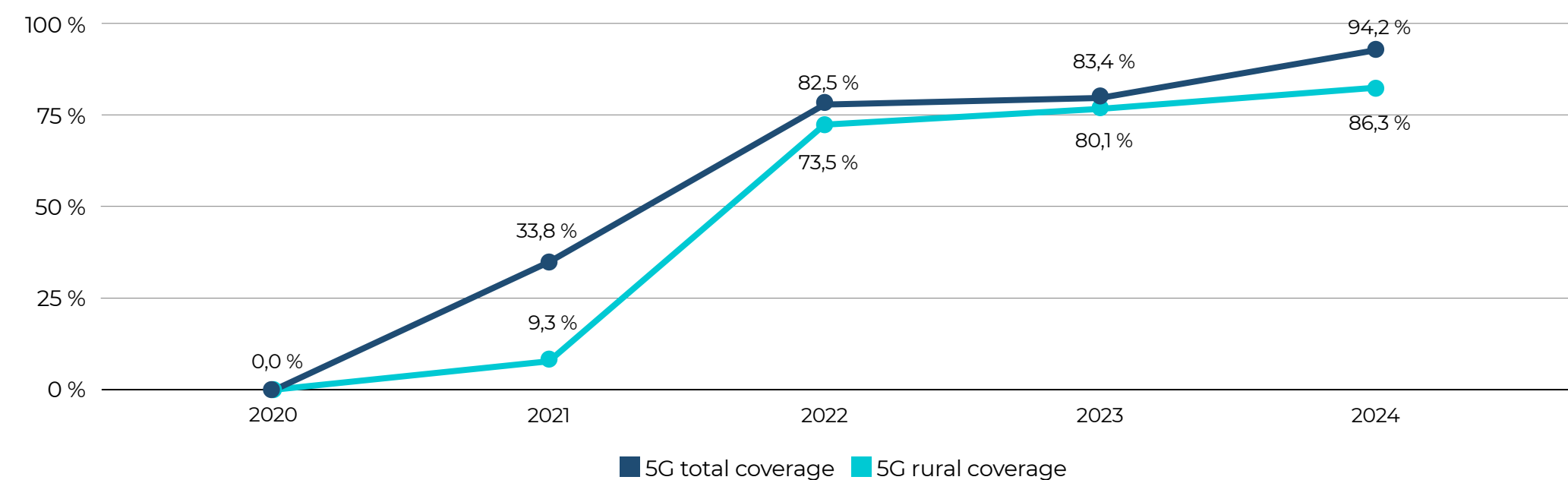


Figure 1.11 5G coverage (% of households) Source: EU

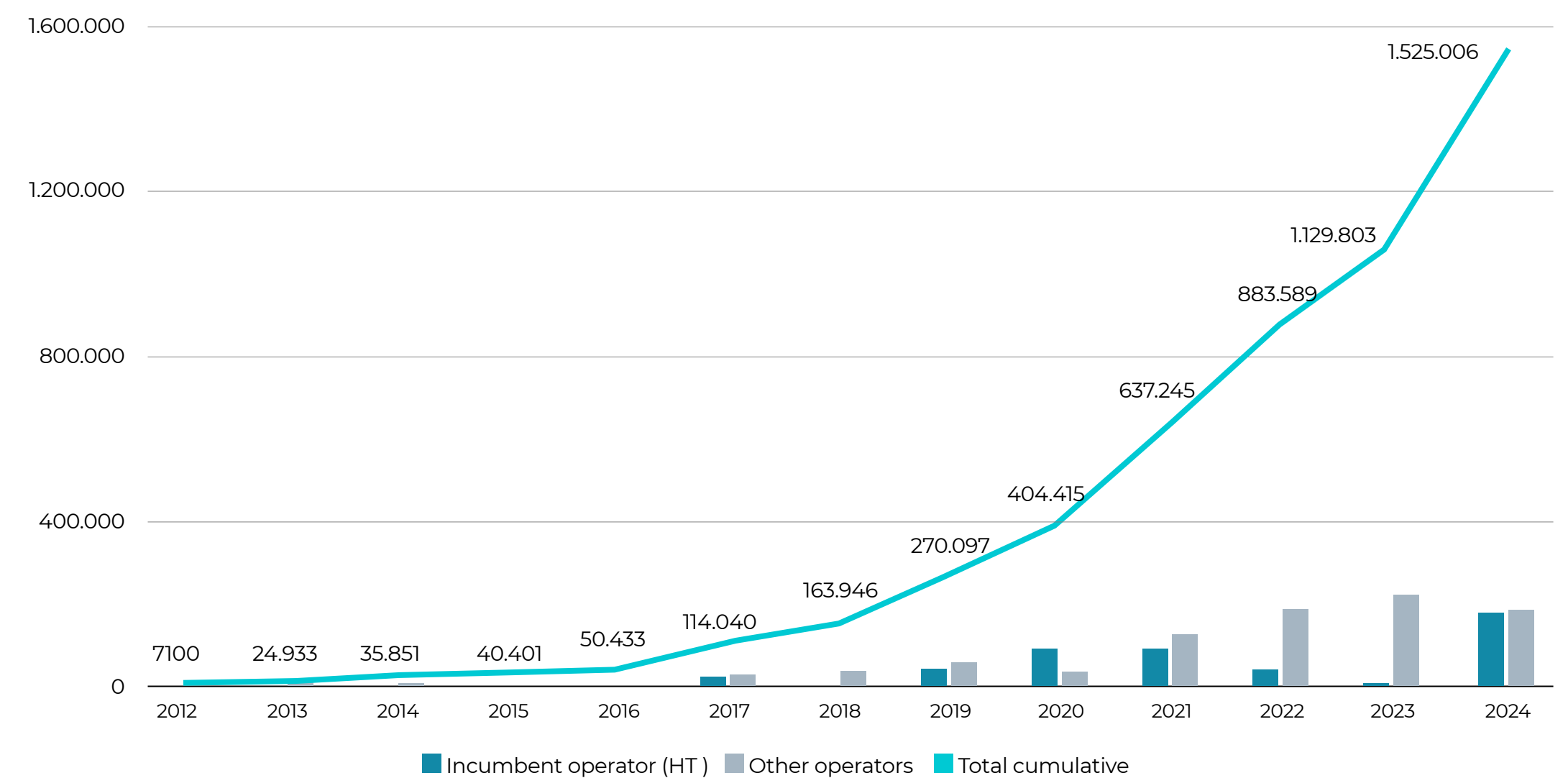


Operators' commercial investments are predominantly directed towards areas where such investments are the most cost-effective, such as urban and sub-urban, densely populated areas. Although considerable advances were made in VHCN rural coverage, which increased from 25.5 percent to 49.1 percent, there are still great differences between VHCN rural and urban coverage, which is why part of the costs of VHCN deployment in rural areas should continue to be subsidised under various state aid programmes.

Important in this context is the role of HAKOM as the [Broadband Competence Office – BCO](#). The main task of the BCO is to encourage the development of broadband access, which includes stimulating infrastructure investments using available co-financing resources, monitoring the realisation of declared commercial interests, stimulating demand for VHCNs and cooperating with all interested stakeholders.

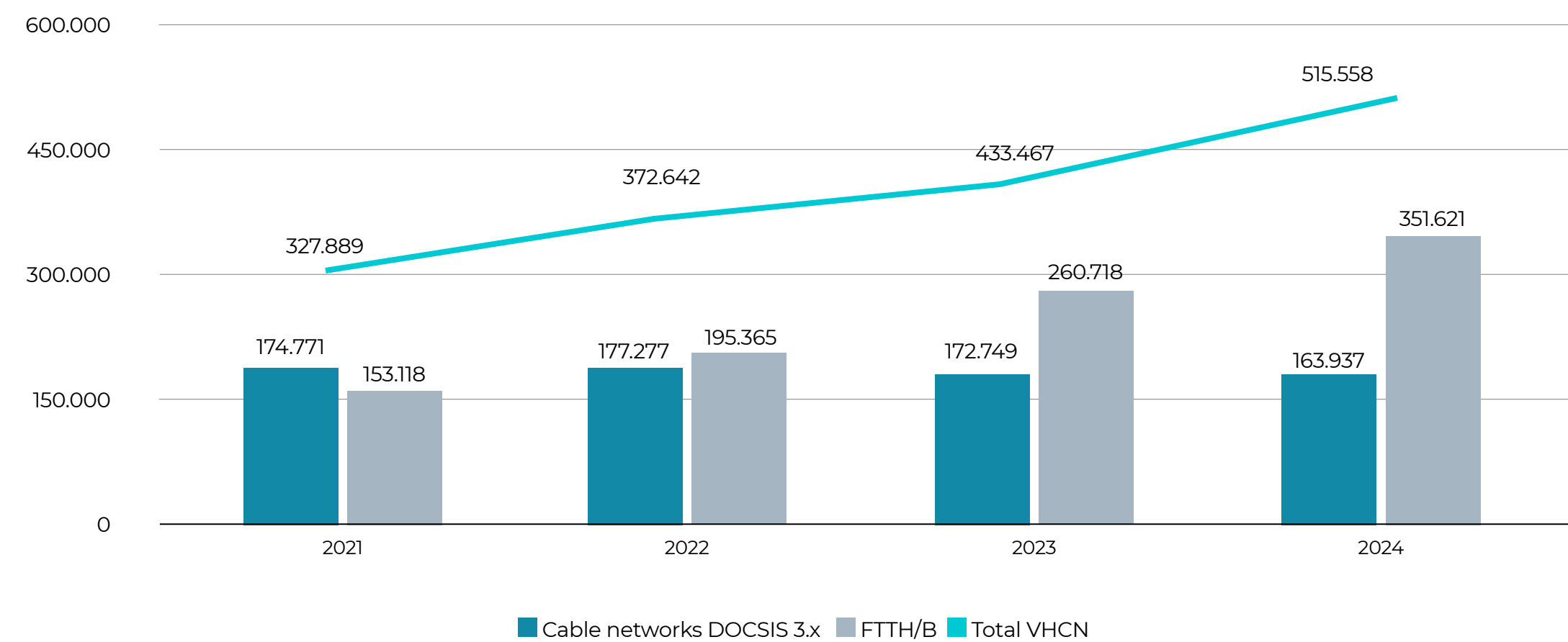
HAKOM collects data on the availability of broadband access on a quarterly basis and publishes aggregate results on the HAKOM's [GIS portal](#). The portal also publishes the notices of intent to build optical fibre distribution networks, which operators are required to report in accordance with the [Ordinance on optical fibre distribution networks](#). The number of new connections planned has been on the increase for the last few years.

Figure 1.12 Number of users of optical fibre distribution networks – notices of intent to build



There were 515,600 VHCN connections at the end of 2024, with 68 percent of them installed by means of the FTTH/B/DP technology. The deployment of VHCN networks requires major investments, which are profitable only if such networks are sufficiently used. Although the FTTH network take up rate is still low, the number of FTTH/B/DP connections grew by 91,000 from the previous year.

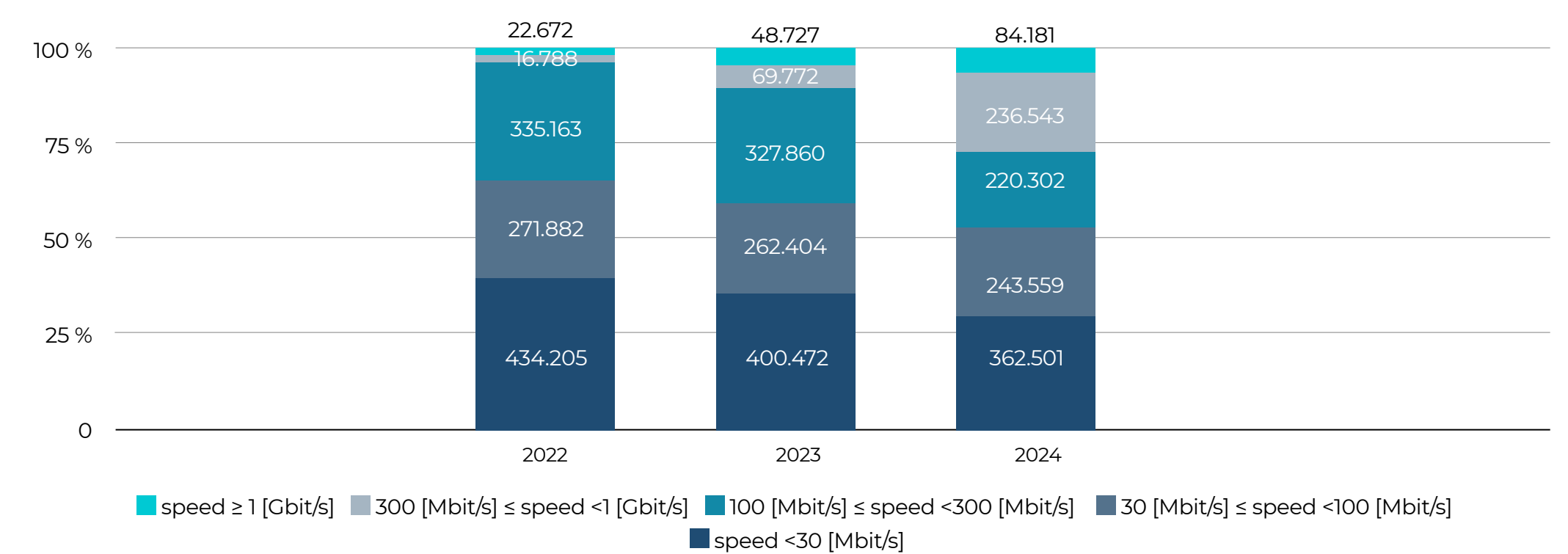
Figure 1.13 Number of VHCN connections



Due to the rising number of FTTH/B/DP connections, contracted access speeds were increasingly high: at the end of 2024, almost half of end-users had access speeds exceeding 100 Mbit/s, while more than one fourth of users used speeds exceeding 300 Mbit/s. The number of users with speeds exceeding 300 Mbit/s increased significantly from the previous year, by 202,000.

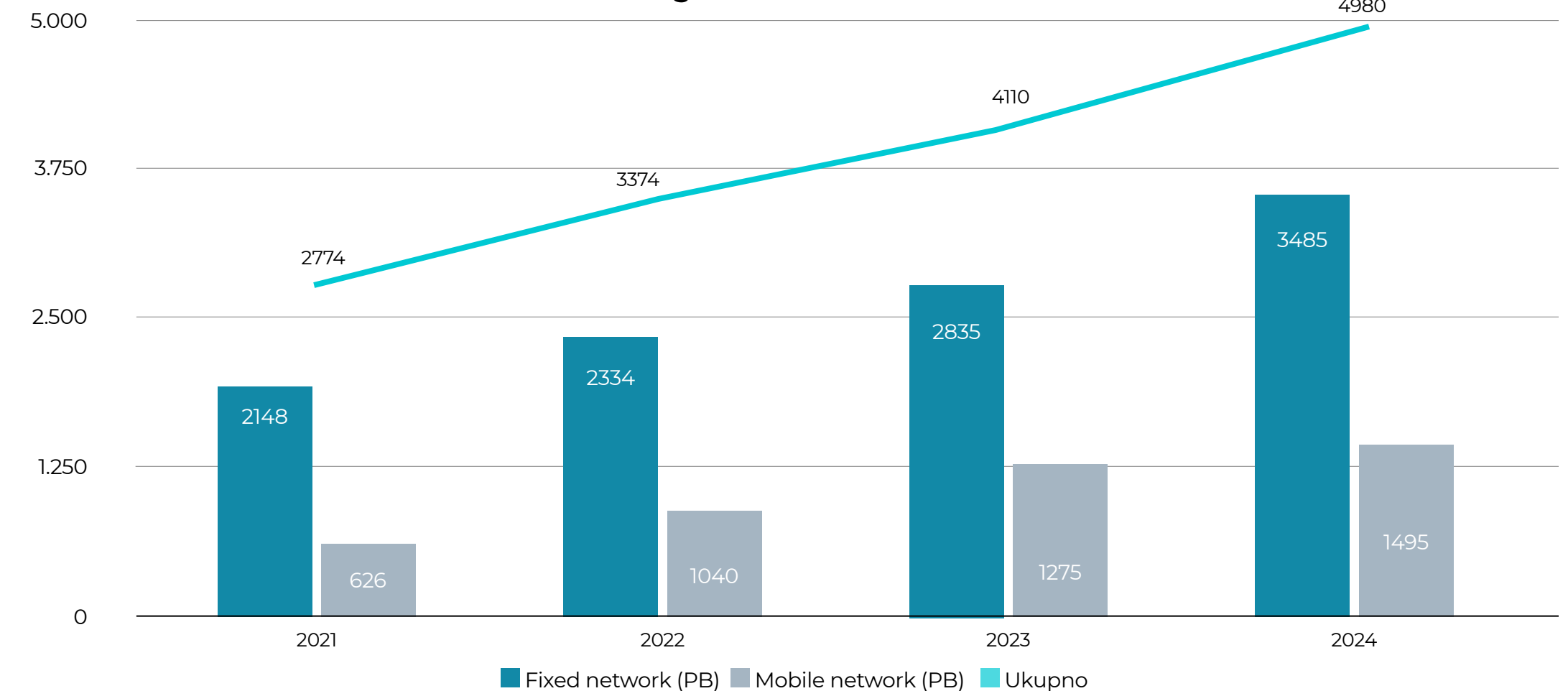
The number of users with VHCN connections is expected to grow even more strongly in the following years, given the rising demand for higher access speed and the still insufficient take up rate for new VHCNs. The deregulation of HT group's VHCNs, targeting the specific areas of the Republic of Croatia, which took effect at the end of 2023, also contributed to improving the take up rate.

Figure 1.14 Number of fixed connections by contracted access speeds



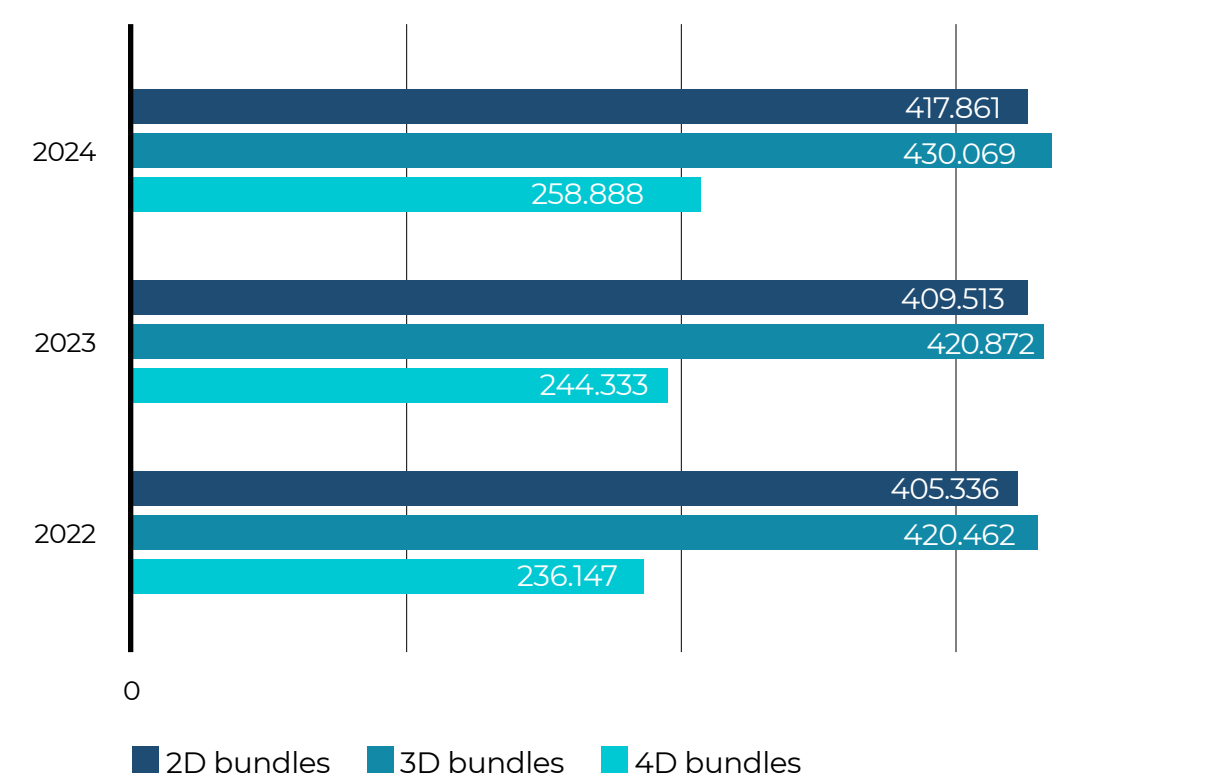
In addition to very high-speed access connections, fixed and mobile network traffic also continued to rise in 2024, reaching almost 5,000 PBs, due to the omnipresent digitalisation of the society and economy and in particular to data-intensive applications, such as video streaming and online video games.

Figure 1.15 Data traffic



The number of users of 4D bundles, that is, those that are provided all services (both in the mobile and fixed networks) by the same operator continued to grow, which is an indication that offering 4D bundles has a significant influence on market competition. The competitiveness of operators that are currently unable to offer 4D bundles because they do not have their own mobile networks with national coverage depends on the availability of MVNO access offers. There are still no operators in the HR using the MVNO access, although mobile communications network operators that have been granted licences for the use of the RF spectrum at the national level are obligated to provide the MVNO access. It is important that the conditions of the MVNO access enable operators without any infrastructure of their own to compete in the market on the same footing as those offering bundled fixed and mobile services. In order to be able to assess the economic replicability of retail offers of network operators enabling the MVNO access, HAKOM is currently implementing a project of constructing a model for the assessment of economic replicability, that is, commercial viability of the various modalities of the MVNO access.

Figure 1.16 Number of service packages

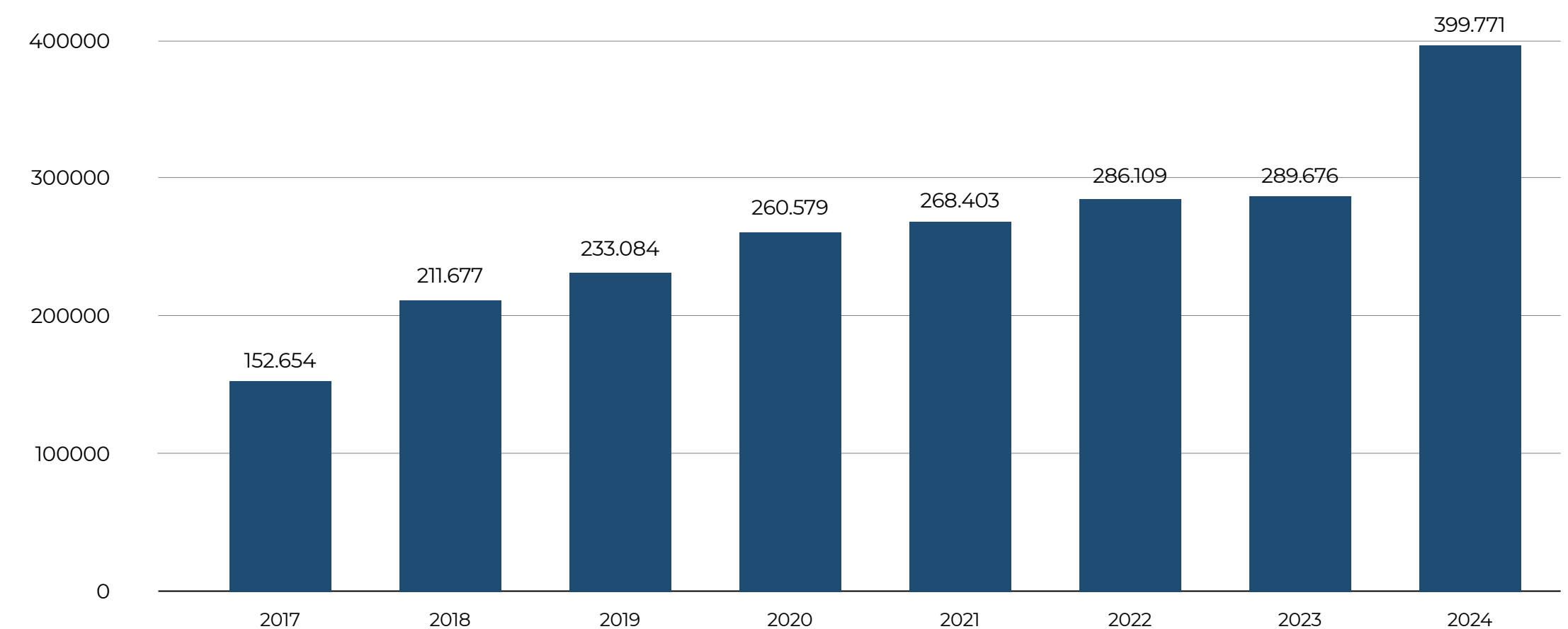


M2M/IoT

Machine-to-machine communication (M2M), which comprises automated communication, is the backbone of internet of things (IoT). M2M communication finds its application in many economic sectors (automotive industry, construction, building management, aviation, agriculture, postal services, transport, sensors). In most cases these services focus on location tracking, proactive industrial machine maintenance and status readings as well as on technical incident re-

porting. Given the technological advances, M2M communication is expected to gain even more importance in the future, while continuous roaming is becoming more and more important for numerous M2M/IoT applications as some devices remain connected to the network outside their own home network/country throughout their useful life. In 2024, growth was 37 percent.

Figure 1.17 Number of M2M connections



Internet neutrality, openness and quality

In the Republic of Croatia, HAKOM is competent for the implementation of rules on the protection of open internet access in accordance with [Regulation \(EU\) 2015/2120](#) of the European Parliament and of the Council laying down measures concerning open internet access and amending Directive 2002/22/EC on universal service and users' rights relating to electronic communications networks and services. In order to fulfil this task adequately, in 2016 HAKOM set up a multidisciplinary team for the implementation of network neutrality rules, which is in charge of a variety of issues related to network neutrality, procedures, interpretations and communication with internet access service operators (resolving end-user complaints, conducting market research and collecting information, in particular technical information gathered by network monitoring).

In 2024, HAKOM did not receive any complaints from end-users regarding difficulties with the use of the internet access service involving either the blocking or slowing down of applications and services or price discrimination. There were also no major changes as regards the introdu-

ction of new products or services. In general, the public knowledge about open internet access and readiness for cooperation of internet service providers (ISP) can be described as commendable. The [Annual Report on the Implementation of Regulation \(EU\) 2015/2120](#) for 2023 once again confirmed the ongoing positive situation regarding open internet access in the HR³. HAKOM continued to monitor the market to ensure compliance with the Regulation and take measures as appropriate. Two inspection decisions were adopted during this reporting period, with all the addressed issues resolved, as a rule, through the dialogue with ISPs.

The overall state of network neutrality in Croatia is generally positive, which indicates that the smooth functioning of the internet ecosystem is ensured. The Regulation and Guidelines have contributed to the gradual improvement of the quality of the internet access service provided in Croatia, primarily by increasing the transparency of information on services provided and a non-discriminatory and open access to internet content, services and applications. HAKOM's supervisory and measurement tools, such as HAKOMetar and HAKOMetar Plus, are available to the public and currently adequate for the analysis and monitoring of derogations from the provisions of the Regulation.

In late 2024, a regular [annual survey on internet user habits and experiences in the Republic of Croatia](#) was conducted on a representative sample of 1,000 respondents aged between 18 and 65.⁴

The survey showed that there were no major deviations from the past few years. The majority of respondents, 74 percent, use the internet access service as part of a service bundle, while 91 percent of them stated that the service bundle contained all the services they needed. The most used electronic communications services by households with internet access are the fixed and mobile access services and the mobile voice service (about 80 percent), the video streaming service (53 percent) and the fixed voice service (47 percent). The fixed voice service, however, recorded a drop in usage compared with the previous year.

Most users, 92 percent of them, use the home WiFi network to connect to the internet, while 58 percent of them connect via the mobile network. The most used connection devices are smartphones (97 percent) and laptops (84 percent), while desktop computers are used by 43 percent of respondents. The internet is mostly used for e-mail correspondence by 91 percent of users, while 90 percent of them use it for social networking and 83 percent for online voice and video calls. More than 50 percent of respondents stated that they would like to use the internet for teleworking in the future and 42 percent of them would also use it for education. Most respondents (88 percent) use WhatsApp for voice and video calls, while the SMS service is used by 19 percent of respondents on a daily basis.

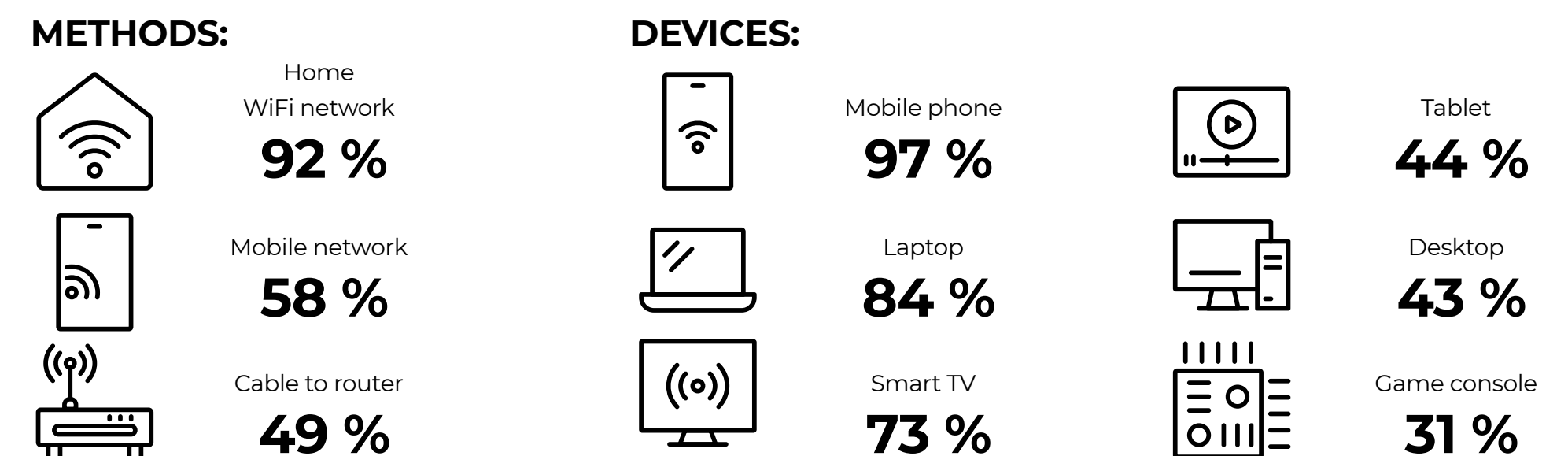
Almost two out of three respondents (63 percent) switched operators once or several times, the most important causes for the switch being a lower price offered by the rival operator (54 percent) and slow internet (47 percent). One third of the respondents would switch operators should the price increase more than 10 percent and all users would change their operator should another operator offer them a 20 percent lower price.

Internet speed, chosen by 79 percent of users surveyed, and low bundle prices, chosen by 74 percent of them, were the most important to users when opting for an operator. Almost one third of the users, 30 percent, never checked their internet speed and 39 percent checked their speed only after noticing a change. HAKOMetar, a tool that enables speed checks and produces results acceptable as relevant evidence when launching a dispute with an operator, was used by 23 percent of the respondents in the previous year.

The most frequent difficulties reported by users were internet access failures, poor internet speed and problems with the WiFi network. Customer support was several times contacted by 53 percent of the respondents, with more than 60 percent of them satisfied with the response quality and 50 percent with the response speed. The respondents showed the greatest satisfaction with the fixed internet service (70 percent), while satisfaction with the mobile internet service for households (65 percent) increased slightly from previous years. The positive trend as regards users who did not observe any difficulties with the internet continued, with their percentage rising from 8 percent to 15 percent in the last four years, and the information worth noting is that one operator resolved internet issues for as much as 70 percent of users within just one hour.

Almost all users took some action to maintain internet security. They mainly avoided downloading applications from unknown sources (73 percent), used safe passwords, protected their personal data and refrained from contacting unknown persons. However, 20 percent of users declared that they had experienced a cyberattack, 14 percent experienced cyberbullying and 21 percent reported online violence.

Figure 1.18 Most common methods and devices used to connect to the internet in households



³ The Report is submitted to the European Commission and BEREC and published.

⁴ The survey was carried out for HAKOM by 4 Market Research d.o.o.

HAKOMetar and HAKOMetar Plus

In order to improve the monitoring of contractual conditions regarding the quality (speed) of the broadband access service, prescribed at the EU level by Regulation (EU) 2015/2120, HAKOM has since 2012 provided end-users and operators, free of charge, with a certified tool for the **measuring of access speeds in the fixed network**, [HAKOMetar](#). HAKOMetar is an official certified tool that enables users to independently check service quality using their own personal computers. Test results are acceptable as evidence in end-user complaint resolution proceedings.

In 2024, more than 15,700 individual measurements were performed and more than 850 certified measurement cycles started, of which 53 were completed and eligible for the submission of complaints to operators due to low speed. These figures indicate that speeds are in a large percentage provided as contracted and that only a small share of users was denied the guaranteed internet access quality. The application, altered and upgraded in the meantime, no longer requires the installation of the Java application, which has lately been disrupting the operation of HAKOMetar due to its numerous modifications. HAKOMetar now supports all popular computer operating systems, including Windows, Linux and Mac OS platforms.

In 2017, for the purpose of **measuring internet quality in wireless networks** (mobile communications networks and WLAN networks) HAKOM launched a free application [HAKOMetar Plus](#). The application provides information on the current wireless internet connection quality and helps raise awareness and improve knowledge of real data transfer speeds and wireless network service quality. All measurements are shown on a geographical map of the HR, so that a map of coverage quality is created with users' measurements.

Measurement results (over 1,272,000 individual measurements since the application became operational, of which some 97,000 measurements were carried out in 2024) are informative and do not constitute evidence in potential complaint resolution proceedings due to the nature of the service and mobile network technology.

These results, summarised in aggregate values for different categories and geographically represented on maps, can be used to compare internet access offers on the market as well as to analyse different internet access offers or offer ranges provided by operators and their market penetration. HAKOM also uses these results to verify whether the information on coverage maps and available mobile network speeds published by operators is consistent with the results of user measurements.

Figure 1.19 Internet access speeds measured by HAKOMetar Plus

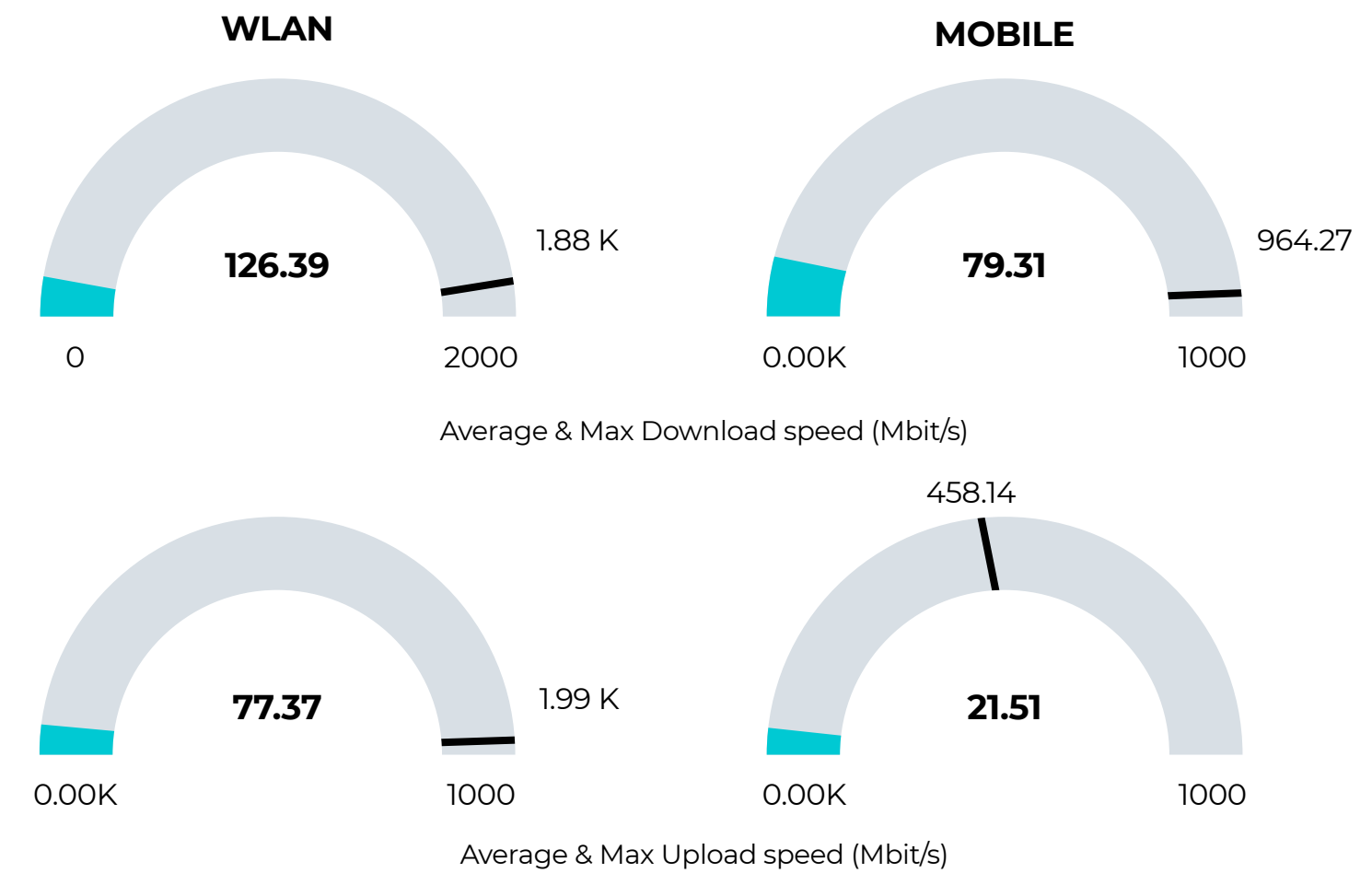
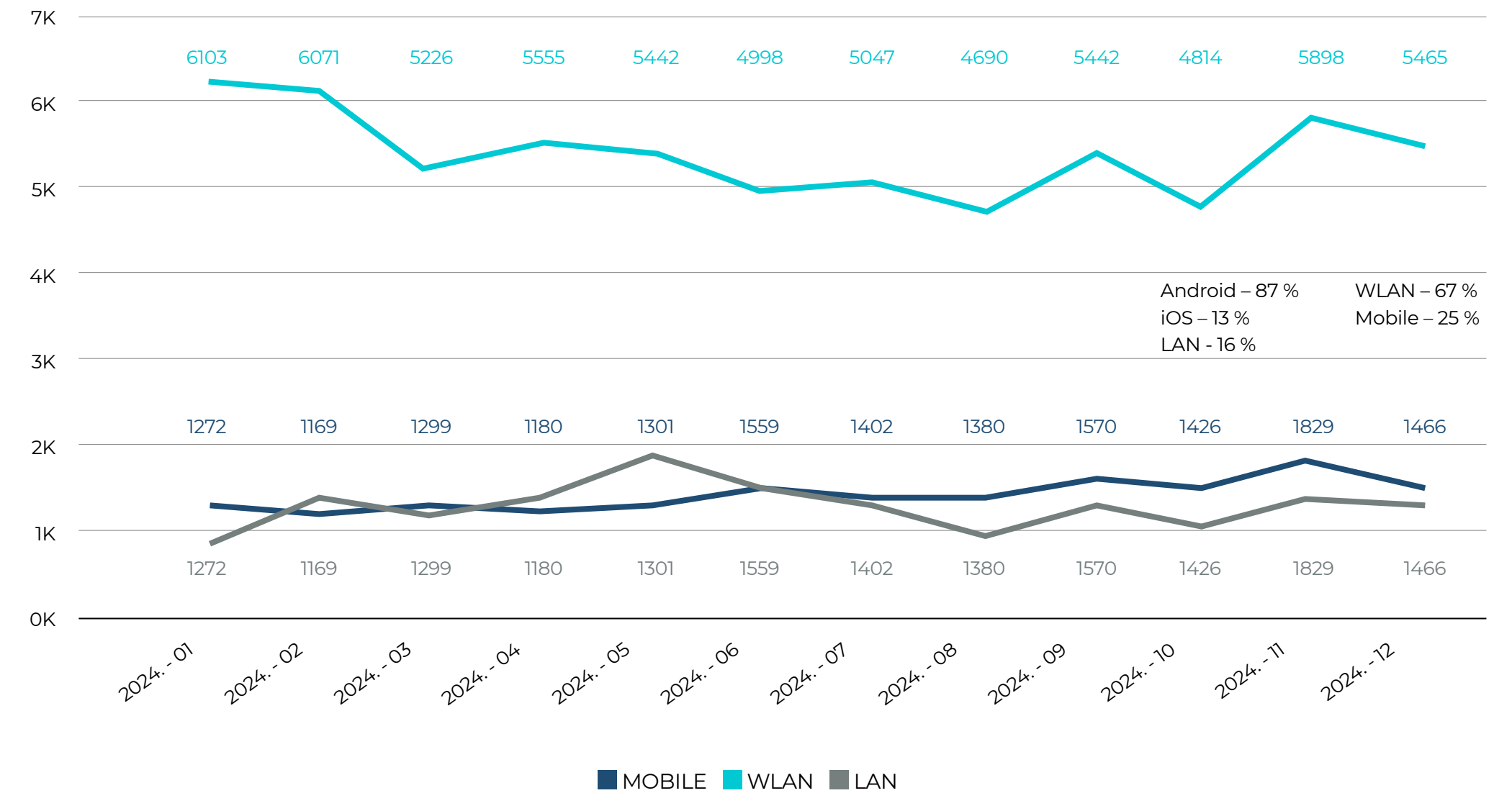


Figure 1.20 HAKOMetar plus and HAKOMetar measurement statistics



Usluga naplatne televizije

Access to the TV programme distribution service is provided through free-to-air TV broadcast from terrestrial transmitters and various forms of pay-TV platforms. In 2023, HAKOM started to collect data on OTT pay-TV services rendered by fixed network operators, because fixed network operators began providing their pay-TV service via OTT applications, which gives users a wider choice as they do not have to use the internet access service of a particular operator to be able to use its pay-tv service.

An increase in the total number of pay-TV connections in 2024 was precisely due to the increasing use of the own OTT service, while all other methods of pay-tv service provision were on the decrease, as expected. More than half of pay-TV connections continued to be accounted for by IPTV connections. Pay-TV service revenues grew by almost 10 percent, primarily due to increases in revenues from the IPTV service and the own OTT service.

Figure 1.21 Pay-TV connections by technology

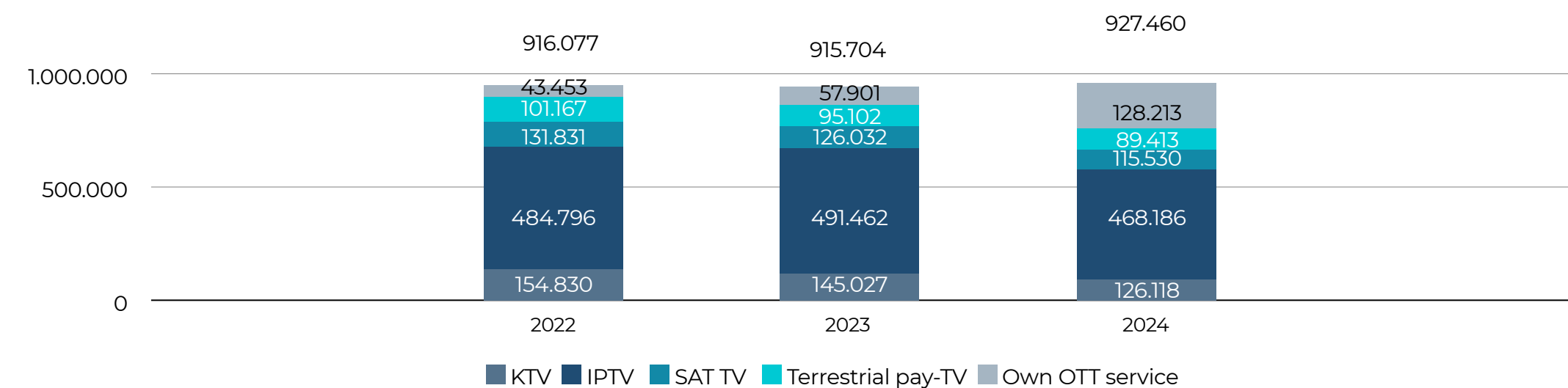
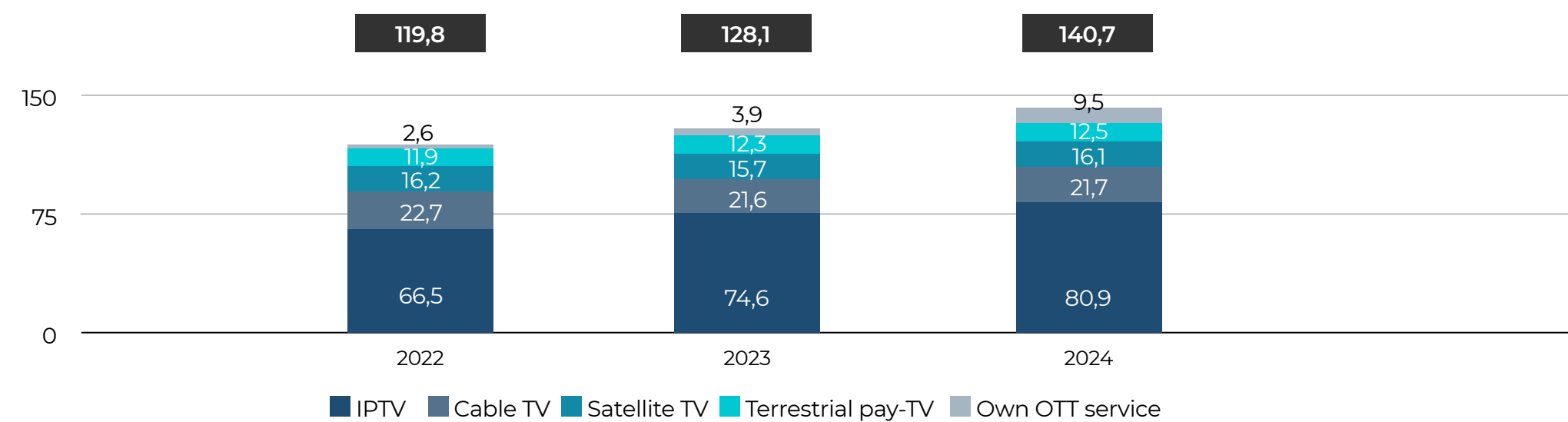


Figure 1.22 Revenues from the pay-TV service by technology (in EUR million)

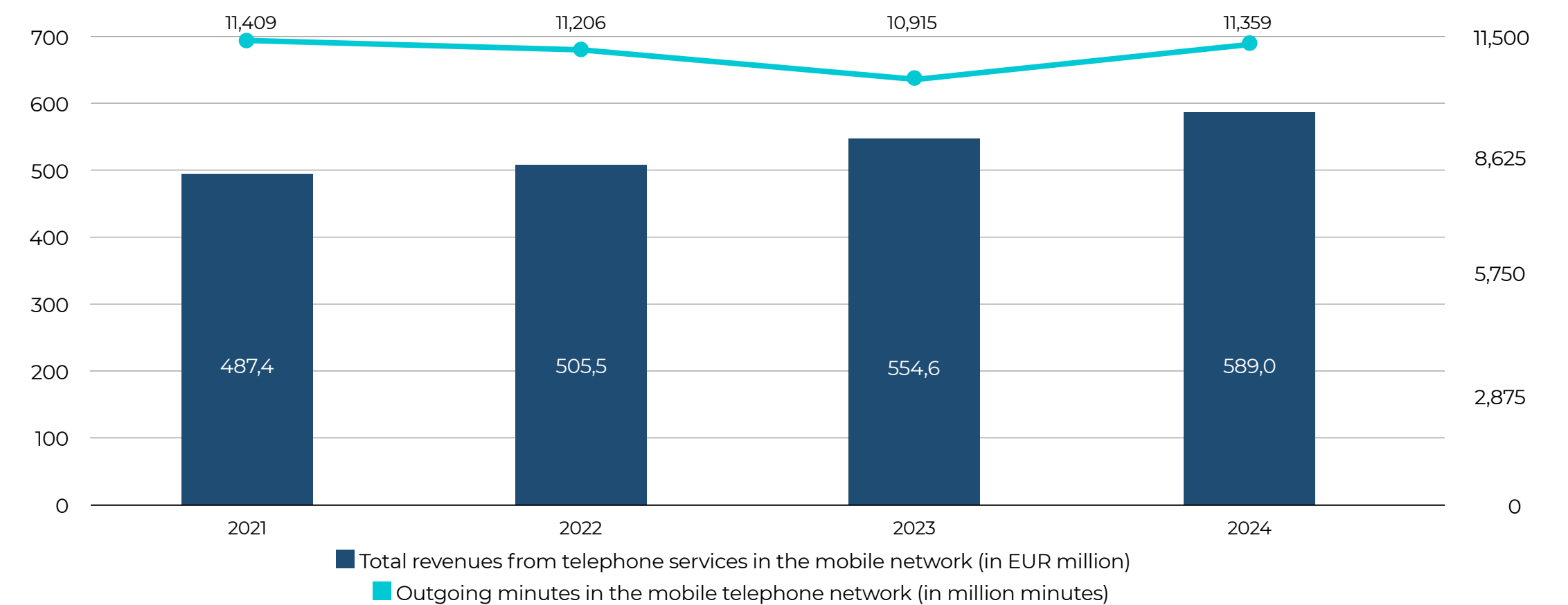


Voice communications services

Mobile networks

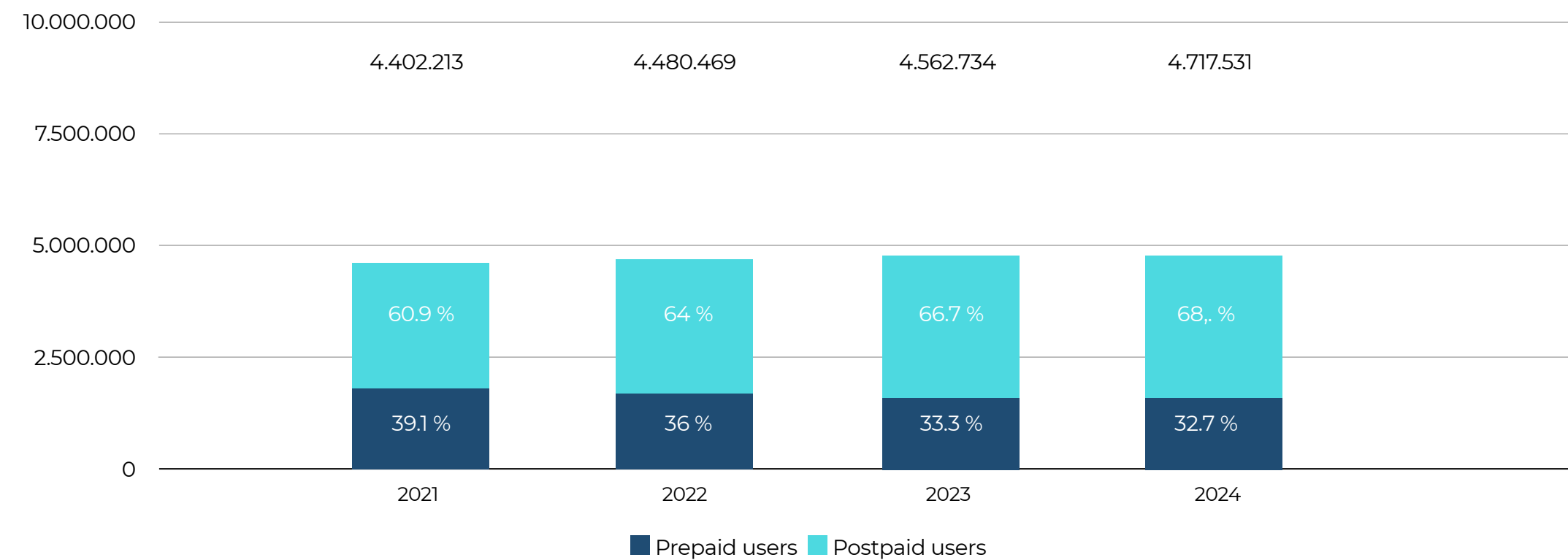
Revenues from telephone services provided via **mobile networks** increased from 2023, due to inflationary price adjustments, but also to the reversal of the downward trend in outgoing minutes in 2024. Specifically, operators can once a year adjust their services prices to the average annual inflation rate for the previous year, published annually by the Croatian Bureau of Statistics. Mobile outgoing minutes recorded an increase this year.

Figure 1.23 Total revenues from telephone services in the mobile network (in EUR million)



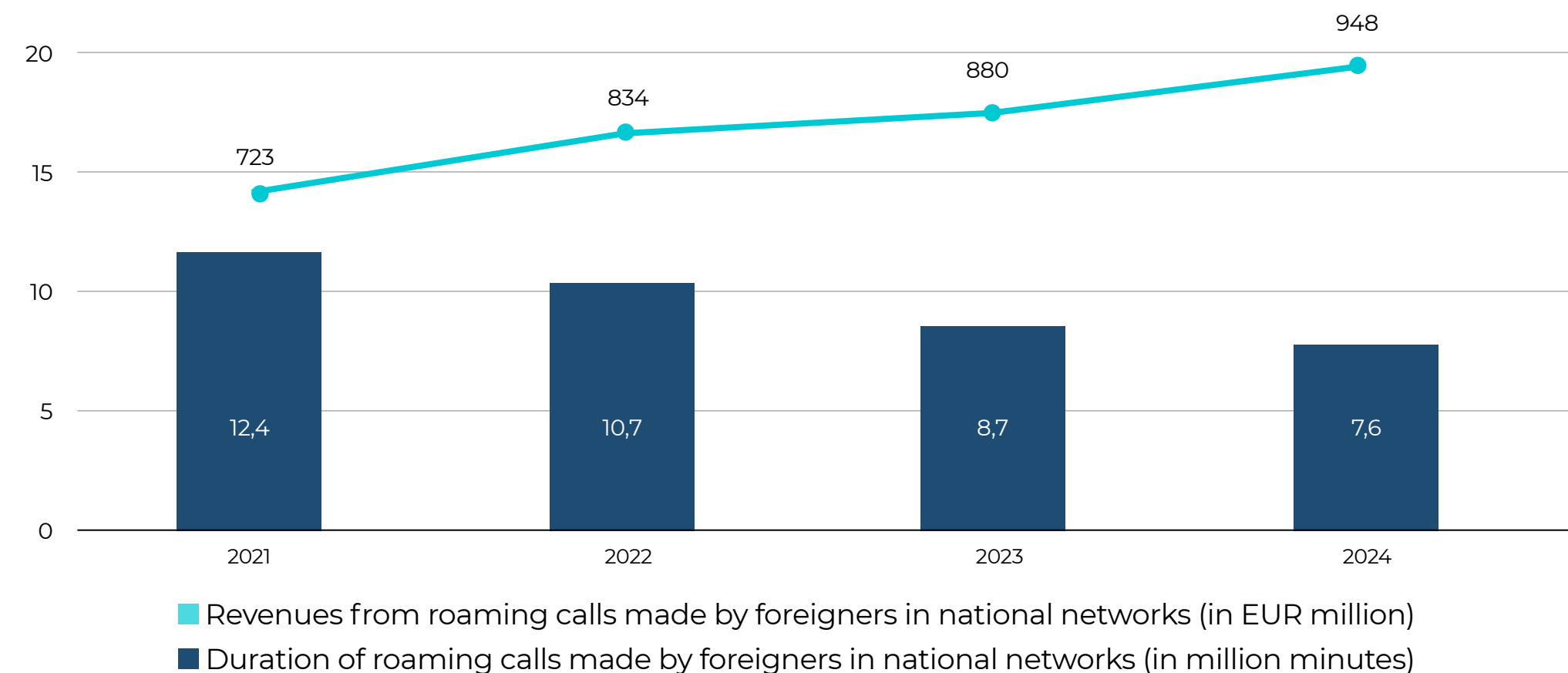
In 2024, the number of users in a subscriber relationship continued to grow, their share exceeding 68%, which is directly related to the increased use of 4D bundles and the tying of mobile and fixed network services.

Figure 1.24 Distribution of users by the type of subscriber relationship



Roaming prices in EEA countries are set and charged based on national prices for other mobile networks (RLAH - Roam Like At Home). As a result, traffic from **roaming calls** made by foreigners in Croatian mobile networks has increased in the last few years, while operators generate lower revenues from roaming services.

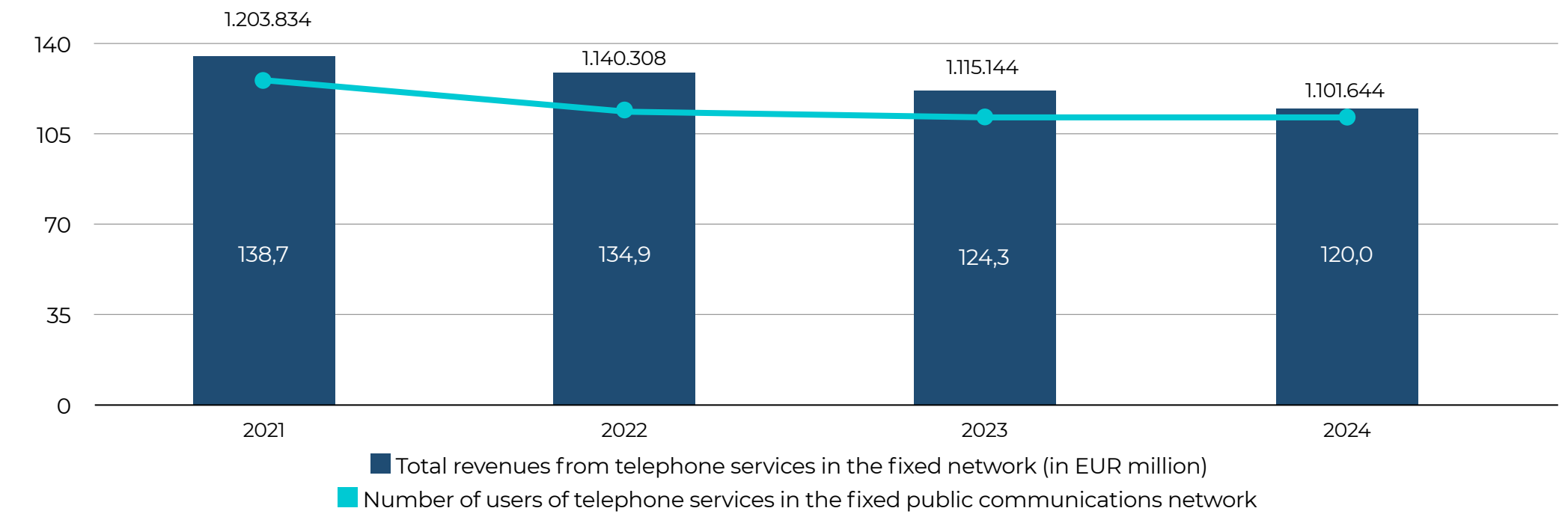
Figure 1.25 Revenues from and the duration of roaming calls made by foreigners in national networks



Fixed networks

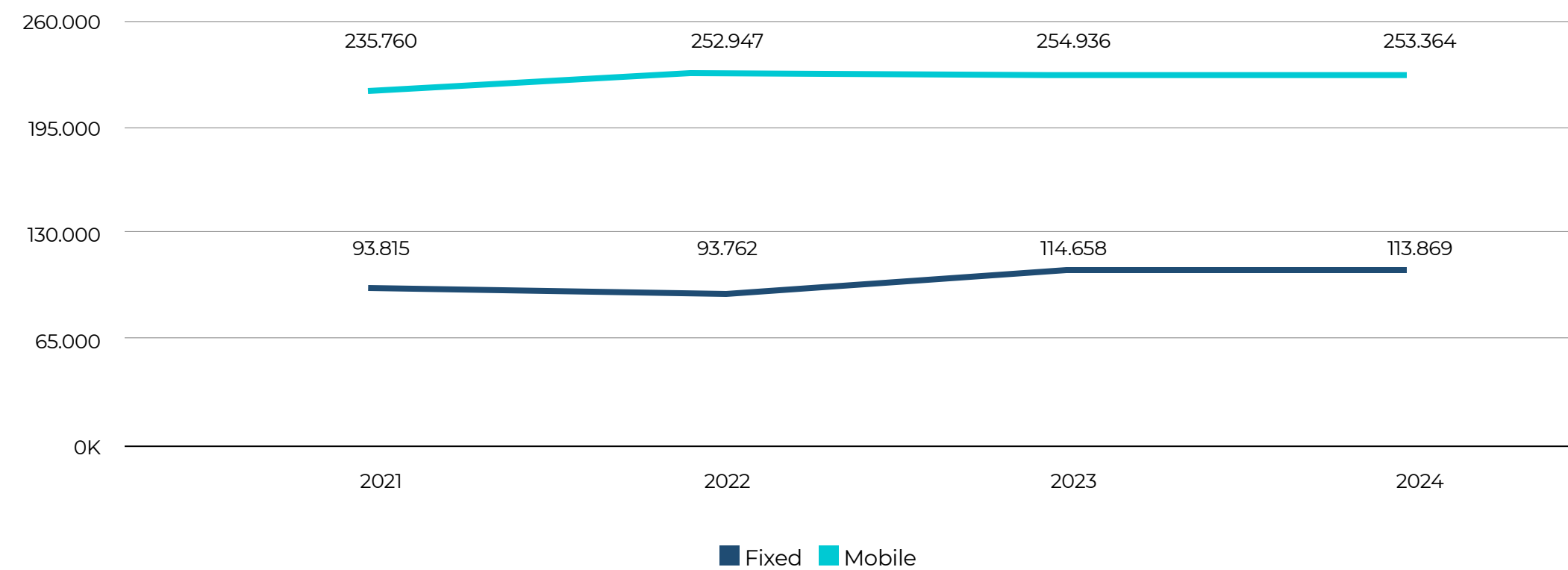
As expected, the number of users of telephone services in the **fixed network** continued to fall and so did the number of total minutes and total revenues these services generate. This is due to the long-standing trend of replacing these services with mobile telephone services and various OTT services, such as WhatsApp, Viber, Facebook Messenger, etc.

Figure 1.26 Total revenues from and the number of users of telephone services in the fixed network (in EUR million)



Number portability

The number portability service, which enables users to select an operator of their own choice and switch to another operator's network while keeping the same number, was introduced by HAKOM in the Croatian electronic communications market as early as in 2005. Since the start of the service until the end of 2024, users switched operators 2,351,257 times in fixed networks and 2,946,927 times in mobile networks. The Central Administrative Database of Ported Numbers (CADPN) is regularly upgraded and maintained.

Figure 1.27 Number of ported numbers in the fixed and mobile networks by years

ADDRESSING AND NUMBERING SPACE MANAGEMENT

The management of the addressing and numbering space involves monitoring market conditions, preparing the [Addressing Plan](#) and the [Numbering Plan](#), assigning addresses and numbers and adopting necessary regulations that enable users the simple transfer and use of the numbering and addressing space. HAKOM is in charge of the Central Administrative Database of Ported Numbers (CADPN), which is required for the number porting service and is regularly maintained or updated. HAKOM is also responsible for the database of the addressing and numbering space of the HR (e-Operator system), which is regularly maintained to enable operators to electronically submit requests for the primary assignment, revocation or transfer of rights to addresses and numbers.

Table 1.1 Address and/or number allocation – number of decisions

Type of application/decision	2021	2022	2023	2024
Primary assignment	130	79	104	93
Revocation	29	13	30	23
Transfer of right	3	10	14	4

In total, there were fewer requests for the addressing and numbering space in 2024 than in 2023. Numbers for fixed electronic communications network services, six-digit short codes for SMS/MMS services, freephone services and network ID codes were the most required types of addressing and numbering resources in 2024.

Table 1.2 Number of allocation requests

Type of service	Number of requests	Allocated resources (numbering)
Fixed electronic communications network services	36	15.800
Six-digit SMS/MMS short codes	28	62
Freephone services (800 and 801)	11	326
NetID codes	4	4
Mobile network access codes (NDC 9xxx)	1	10,000
General content services (60)	1	1
Socially sensitive services (EU harmonised short number) 116xxx	1	1

The amount of free addressing and numbering resources, that is, the number of addresses and numbers that are free for primary assignment to operators currently completely suffices for the needs of the market.

Table 1.3 Numbers and the remaining capacity available for primary assignment

Type of the addressing and numbering space	Free numbers	(%)
Services in the fixed network (all counties)	21,821,000	80.82 %
NetID codes	39	39.39%
060 General content services	991,757	99.18%
064 Services with child-inappropriate content	997,687	99.77%
072 Common access code services	988,047	98.80 %
074 Personal number services	997,394	99.74 %
075 Personal number services	985,172	98.52 %
800 Freephone service	803,785	80.38 %
890xx M2M services	48,300,000	48.30 %
9xxx Services in the mobile network (public mobile network access codes; NDC)	45,720,000	45.72 %

SERVICE PROVISION QUALITY

The manner of provision of electronic communications networks and services as well as quality criteria for electronic communications networks and services are prescribed in detail in the [Ordinance on the manner and conditions for the provision of electronic communications networks and services](#). This ordinance requires the operators of publicly available electronic communications services to regularly publish relevant, up-to-date and comparable data on service quality indicators. More precisely, operators with revenues exceeding 2 percent of the total revenues of the relevant electronic communications services market, or those required to do so by HAKOM, must measure service quality at their own expense at least every six months or, exceptionally, upon HAKOM's request, in shorter intervals. Upon the completed verification of the submitted indicators, HAKOM, at least every six months, publishes [data on the quality of service provision by operators](#). [Annual data on the quality of universal service provision](#) are available on HAKOM's website.

The results show advances in specific segments, such as an improved customer support response, while there are still challenges to be addressed as regards the time required for setting up connections and the average time for the elimination of breakdowns (although these are still within the legally prescribed limit), which indicates that working processes related to new connections need to be additionally optimised. HAKOM commended operators' efforts to ensure high-quality services to their users, while also encouraging them to put in even more effort to increase user satisfaction.

NETWORK AND SERVICES SECURITY

The security of electronic communications networks and services was satisfactory in 2024. HAKOM, as the competent authority for the supervision of network and services security, received one report and analysed 17 incidents, including 2 computer-security incidents and 15 security incidents. One major incident was reported to the European Information Network Security Agency (ENISA). The incident was linked to a software error that caused difficulties with the internet access service in the mobile and fixed networks for a significant number of users. In 2024, 3 ex-officio inspections were carried out to verify that appropriate measures had been taken to ensure the security of networks and services. In 2024, HAKOM participated as co-chair of the European Competent Authorities for Secure Electronic Communications (ECASEC), which serves as a platform for cooperation and exchange of information between national authorities supervising the security of electronic communications services in Europe. As a member of the national working group for the implementation of NIS 2⁵ HAKOM participated in the drafting of the new Cyber Security Act and the accompanying regulation.

5 <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=COM%3A2020%3A823%3AFIN>

ACCESS TO AND THE USE OF THE ELECTRONIC COMMUNICATIONS INFRASTRUCTURE

Access to and use of the ECI is important for electronic communications and their development in general. The related procedures include drafting subordinate legislation, regulations, instructions and forms necessary for access to and the shared use of cable ducts, the shared use of the physical infrastructure and optical fibre installations in buildings and collocations, resolving disputes between infrastructure operators and beneficiary operators, determining technical conditions, etc. The year 2023 saw the adoption of the [Ordinance on the manner and conditions of access to and the use of the access point and physical infrastructure inside residential and commercial buildings](#), [Ordinance on optical fibre distribution networks](#) and [Ordinance on the manner and conditions for the determination of the zone of electronic communications infrastructure and associated facilities, of the protected zone and radio corridor, and of the obligations of the operator and construction work or building investor](#).

Right of way

The right of way is the right of access to and the installation, use, repair and maintenance of the electronic communications network and the electronic communications infrastructure and associated facilities, including cable ducts, and other related rights, which impose a burden on the real estate on which the electronic communications infrastructure and associated facilities have been constructed. The right of way certificate is issued on the basis of the Electronic Communications Act and the [Ordinance on the right of way certificate and fee](#), based on requests submitted by infrastructure operators (infrastructure operators previously established at the request of public property managers or real estate owners).

In 2024, 290 right of way certificates for natural persons and 85 right of way certificates for the infrastructure operator were issued. In the course of regulation of property law relations between infrastructure operators and public property managers or real estate owners, 8 new requests were received for the regulation of these relations between local self-government units (LGUs), Harbour Master's Offices, and the infrastructure operator, and 25 requests were resolved. All of the 25 resolved requests were received in the period before 2024. It should be noted that HAKOM's resolution of requests is conditioned on the accuracy of the documentation, so that it is possible to have several decisions (partial, final and supplementary) related to the case. The goal of regulating these relations is to achieve monetary compensation for the use of the real estate.

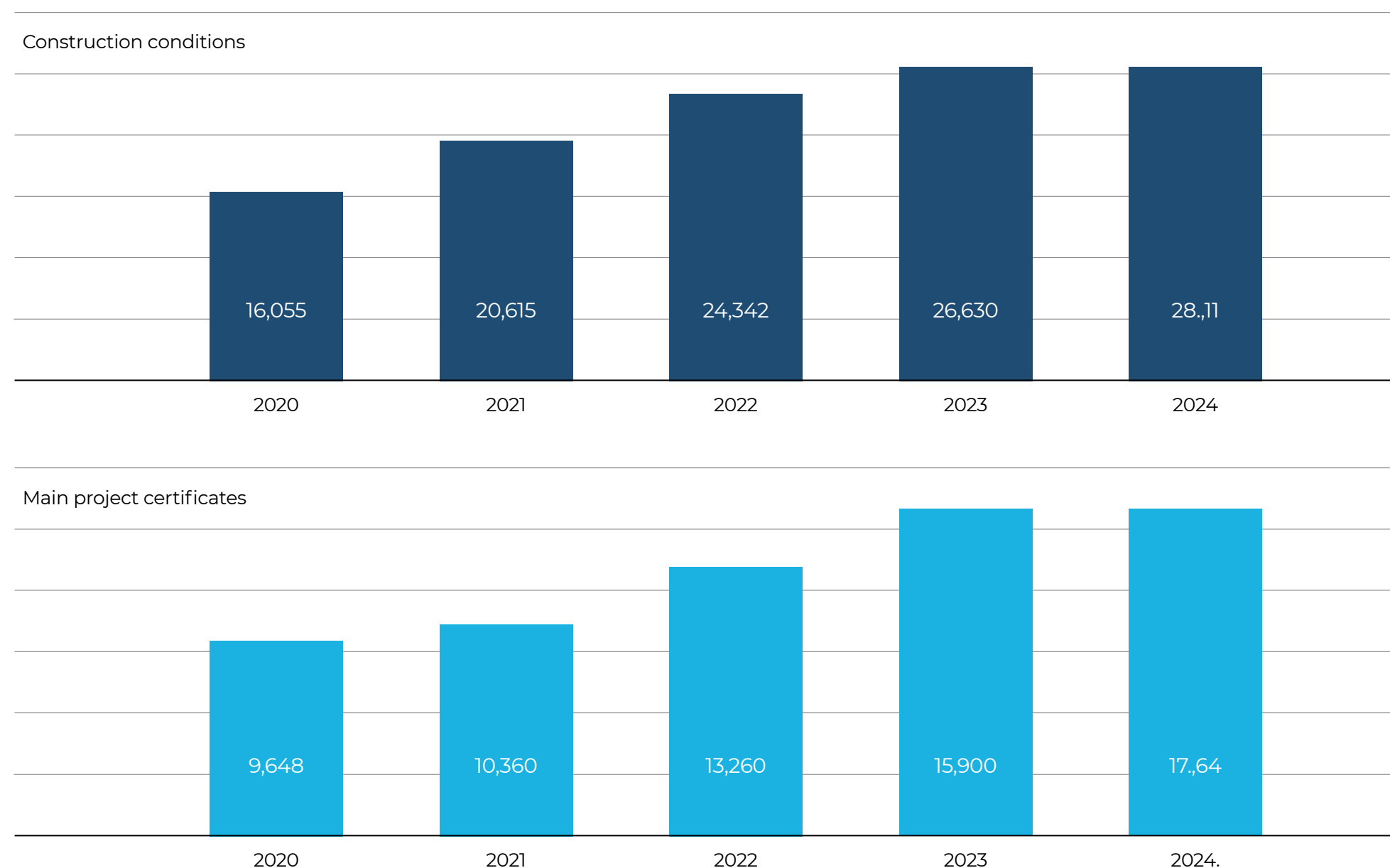
Public law body operations

HAKOM, as a public law body competent for activities prescribed by statutory regulations on physical planning and construction, the [Physical Planning Act](#) and the [Building Act](#), participates in the procedures of issuing guidelines for the preparation of physical plans, providing opinions on physical planning documents, establishing special conditions for construction and granting main project certificates.

In 2024, 415 documents were issued with **requirements (guidelines) to be complied with when developing physical plans at all levels**. During the year, HAKOM participated in public consultations on proposals for physical plans at all levels, issuing 488 opinions on proposed physical plans.

In 2024, the number of requests for establishing **special conditions for construction** and for **granting main project certificates** increased by 10 percent from the previous year.

Figure 1.28 Number of defined special construction conditions and issued main project certificates



REGULATORY ACTIVITIES

As an SMP operator, HT is subject to certain regulatory obligations allowing other operators access to wholesale services that enable them to provide services to end-users where they do not have their own infrastructure. Therefore, in order for competition to be as effective as possible, it is important that the prices of those wholesale services are cost-oriented.

Setting regulated wholesale fees

In 2024, based on the updated cost model, HAKOM set new **wholesale prices**⁶ to be applied for the next three years to ensure regulatory predictability. HAKOM also set **new one-off fees**⁷ for the activation/deactivation of wholesale services.

These decisions reduced monthly fees for HT's wholesale services provided via the FTTH network by 5 to 8 percent, which should allow easier access to the FTTH network and reduce costs for operators wishing to use the existing infrastructure. Furthermore, for the first time based on the results of the updated BU-LRIC cost model, HT's cable ducts access fees were set, at a significantly lower level, down by more than 50 percent, which will facilitate the deployment of alternative operators' own FTTH networks.

In addition to monthly and one-off fees for HT's wholesale services, which allow alternative operators without a network of their own to provide retail services to private users and small business users, based on the results of the updated BU-LRIC cost model, HAKOM also set monthly fees for HT's wholesale services on the market of dedicated capacity services enabling alternative operators to connect their own network nodes and to provide services to larger business users. It should be noted that these fees for the most represented services based on the Ethernet technology were reduced by more than 40 percent on average.

These decisions are expected to result in a reduction of costs for operators using HT's wholesale services provided through the FTTH network, which should lower retail FTTH prices and encourage a faster migration of users from copper to FTTH networks. In addition, reducing the prices of access to HT's existing FTTH networks may channel alternative operators' investments to the areas that are not covered by the HT's FTTH network and reduce the unnecessary construction

⁶ [Decision](#) on monthly fees for the service of wholesale local access via copper and optical fibre networks (ULL, FA-PON); [Decision](#) on monthly fees for the service of wholesale central access via copper and optical fibre networks (NBSA); [Decision](#) on monthly fees for the high quality access service; [Decision](#) on annual fees for the service of access to and the shared use of cable ducts; [Decision](#) on monthly fees for renting space in the distribution node to accommodate splitters

⁷ [Decision](#) on one-off fees for the service of wholesale access via copper and optical fibre networks (ULL, FA-PON); [Decision](#) on one-off fees for the service of wholesale broadband access via copper and optical fibre networks (NBSA); [Decision](#) on one-off fees for the high quality access service

of parallel FTTH networks. The lowering of the prices of wholesale dedicated capacity services should reduce the costs of building and expanding the networks of beneficiary operators and providing retail services to business users, which can indirectly contribute significantly to the digitalisation of their business and society as a whole.

All wholesale prices incorporate **the rate of return on invested capital (WACC)**, the calculation of which is updated once a year. In December 2024, a decision was adopted setting the WACC at 4.95 percent, while **a risk premium** of 1.59 percent is additionally applied to services provided through FTTH/FTTB/FTTDP access. New WACC values and risk premiums will be used in all future pricing decisions on regulated wholesale services.

Introduction of the Equivalence of Input model

In order to implement **the obligation of non-discrimination**, HAKOM, in cooperation with operators, adopted a decision on **the introduction of the equivalence of Input (Eol) model**. The aim of the Eol measure is for HT's retail services to use the same systems and processes as the operators using wholesale services so that a high degree of non-discrimination could be ensured. Building on an analysis of existing processes and the communication channel between HT and beneficiary operators, this decision defines amendments to the process of ordering and activating the service by end users and the elimination of breakdowns. Amendments are aimed at improving the verification of FTTH network availability, checking technical capabilities, providing the same information through the same information systems as well as the same technicians' services. The harmonisation of processes contributes to a better comparability of the main performance indicators relating to the realisation of services and the elimination of breakdowns that are regularly monitored by HAKOM. This will make it easier to identify a potentially discriminatory HT's behaviour towards wholesale customers vis-à-vis its own retail units. Therefore, the expected effect of this decision is to improve the position of beneficiary operators in relation to HT's retail units in order for effective competition to be promoted. Also expected are a lower number of rejected requests for the provision of services via HT's FTTH network, improved end-user experience and a better utilization of HT's FTTH network, which all together contributes to the objectives of the Digital Decade.

Margin squeeze test methodology

HT and its retail unit, Iskon, are obliged to conduct **a margin squeeze test** for the broadband access service and the closely related IPTV service. The test is carried out in accordance with the Margin squeeze test methodology, adopted by HAKOM. In 2024, HAKOM adjusted this methodology to market conditions and conclusions derived from market analyses. The methodology was adopted in 2025.

Analyses of relevant markets

In 2024, HAKOM prepared a proposal for **the analyses of the market for wholesale dedicated capacity (M2/2020)** and **the market for wholesale trunk segments of leased lines – non-competitive relations (M14/2003)**. These wholesale services are used by operators to develop their own network, connect the network with other operators for the purpose of providing other electronic communications services at the retail level or connect base stations. They are also essential for the provision of services to business users - businesses and public institutions, where they are used in complex and tailor-made packages designed to contain publicly available fixed and mobile telephone services, data transmission services, broadband internet access services, cloud computing services, remote surveillance services, etc. In addition, these services are used to set up virtual private networks (VPNs) or connect branches at various fixed locations, including data centres, for the purpose of exchanging (transferring) data and accessing business applications. They are accompanied by specific user requirements regarding quality, availability, reliability, breakdown elimination times, etc. Dedicated capacity services are characterised by 'more stringent' requirements than those intended for the mass market, in particular as regards the prioritisation of traffic and the handling of service interruptions.

A detailed geographical analysis was also carried out to establish whether the whole area of the HR has equal competitive conditions or the market should be geographically segmented and regulations in specific geographic areas adjusted accordingly. After assessing the existence of SMP operators on the basis of identified obstacles to the development of effective competition, it was proposed to continue regulating these relevant markets. A public consultation was carried out in the first quarter of 2025.

Opinions on standard offers for access to networks co-financed by EU funds

Under the National Framework Programme (NFP), aimed at developing the broadband infrastructure in areas where there is no sufficient commercial interest to invest, HAKOM issues opinions on wholesale conditions and fees for access to networks co-financed by EU funds. After the initial approval of wholesale fees and conditions, HAKOM carries out a subsequent verification of conditions and fees once a year in order to adapt to changes in the market. This takes into account changes in wholesale fees and conditions in commercial areas, including changes in the regulated fees and conditions of SMP operators. In order for HAKOM to be able to give its opinion on the proposed fees, their amounts are checked once a year using benchmarking with regard to the same or comparable services offered in other areas of the HR, including the prices of regulated services. The table below shows the projects for which HAKOM issued opinions in 2024.

Table 1.4 Projects within the NFP for which HAKOM issued opinions on conditions and fees in 2024

Network operator	Type of access network	Area covered	Type of verification	Opinion issued
AI Hrvatska d.o.o.	optical fibre	Solin, Kaštela, Ivanić-Grad	subsequent	April 2024
Elkomnet d.o.o.	optical fibre	Virovitica-Podravina County (Municipalities of Crnac, Čačinci, Čađavica, Mikleuš, Nova Bukovica, Sopje, Voćin and Zdenci)	initial	March 2024
Hrvatski Telekom d.d.	wireless	Osijek-Baranja County, Brod-Posavina County, the cities of Rovinj, Poreč, Zaprešić, Dubrovnik, Mursko Središće, Sveta Nedelja, Vukovar, Ludbreg and Omiš and the municipalities of Đurmanec and Medulin	subsequent	April 2024
AI Hrvatska d.o.o.	wireless	Solin, Kaštela, Ivanić-Grad	subsequent	July 2024
Tesla net d.o.o.	optical fibre	Cities of Gospić and Otočac and the municipality of Plitvička Jezera	subsequent	July 2024
Kotar net d.o.o.	optical fibre	Municipalities of Sukošan, Sveti Filip i Jakov, Galovac and Škabrnja	subsequent	July 2024
Smart Island Krk d.o.o.	optical fibre	Island of Krk	naknadna	December 2024

Activities related to roaming regulation

Roaming Regulation (2022/612), which applies since July 2022, **extends the “roam-like-at-home” scheme** until 2032. The regulation sets forth wholesale roaming price caps, aimed at securing returns on costs for operators. In December 2024, the European Commission finalised and published a cost model on the basis of which existing wholesale roaming price caps will be reviewed. The model will also serve to calculate mobile termination rates (MTRs). Specifically, in December 2020, the Commission adopted a Delegated Act setting uniform EU/EEA termination rates with a view to achieving full harmonisation at the EU level. As part of the BEREC Roaming Working Group, HAKOM carried out the activities related to necessary data collection and the preparation of a report for the European Commission to be taken into account by the Commission when defining the rates.

Universal service

Universal service is an internet access and voice communication service of a certain quality that must be available to every citizen of the HR at any reasonable location at an affordable price. It also includes special offers with prices for services tailored to the needs of a socially vulnerable group of citizens. If HAKOM determines that the retail prices of universal services are not affordable to a socially vulnerable group of consumers, it will require the universal service operator to offer affordable tariff options or packages, at least at a fixed location. Universal service operators must take specific measures and provide appropriate support to consumers with disabilities, with a view to ensuring the availability and affordability of the related terminal equipment and special equipment and services enabling those consumers to access universal service in the same way as other consumers, including, where appropriate and applicable, total conversation services and transmission services.

Once every three years, HAKOM carries out a procedure to determine whether there is a need to designate a universal service operator. In this procedure, HAKOM conducts a quality analysis of the provision of universal services (hereinafter: quality analysis, details available via the [link](#)), taking into account the results of the geographical survey referred to in Article 58 of the ECA and, where appropriate, any additional evidence that the availability of universal service cannot be ensured under normal market conditions or through other possible national public policy mechanisms. This procedure applies equally to the determination of affordable universal services. One or more operators may be designated to provide universal services throughout the national territory and/or to cover different parts of the territory of the HR pursuant to a decision of HAKOM.

Based on the quality analysis, HAKOM concluded that it was necessary to continue to provide at least the following services within the scope of universal services:

- broadband internet access with a minimum speed of 14/1 Mbit/s and voice communications services at affordable prices;
- installing public payphones in or near locations of public interest;
- affordable tariff options or packages tailored to socially vulnerable groups of consumers in the whole territory of the HR, with the price cap of EUR 6.77 (including VAT) for internet access.

Pursuant to a [Decision](#) of HAKOM dated 17 October 2024, the following have been designated as universal service operators in the HR territory, for a period of three years, starting on 1 December 2024, and entrusted with ensuring the accessibility of universal services: Hrvatski Telekom d.d. (in the whole HR territory), AI Hrvatska in 19 geographical units/municipalities⁸ and Telemach Hrvatska in 5 geographical units/municipalities⁹.

In addition, pursuant to this decision, all the three operators were appointed as universal service operators for affordability in the whole HR territory, starting on 1 December 2024. The decision extended the categories of end-users entitled to the universal service package for socially vulnerable users. This right can now be exercised by: beneficiaries of the guaranteed minimum benefit, beneficiaries of the right to an inclusion allowance of the first, second or third level of support who are not provided with accommodation or organised housing, beneficiaries of the national benefit for the elderly, beneficiaries of the allowance for unemployed Croatian Homeland War veterans and their family members, beneficiaries of the allowance for civilian victims of the Homeland War and beneficiaries of the energy-vulnerable consumer allowance (this right may also be exercised by household members of the listed categories).

Market Day

The eleventh annual conference dedicated to the electronic communications market was held in mid-October - **Electronic Communications Market Day**. The conference presented the most important activities in the market, with an emphasis on industry perspectives and development, the effects of deregulation, the future use of RF spectrum as a limited national resource and amendments to be introduced to universal service. In four panels, the conference provided an opportunity for regulators and stakeholders to share their views, experiences and examples of positive practices and contribute to market changes through open dialogue.

⁸ Črnomerec, Donja Dubrava, Donji grad, Gornja Dubrava, Novi Zagreb-istok, Novi Zagreb-zapad, Peščenica-Žitnjak, Podsljeme, Podsused-Vrapče, Sesvete, Stenjevec, Trešnjevka-jug, Trešnjevka-sjever, Trnje, Brela, Split, Tučepi, Brckovljani and Dugo Selo

⁹ Novi Zagreb-istok, Novi Zagreb-zapad, Stenjevec, Trešnjevka-jug and Trnje

PLANNING AND REALISATION OF ACTIVITIES

Electronic communications market activities						
No.	Activity	Result	Planned completion	Strategic goal	Realisation	Implementation assessment
1.	Harmonise SMP operators' regulatory obligations with the analyses of the wholesale broadband access market	SMP operators' regulatory obligations harmonised with the provisions of the analyses of the wholesale broadband access market	I	2.1, 2.2	Decision on the manner of implementation of EoI obligation adopted. RIA carried out	Achieved
2.	Harmonise the margin squeeze test methodology with the provisions of the analyses of the wholesale broadband access market	Margin squeeze test methodology harmonised	II	2.1, 2.2	Document margin squeeze test methodology adopted RIA carried out	Achieved
3.	Complete the analysis of the market for wholesale dedicated capacity (M2/2020 i.e. M4/2014 & exM14/2003)	Analysis of the market for wholesale dedicated capacity completed	II	2.1, 2.2	Data collected and analysed Proposals of decisions and the analysis of markets M2/2020 and exM14/2003 published for public consultations Draft of RIA prepared for public consultations	Proceeding as planned

4.	Apply the economic replicability test for the purpose of symmetric regulation	Economic replicability test is applied for the purpose of implementing symmetric regulation	I	2.1, 2.2	There were no requests	Achieved
5.	Update WACC values	WACC values established	IV	2.1, 2.2	Decision on WACC values adopted	Achieved
6.	Set regulated wholesale prices based on the updated BU-LRIC+ cost model	New wholesale prices set	I	2.1, 2.2	8 decisions setting wholesale prices adopted	Achieved
7.	Develop a model for the assessment of economic replicability of the network operator's retail offers in the context of MVNO access	Developed model that will be used for the assessment of economic replicability of the network operator's retail offers, taking into account various modalities of wholesale MVNO access and pertaining retail costs	IV	2.1, 2.2	Public procurement procedure for consultancy services implemented Contract with the selected provider signed	Proceeding as planned
8.	Amend reference offers	New wholesale conditions in reference offers	Ongoing	2.1, 2.2	Decision amending the HT reference offer for the wholesale broadband access service	Achieved

9.	Issue opinions on reference offers for access to networks co-financed from EU funds	HAKOM's opinions regarding reference offers	Ongoing	2.1	6 opinions issued	Achieved
10.	Conduct the margin squeeze test (MST)	Tariff packages/offers of operators subject to the MST in accordance with the methodology	Ongoing	2.1	All received offers tested within the time limit	Achieved
11.	Enable dynamic reports on EC market indicators on HAKOM's website	Dynamic reports published on HAKOM's website	IV	2.1, 5.1, 5.2	Version of reports to be tested before publishing made	Proceeding as planned
12.	Collect and process data on EC market	Reports on EC market indicators	Quarterly	2.1, 5.1	Quarterly reports on EC market indicators published	Achieved
13.	Supervise the implementation of regulatory obligations	Analysis and disclosure of regulated wholesale KPIs, supervision administrative acts	Ongoing	2.1, 2.2	Quarterly reports published Inspection supervisions started	Achieved
14.	Resolve regulatory disputes between operators	Administrative acts	Ongoing	4.2	5 disputes resolved	Achieved

15.	Implement activities related to roaming regulation	Support to BEREC and operators	Ongoing	4.1, 1.1	Data collected and activities implemented related to the draft BEREC opinion on roaming regulation	Achieved
16.	Monitor and supervise the implementation of MVNO access obligations	Enabled access to MVNOs	Ongoing	2.1, 2.2	Operator notification of MVNO access request received No follow up activities	Achieved
17.	Analyse security risk assessments, risk treatment plan and operator audits	Internal report and/or inter-sectoral report and/or inspection supervision	III	1.3	Internal annual report prepared Findings of 3 inspection supervisions published Decision AI Decision HT Decision Tele-mach	Achieved
18.	Process reported security incidents	Internal report and/or inter-sectoral report and/or inspection supervision	Ongoing	1.3	Annual internal report prepared	Achieved
19.	Analyse the security of networks and services and publish collected data	Reports on cyber incidents and network security Quarterly reports (SOP) Annual reports (SOP, ENISA)	Kvartalno II	1.3	Quarterly reports and annual report prepared ENISA report NSC report	Achieved

20.	Implement NIS 2 Directive in cooperation with other bodies of the national working group	Regulatory amendment proposal	IV	1.3	Proposal prepared, Cybersecurity Act and Cybersecurity Regulation adopted	Achieved
21.	Implementation of CER Directive in cooperation with other bodies of the national working group	Regulatory amendment proposal	IV	1.3	Proposal prepared, Critical Infrastructure Act enacted	Proceeding as planned
22.	Promote the use of IPv6 addresses in cooperation with other relevant authorities	Nacional report and guidelines, workshop	IV	1.1	Workshop with operators, MJ-PADT and industry held NOG workshop	Proceeding as planned
23.	Implement net neutrality rules (TSM Regulation)	Operators work in accordance with TSM Regulation Opinions and comments for BEREC Annual Report for BEREC and EC	Ongoing Ongoing II	1.1	Opinions for BEREC prepared Annual report for BEREC and EC prepared Annual report on the implementation of TSM Regulation prepared	Achieved
24.	Analyse quality parameters for operators' service provision	Semi-annual reports	I i III	1.1	Reports achieved and published	Achieved
25.	Manage the addressing and numbering space	Numbering and addressing plan	Ongoing	2.3	119 number allocation decisions issued	Achieved
26.	Ensure and monitor the number porting process	CADPN system in operation	Ongoing	1.1	Available >99% of the time	Achieved

27.	Supervise the quality of universal service provision in electronic communications	Annual report on universal service provision quality	Ongoing	1.2	Report published	Achieved
28.	Carry out an analysis of universal service provision quality	Analysis of universal service provision quality	IV	1.2	Analysis completed RIA carried out Analysis of universal service provision quality	Achieved
29.	Selection of the universal service operator	Council Decision on designating the universal service operator	IV	1.2	Designated universal service operators Decision on selected universal service operators	Achieved
30.	Process registration applications and notifications on the start or termination of the provision of electronic communications services	HAKOM's certificates and updated list in e-Operator EU register of operators updated with Croatian operators	Ongoing	2.2	139 certificates issued	Achieved
31.	<i>Activities under items 31.–39. from the 2024 Annual Work Programme are shown in a table in the chapter Consumer Protection</i>					
40.	Conduct inspection supervisions in the area of electronic communications	Supervision administrative acts	Ongoing	1.1	Inspection supervision report	Achieved
41.	Issue and publish expert opinions	Expert opinions	Ongoing	1.1	One expert opinion issued	Achieved

42.	Educate and raise awareness of the protection of children in electronic communications	Safer Internet Day marked in February Workshops for children and young people	Ongoing	1.1	https://www.hakom.hr/hr/dan-sigurnijeg-interneta-zajedno-za-bolji-internet-728/728 , education sessions held for students and parents in 76 primary school grades; questionnaires prepared for students before and after education; Privacy Calculator updated	Achieved
43.	Supervise the implementation of regulatory obligations for the ECI	Analysis of regulated KPIs for the shared use of cable ducts	Ongoing	4.1	Internal report	Achieved
44.	Implement GIA in cooperation with other public authorities in the working group	Regulatory amendment proposal	Ongoing	4.1	Proposal prepared, regulations in the adoption procedure	Proceeding as planned
45.	Enhance the system of collecting data for the geographical review of coverage by broadband networks and their use (mapping) – GIS portal	Improved GIS portal	IV	3.1	Improved software enables faster and easier retrieval of targeted data on the GIS portal	Achieved
46.	Collect and process data on broadband access coverage	Graphical display accessible on the GIS portal	Ongoing	3.2	Data collected, processed and accessible to the public	Achieved

47.	Issue opinions in the procedure of drafting and adoption of physical plans and public consultation, including the State Plan for Spatial Development	HAKOM's opinions	Ongoing	3.1, 5.1	448 opinions and 415 requirements -guidelines issued	Achieved
48.	Establish special conditions for construction/connection conditions/grant main project certificates	HAKOM's administrative acts	Ongoing	5.1	17, 464 main project certificates granted and 28, 611 special conditions for construction established	Achieved
49.	Identify the infrastructure operator (right of way)	Right of way certificates	Ongoing	1.3	85 right of way certificates for infrastructure operators and 290 right of way certificates for natural persons	Achieved



02

POSTAL SERVICES

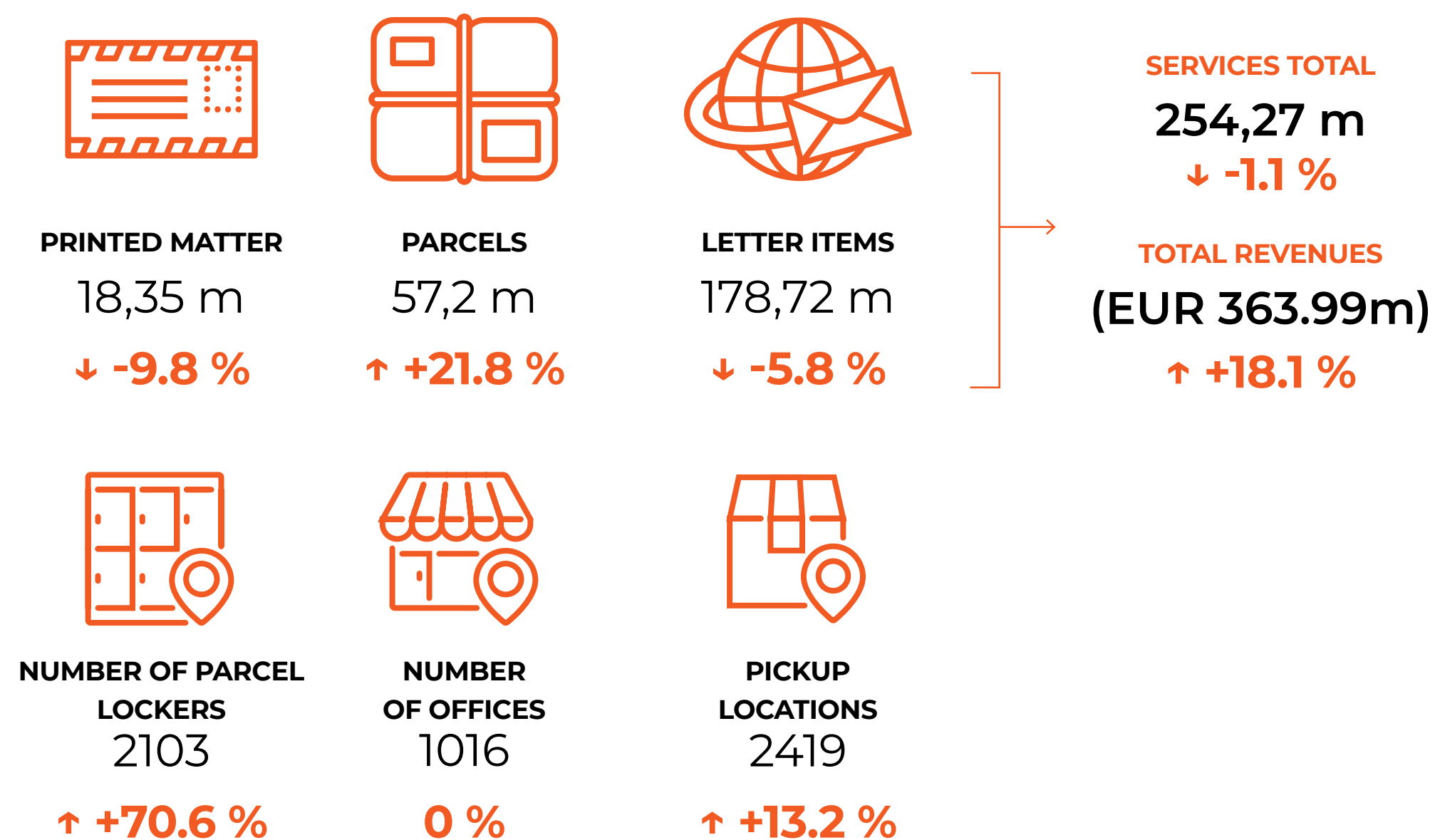
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Figure 2.1 Basic data on the postal services market



Even in today's digital age postal services still have an important role in maintaining global connectivity by enabling an efficient distribution of letters, parcels and goods. Modernised postal services provide a necessary support to propulsive e-commerce, thus contributing to the economic development and social and economic inclusion. In 2024, the main activities focused on the development of the postal services market and the preservation of universal service in the HR. HAKOM, through its regulatory activities, carried out in line with the EU's objectives, strove to implement European guidelines and practices. Currently deliberated at the EU level are possible amendments to and the adoption of the new Postal Services Directive, which could additionally shape the future of postal services in EU Member States.

MARKET OVERVIEW

In 2024, the postal services market continued to be affected by digitalisation and changing consumer and user habits. The traditional forms of physical communication are increasingly being

replaced by electronic forms, and consumers are creating an increased demand for the physical delivery of e-commerce related parcels. These changes affected the structure of services, with both 'classic' and other postal services under constant pressure to adapt to users' market demands, which created new services and service provision business models, but also added new value to existing services.

Trends from previous years continued into 2024. Fewer postal services were recorded, the main reason being the lower number of letters and printed matter. At the same time, the number of parcels grew to a record high in 2024, with the result that the positive trend of previous years continued and their market share increased. These trends are almost identical to those in other EU Member States.

International postal traffic, as forecast, recovered slowly following a volatile environment in the past few years and the number of services in cross-border traffic increased. This continued the positive trend, due to an increase in the volume of e-commerce, a key generator of the need for postal services in international traffic.

Revenues from postal services continued to grow, primarily due to the growth in higher value-added services, which have a higher price, as well as to an increase in the prices of certain postal services.

Providers

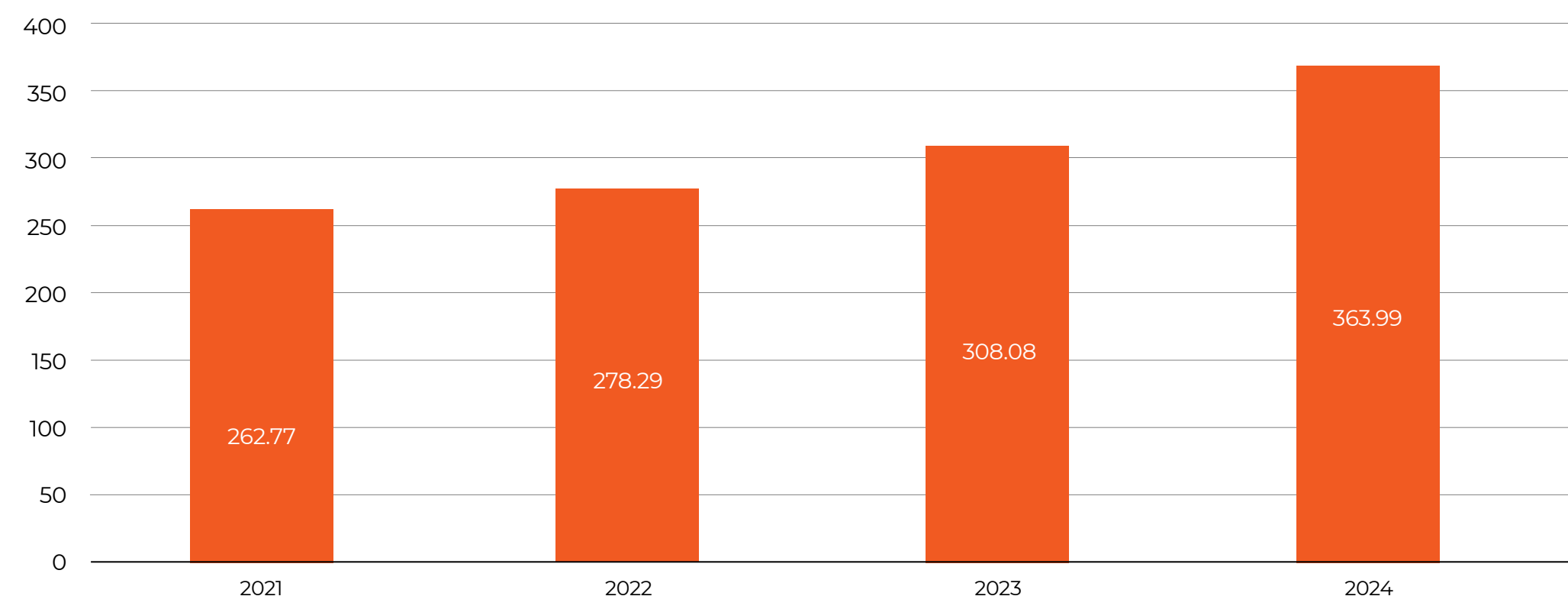
A total of 23 providers provided services in the postal services market at the end of 2024, which was 1 fewer than a year earlier, given that 1 provider was removed from the registry of postal service providers pursuant to the [Postal Services Act \(PSA\)](#) because it had not provided registered services for more than a year. Hrvatska pošta d.d. (HP) is the only postal service provider in the HR that, in accordance with the PSA, has the right and obligation to provide universal service for a period of 15 years from the date of entry into force of the PSA. In addition to universal service, HP also provides interchangeable and other postal services, thus taking a leading position on the market. Through its network of postal offices, HP also offers additional services outside the postal sector, such as financial services, sales of goods, etc. Its presence on islands, rural and less densely populated areas is extremely important for the local population. Of other registered providers, 19 provided other postal services, with 3 of them also providing interchangeable postal services, while 3 providers provided exclusively interchangeable postal services. In addition to domestic providers, there are global and regional postal companies such as DHL, DPD, FedEx, UPS, GLS, Intereurope and others that provide their services through their own networks as registered providers or in cooperation with other providers within the HR. Most providers, 13 of them, provided services in domestic and international traffic, while 10 providers provided services only in domestic traffic, including 2 providers that provided services in the limited area of one or more counties and/or cities. At the end of 2024, 11,734 workers were employed in jobs related to postal services, an increase of approximately

1 percent compared to the end of 2023. In 2024, with the aim of streamlining operations and improving the quality of parcel delivery, providers continued to introduce new access points for the pickup and/or drop-off of parcels. The number of facilities (offices and pickup locations) and parcel lockers increased¹⁰, so that the end of 2024 saw a total of 3,435 facilities, which is an increase of 8.9 percent compared to 2023, and 2,103 parcel lockers, which is 71.6 percent more than at the end of 2023.

Revenues

The positive revenue growth trend continued into 2024, despite the lower number of services provided. The growth was mainly driven by an increase in the number of value added parcels and services, whose revenues compensated for the decrease in revenues from letter items. In addition, the revenue growth was partly boosted by an increase in the prices of certain services. In 2024, total revenues amounted to EUR 364m, an increase of 18.1% from 2023.

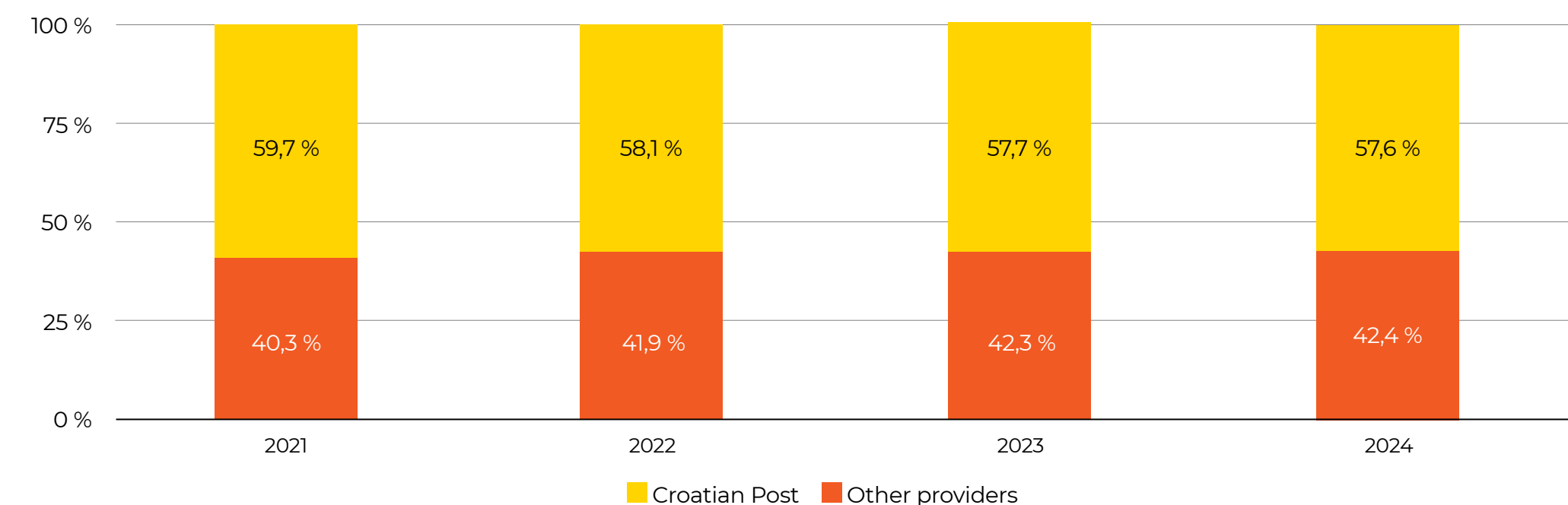
Figure 2.2 Total revenues from postal services (in EUR million)



¹⁰ Self-service devices for the pickup and drop off of postal items.

Both HP and other postal service providers recorded an 18 percent increase in revenues, and market shares by revenue did not change compared to the previous year.

Figure 2.3 Providers' shares in total revenues

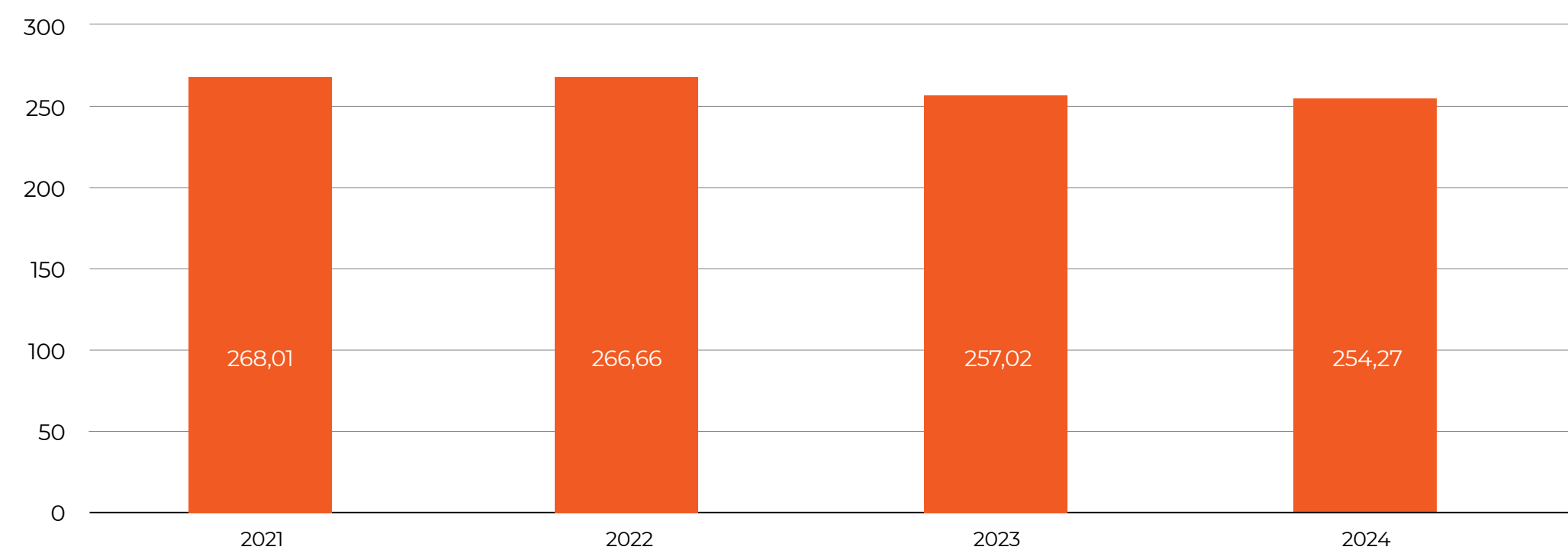


The revenue structure shows a continued upward trend in revenues from high-value services, especially as concerns other providers, while HP still generates most of its revenues (about 60 percent) within universal service, providing traditional postal services whose volume is shrinking. Revenues from high-value services have been higher than revenues from traditional services for several years, and although the gap did not widen in 2024 due to universal service price corrections, the share of high-value services is expected to increase further in the long term. The key driver of this trend remains the development of e-commerce and related postal services, which will further affect the market revenue structure in the coming years.

POSTAL SERVICES

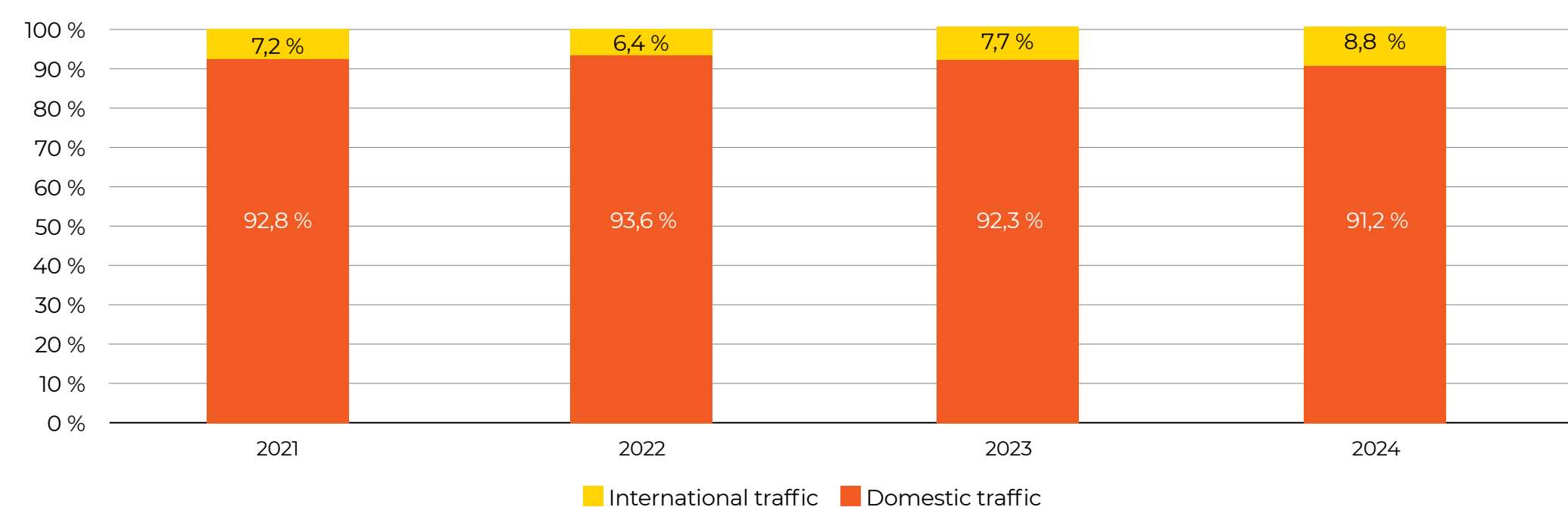
The total number of postal services in the HR has been steadily declining, which is in line with the trends present in the postal markets of other EU Member States and other developed countries. In 2024, the negative trend was somewhat slower, with a decrease of 1 percent from the previous year and a total of 254,270,213 postal services delivered. This trend is expected to continue more strongly in the coming years.

Figure 2.4 Total number of postal services (in million)



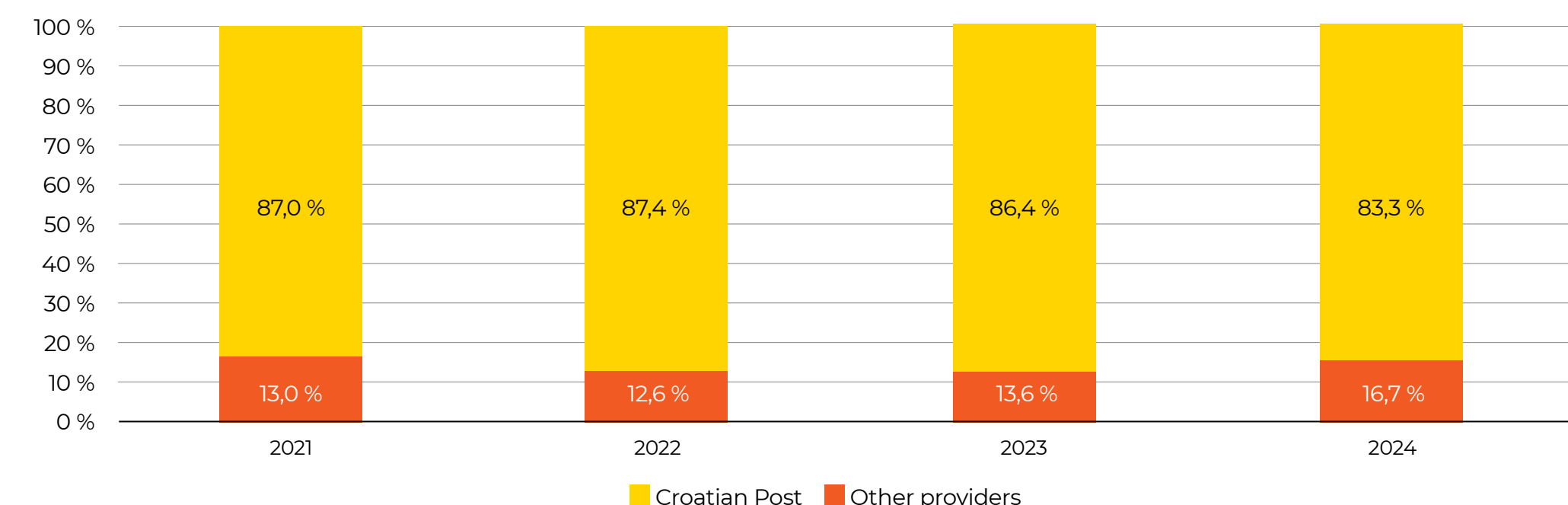
In 2024, international postal traffic took place in a relatively favourable environment. In total, 22.3 million international postal services were provided, an increase of 2.6 million or about 13 percent from the previous year. The share of international traffic in total traffic also increased as a result, up to 8.8 percent in 2024, although it was still below the highest recorded share of 11 percent in previous years. Further growth is expected, generated primarily by the expansion of cross-border e-commerce, the main driver of international postal services.

Figure 2.5 Shares of postal services by types of traffic



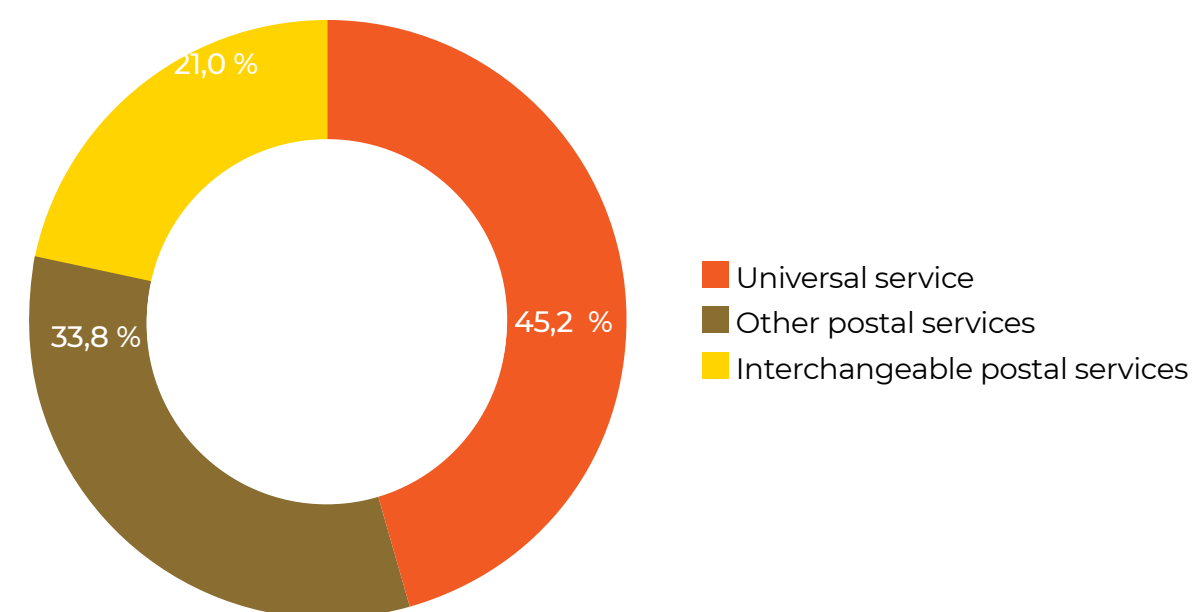
HP has remained the largest postal service provider in the market in terms of the number of services provided, but its market share is gradually decreasing. In 2024, HP provided 211.7 million services, accounting for 83.3 percent of the total market, about 3 percentage points less than the year before. However, while dominating the number of services, HP is not equally dominant in revenue generated, where its share is around 58 percent, while other providers are gradually strengthening their market presence.

Figure 2.6 Providers' market shares by the number of services provided



In 2024, HP reduced the number of its services by 4.7 percent from the previous year, while other providers recorded a growth of 22 percent. The downward trend in the share of universal service in the total number of services continued, although universal service retained the highest market share of 45.2 percent. While this is a slight decrease from 2023, compared to the pre-pandemic 2019, however, the number of services was 16 percentage points lower, with the importance of traditional postal services within universal service decreasing the most. At the same time, the number and share of other postal services grew, with other services accounting for 33.8% and interchangeable services for 21% of the market at the end of 2024.

Figure 2.7 Shares of types of postal services



The environment in which postal services have been provided in recent years has had a significant impact on the demand for certain types of services. The number of letters and printed matter has continued to decline, while the delivery of parcels¹¹ has continued to grow, in line with trends in other EU Member States. In 2024, around 11 million fewer letters were delivered than in the previous year, down by 5.8 percent, while the number of printed matter decreased by 10 percent. Cumulatively, between 2021 and 2024, the number of letters decreased by 14.5 percent and the number of printed matter by 16.2 percent. At the same time, parcel deliveries were growing strongly – 10.2 million more in 2024 than in the previous year, which is an annual increase of about 22 percent and an increase of 55 percent compared to 2021.

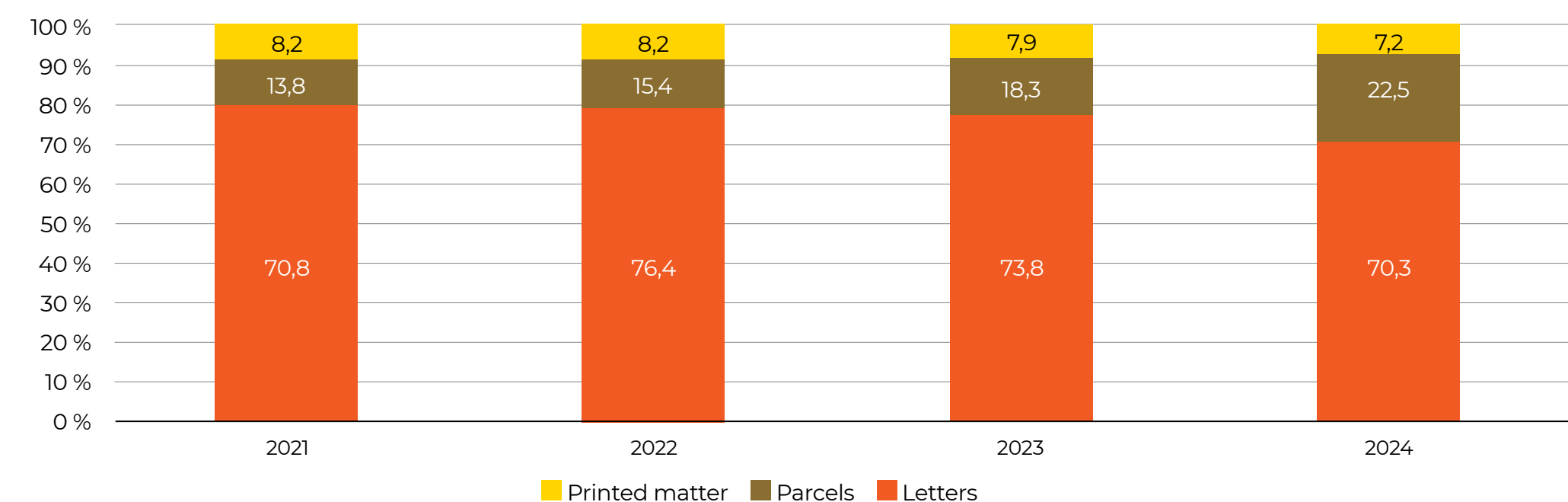
Figure 2.8 Number of postal items by type (in million)



¹¹ Regular parcels and value-added items (express items)

Changes in demand for certain types of postal services led to a further change in the market structure, with the share of parcels continuing to grow and the share of letters and printed matter declining. In 2024, the share of parcels reached 22.5 percent, an increase of 4 percentage points from the previous year and the highest market share recorded. This growth trend in parcel traffic is expected to continue in the future, mainly due to the expansion of e-commerce, where parcel services are a key part of the logistics chain.

Figure 2.9 Share of postal services by type

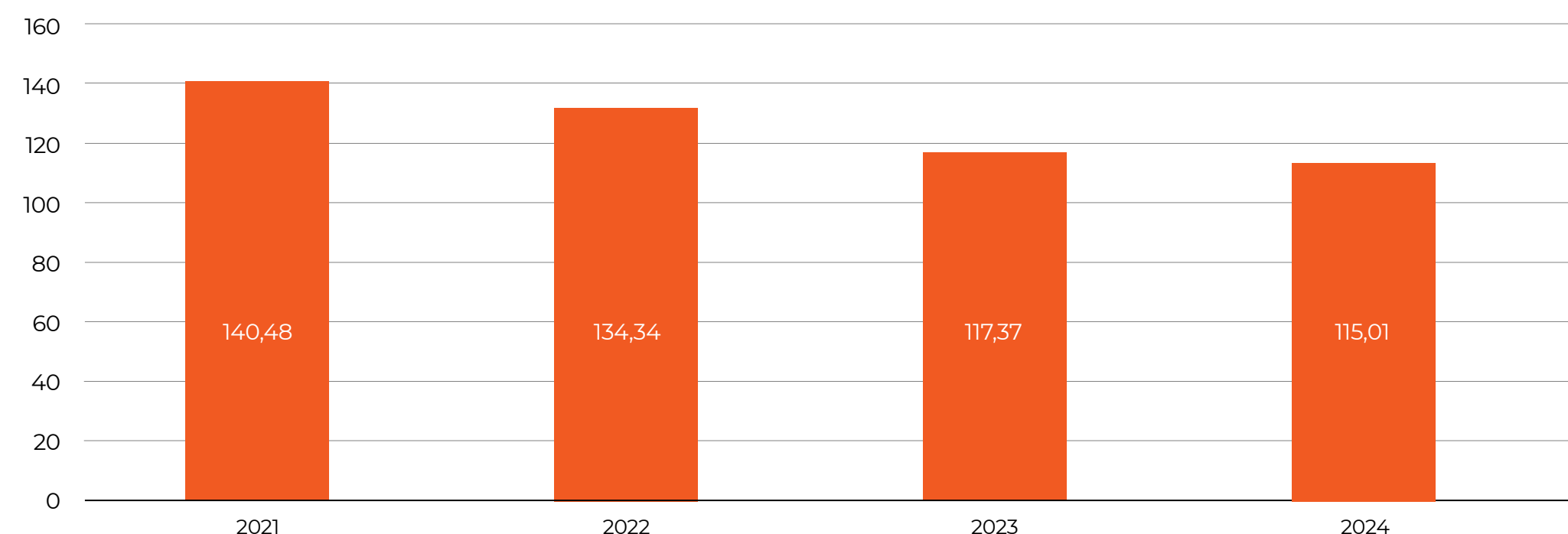


Universal service

Universal service¹² is a set of different postal services in domestic and international traffic the provision of which is of special interest to the HR and which, in addition to adhering to a certain standard of quality, needs to be available at an affordable price and under the same conditions to all postal services users throughout the HR territory. The only provider of universal service in the HR is HP, which has acquired the right and obligation to provide this service pursuant to the PSA. In 2024, 115,010,990 services were delivered within the scope of universal service, which is a decrease of 2 percent compared to the previous year and a continuation of the negative trend. This decrease was expected and resulted from accelerated digitalisation and changes in user communication habits, which particularly affect this segment. Between 2021 and 2024, the number of services within universal service decreased by 25.5 million, and this trend is expected to continue.

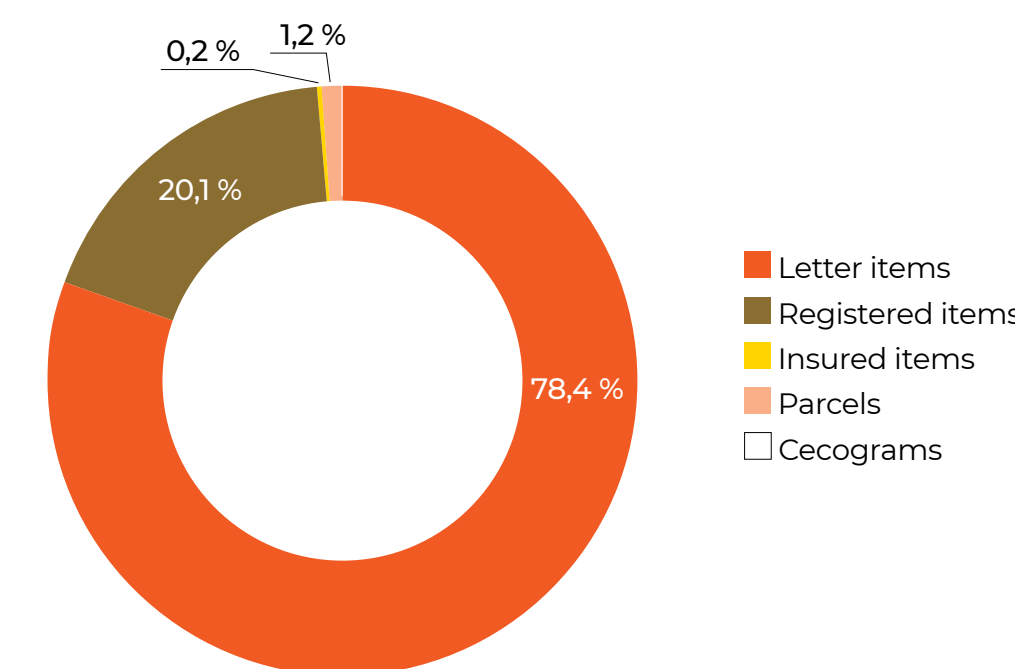
¹² Universal service includes postal services in domestic and international traffic: clearance, sorting, transport and distribution of letter items of up to 2 kilograms, of parcels of up to 10 kilograms and of registered mail, insured items and cecograms of up to 7 kilograms as well as sorting, transport and distribution of parcels of up to 20 kilograms in international inbound traffic.

Figure 2.10 Total number of services within the scope of universal service



The share of universal service in the total number of postal services continued to fall, standing at 45.2% in 2024, the lowest share so far. Despite the reduction in the number of services, universal service revenues did not drop, but increased to around EUR 126.4m. This increase in revenues is the result of an increase in the prices of certain services within universal service, carried out in accordance with HAKOM's regulatory decisions. Within the scope of universal service, letter items still dominate, accounting for about 78 percent of the total, which is 1 percentage point less than in the previous year. Registered items follow with a share of 20.1 percent, while all other services together make up the rest.

Figure 2.11 Shares of services realised within the scope of universal services by type



Universal service will continue to play an important role as a service of general interest, primarily because of its affordability and availability throughout the territory of the HR. However, given the development of more modern, efficient or less costly and environmentally friendly means of communication, its gradual reduction and loss of significance is expected. This trend, which is also present in other EU Member States, will result in a further reduction in the number of services within universal service in the coming years.

Some of the services falling within the scope of universal service were provided, in addition to by the universal service provider, by other providers, but in the context of interchangeable postal services¹³. These services, provided by 7 providers in 2024, reached a total of 53.4 million services, which represents a decrease of 5.5 percent from the previous year and a change in the growth trend. The share of interchangeable postal services in the market decreased to 21 per cent, while revenues reached EUR 26m.

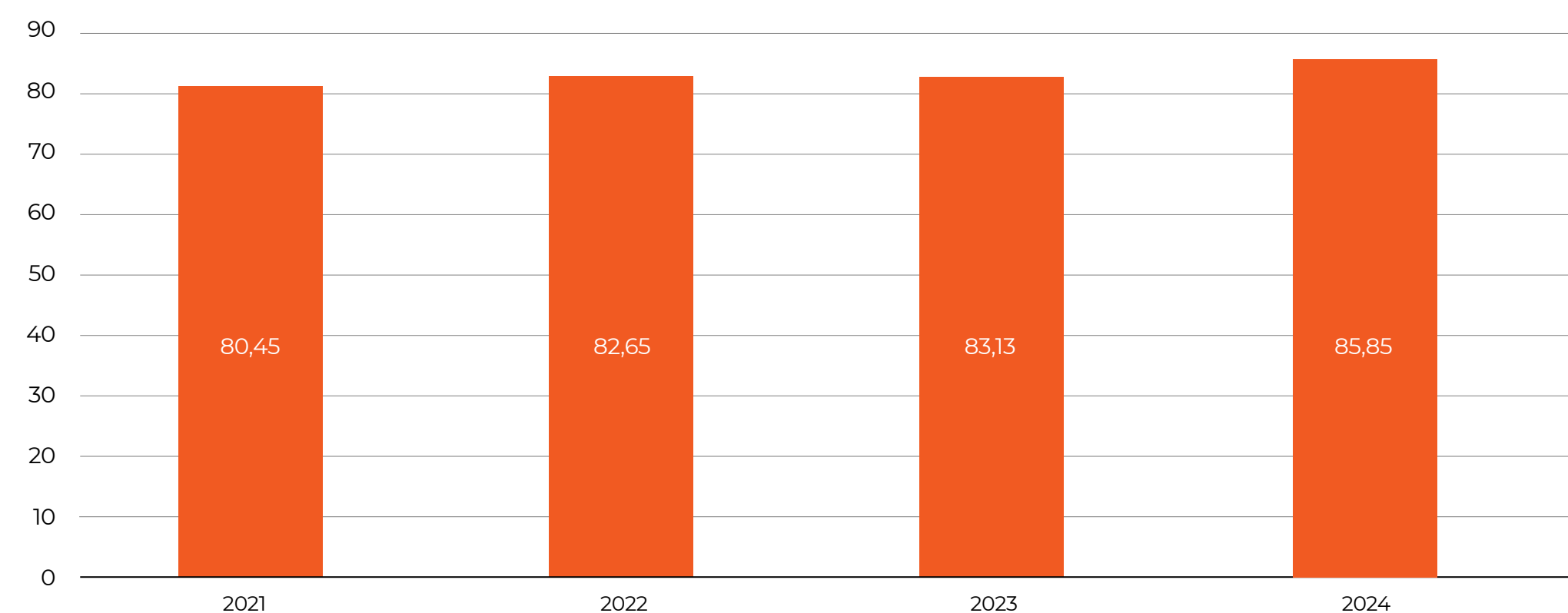
Other postal services

Other postal services include services that are outside the scope of universal service and interchangeable postal services, and include basic types of items such as letters and parcels with some

¹³ Postal services from the scope of universal service, which may deviate from the conditions of universal service, such as the obligation of daily delivery or the obligation to provide services in the entire territory of the country, but may from the user standpoint be viewed as being within the scope of universal service because they are sufficiently interchangeable with universal service.

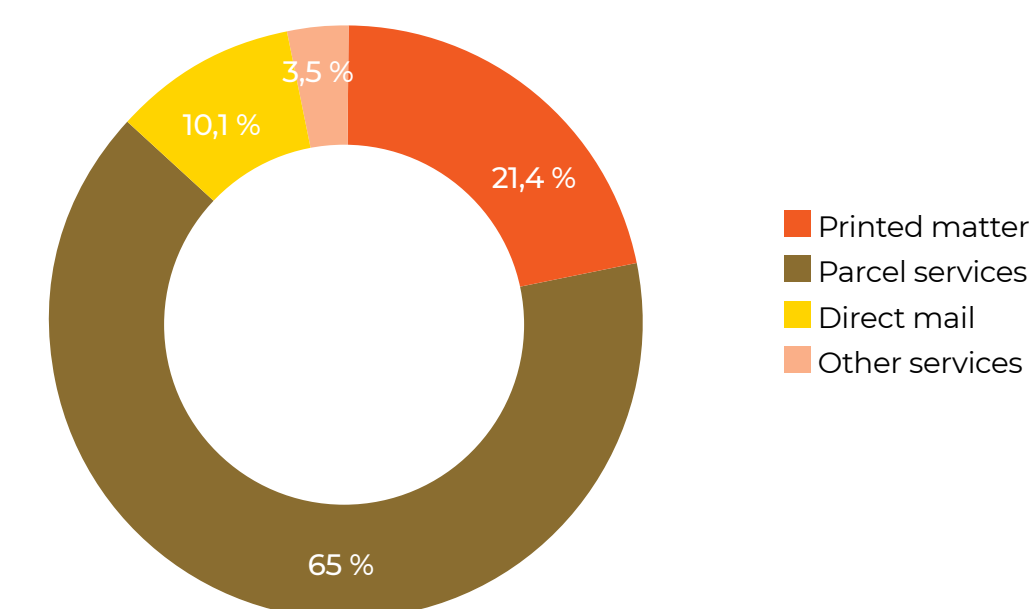
added value¹⁴, the so-called express items, printed matter and direct mail¹⁵. This segment of the market is among the most dynamic ones, and competition is particularly pronounced because a large number of providers offer these services. In this segment, providers are enabled to offer services to users that best meet their specific needs and requirements, thus opening up space for further growth and market development. Particular emphasis is placed on the development of new ways of providing e-commerce services as well as on adding new value to existing services by adapting and complementing services or introducing new ones. Other postal services accounted for 85,845,140 services, which is an increase of 3.3 percent from the previous year, and the share of this segment in the total market increased by 1.5 percentage points, reaching 33.8 percent.

Figure 2.12 Total number of other postal services (in million)



The increase in the total number of other postal services had a significant impact on changes in the structure of services provided, so that the trend observed in previous years continued. In 2024, there were 10.1 million more parcel services than in the previous year, which resulted in 65 percent of all other services having some added value, thus increasing their market share by 10 percentage points. At the same time, the number and shares of other types of services recorded a decline, indicating an increasing market focus on value-added services.

Figure 2.13 Shares of services realised within the scope of other postal services by type



The increase in the number of parcel services has led to significant changes in revenues from other postal services. In 2024, total revenues from these services increased by EUR 30.4m from the previous year and total revenue reached EUR 211.6m. This growth of 16.8 percent confirms the continuation of the positive trend, while revenues from other postal services account for 58.1 percent of total postal revenues on the market. Although these services account for about one third of all postal services, their share of total market revenue shows significant potential, especially in the segment of high-value services, such as those related to e-commerce. Data on parcel services further confirm this trend, as in 2024 they accounted for about 22 percent of the total market and generated about 55 percent of total revenues. These changes clearly confirm the potential of parcel services, especially in the context of e-commerce, where significant revenues can be achieved with a smaller number of services, which contributes to further market growth. Within other postal services, the largest number of parcel services is generated by HP, while the largest revenue is generated by the provider General Logistics Systems Croatia d.o.o. (GLS Croatia).

¹⁴ Added value means clearing items when called by users, enabling tracking, observing contracted delivery times, etc.
¹⁵ Direct mail – a postal item consisting solely of advertising, marketing or publicity material and comprising an identical message, except the addressee's name, address, and identification number, as well as other modifications that do not change the nature of the message, which is sent in at least 500 copies.

Figure 2.14 Providers' shares by the number of realised parcel services within the scope of other postal services

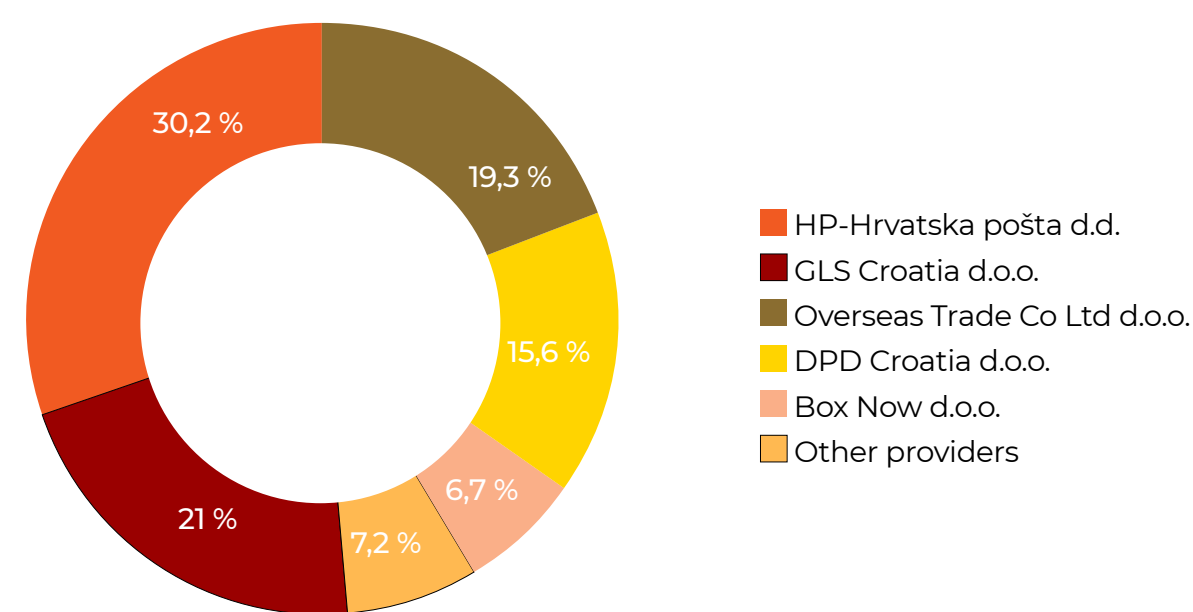
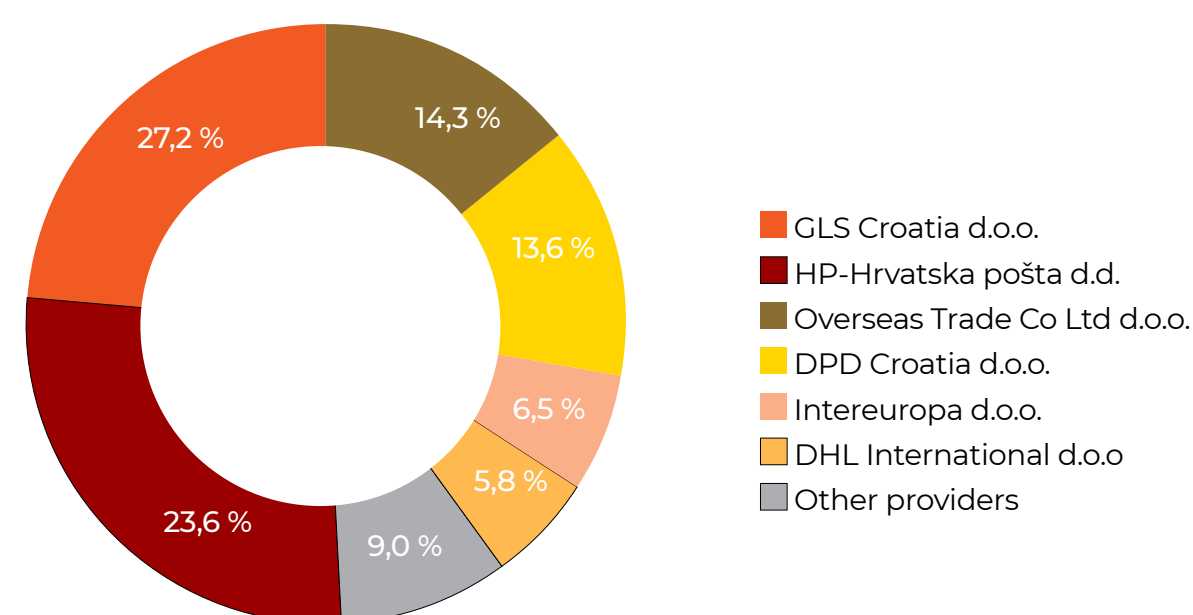


Figure 2.15 Provider shares by revenues from parcel services within the scope of other parcel services



divergence analysis of the key parameters of the allowed **price cap** for a basket of services, which includes a letter of up to 50 grams in domestic and international traffic and a registered item of up to 50 grams in domestic and international traffic. The analysis showed that the corrected allowed price increase was 20.26 percent, while under the decision in effect the allowed increase is 26.50 percent. As the divergence remained within the permitted limits, there was no need for any further correction of the cap or for a new decision to be taken.

At HP's request, HAKOM also conducted an extraordinary review of the deviation of key parameters of the price cap model, where the analysis comprised the projections of postal item volumes, operating costs and market conditions. Identified issues included labour shortages, high employee turnover and the need to adjust workers' material rights to ensure the stability and sustainability of universal service in addition to the required quality. The analysis also showed that the prices of individual services in Croatia, such as letters of up to 50 grams, remained among the lowest in the EU.

On the basis of the audit carried out, in October 2024 the Council of HAKOM adopted a [Decision on increasing the weighted price of the universal service basket](#) by an additional 22.02 percent, to be applied until 31 December 2025. Although the Decision allows for a price increase, HP did not change the prices of the services included in the basket until the end of 2024.

Universal service prices

Within the scope of its responsibilities under the PSA, as in previous years and throughout 2024, HAKOM monitored and regulated universal service prices and determined the conformity of those prices with the provisions of the PSA and the guidelines of the EU Postal Directive.

Thus, in addition to verifying the prices related to the basket of services within the price cap, HAKOM also carried out a control of the application of universal service prices in contracts concluded by HP with large users. The aim was to prevent any abuse of HP's dominant position, since such abuses could result in distortions of competition and squeezing out competition in the field of interchangeable postal services.

Therefore, HAKOM continuously controlled the contracts concluded by HP for universal service, interchangeable and other postal services, ensuring their compliance with regulatory requirements and market principles. These activities ensured that prices and contracts comply with regulations, protecting the interests of users and preventing potential distortions of competition.

REGULATORY ACTIVITIES

Price cap for the period from 2023 to 2025

In accordance with the [Methodology for the regulation of prices of universal service](#) (Methodology) and the adopted [Decision on the allowed price cap](#) of January 2023. HAKOM conducted a

Accounting separation (regulatory financial statements)

The PSA lays down the obligation of **accounting separation** for postal service providers, in particular the universal service provider, as well as HAKOM's competence in the procedure. Accordingly, in May 2024, HP submitted to HAKOM the Regulatory Financial Statements (RFS) for 2023 with associated documents, which was prepared in compliance with HAKOM's [Instructions on accounting separation and cost accounting of the universal service provider](#) (Instructions).

Pursuant to the provisions of the PSA, HAKOM initiated a procedure to verify the accounting separation of HP's revenues and expenses, including an audit by an independent audit company. The audit of the RFS for 2023 was conducted by Crowe Revizija d.o.o., which concluded that the 2023 RFS was prepared in compliance with the PSA and Instructions and complied with International Financial Reporting Standards.

After the audit and pursuant to the auditor's opinion, HAKOM issued a [Statement of compliance of the methodology of accounting separation by Hrvatska pošta](#), confirming that the 2023 RFS complied with all prescribed requirements by its form, content and methodology.

Universal service provider's net cost

Pursuant to the provisions of the PSA, if the obligation to provide universal service generates net cost which constitutes unfair financial burden on the universal service provider, the universal service provider is entitled to the reimbursement from the state budget.

In June 2024, HAKOM received from HP, as the universal service provider, a Request for the reimbursement of the universal service net cost for 2023. The Request presented the economic result with the obligation of the universal service provision against the scenario without such an obligation. According to the data provided, HP stated that the universal service net cost for 2023 was EUR 21,029,283.

Pursuant to the PSA and the [Instructions on the calculation and reimbursement of the net cost of universal service](#), HAKOM carried out a detailed calculation verification procedure. Following the analysis and the necessary corrections, it was found that all the conditions for establishing that the net cost represented an unfair financial burden for the universal service provider were met and the HAKOM Council adopted a [Decision setting the net cost](#) for 2023 at EUR 14,954,492, which is EUR 6,074,791 less than the amount stated in HP's request.

Network access – (RIA and ordinance amendments, submission of new access prices)

In accordance with its regulatory powers, at the beginning of 2024, based on HP's request for harmonising and amending the Ordinance on the provision of universal service in the part regulating the price of access to the postal network, HAKOM carried out an in-depth analysis of the received request using the Regulatory Impact Assessment (RIA) methodology, in order to objectively assess the justification of the request and identify possible regulatory adjustments that would ensure a balance between the sustainability of the service and the interests of access users. By implementing the RIA methodology, HAKOM assessed the effects of the existing pricing model for **access to the postal network** and identified optimal solutions allowing transparency and market stability. On the basis of the findings, a proposal for amendments to the Ordinance was drawn up, with key amendments including the redefinition of Article 25, in order to ensure the application of a cost-effective approach to prices. Following the public consultation, the final text of the Ordinance was drafted, adopted by the Council of HAKOM in August 2024 and published in the Official Gazette. With these regulatory adjustments, HAKOM has set a high standard of application of the RIA methodology in the field of postal services, ensuring an expertly based, accurately analysed and measurably effective approach to regulatory decision-making.

Regulation on cross-border parcel delivery

[Regulation 2018/64 of the European Parliament and the Council on cross-border parcel delivery services](#), and the implementing acts adopted pursuant to the Regulation, have been in force for several years, and HAKOM is the competent authority for all prescribed activities and obligations in the HR. The Regulation aims to ensure the benefits of the European single market by removing cross-border barriers to postal traffic and the development of e-commerce in EU Member States.

As in previous years, in 2024 HAKOM carried out the activities prescribed by the Regulation and collected data from postal service providers through the prescribed questionnaires on the prices of individual services, realised quantities, revenues and employees, and the processed data were submitted to the EC. In accordance with the provisions of Article 6 of the Regulation, a procedure for the assessment of cross-border single-piece parcel tariffs charged by the parcel delivery service provider subject to a universal service obligation based on publicly available prices of postal services published on the EC website was also carried out. The analysis established that HP applied uniform prices to all international letter items, and the results showed that HP cross-border tariffs for letters for countries within the Union were not unreasonably high. Regarding

tariffs for parcels in international traffic, the analysis showed that cross-border tariffs were not unreasonably high regardless of the fact that tariffs for countries in the third delivery zone were above the reasonability threshold set by the EC, which was due to the low volume of shipments and increased transport and transit costs. The results of the analysis were submitted to the EC, which publishes them on its [official website](#), so that HAKOM fulfilled all its obligations pursuant to the Regulation.

Quality of universal service provision

HAKOM, as in previous years, focused part of its regulatory activities on supervising and monitoring **the quality of universal service provision** with a special emphasis on meeting the prescribed quality criteria. Quality is a key element of user satisfaction, and achieving the prescribed quality criteria is the goal that all EU Member States, including Croatia, aspire to. The PSA and the Ordinance prescribe the method of measuring and the quality criteria that the universal service provider in the HR must meet, both in domestic and international traffic. There are two key quality parameters: ensuring the delivery of postal items within prescribed deadlines¹⁶, which is verified by measuring the time of delivery of postal items from clearance to delivery, and the number of complaints and compensation claims. Quality measurements are carried out in accordance with the prescribed standards, and the universal service provider is obliged to submit to HAKOM a Report on the quality of provision of universal service (Report).

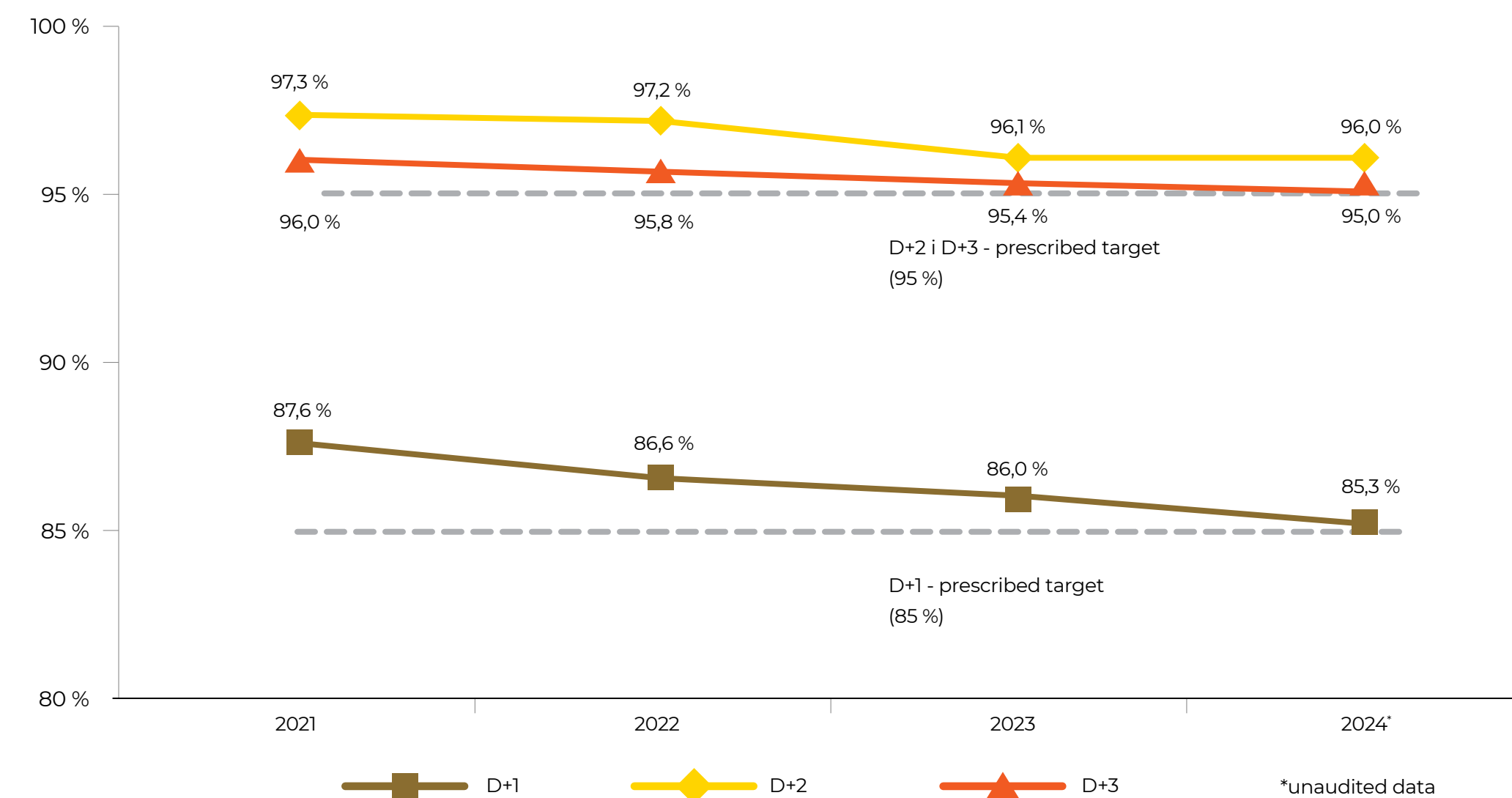
According to the 2024 Report, HP conducted two measurements of the quality of universal service provision in international traffic by measuring the transfer of priority letter items. The first measurement, conducted within the framework of the Universal Postal Union (UPU), regarded transfers between the HR and individual UPU members, while the other one was related to the UNEX measurement of traffic between the HR and the EU Member States with which international traffic flows are established, conducted by the IPC. The UNEX measurement showed that quality of transfer continued to improve from the previous year, but that the prescribed criteria were still not fully met. In 2024, within the D+3 time limit, 25.6 percent of priority items were delivered, while within the D+5 time limit 63.9 percent of such items were delivered. The analysis of results within the EU shows that Croatia is no exception, as other members have not fully met the prescribed benchmarks either, which points to increased challenges in international postal traffic.

HP measured the quality of universal service provision in domestic traffic on an ongoing basis throughout 2024 by monitoring the conveyance of priority and non-priority postal items. Accord-

¹⁶ Universal service providers in domestic traffic must ensure the delivery of 85 percent of postal items of the fastest category (priority items) in one working day, i.e. 95 percent within two working days, and for all other shipments 95 percent within three working days. In international postal traffic with EU Member States universal service providers must ensure the delivery of 85 percent of the fastest category items within three working days, i.e. 97 percent within five working days.

ding to the results, all the prescribed criteria were met: 85.3 percent of priority items were delivered within the D+1 time limit and 95.9 percent within the D+2 time limit, while 95.0 percent of non-priority items were delivered within the D+3 time limit. As in previous years, HAKOM conducted an audit of the measurements and obtained results from the 2023 Report to verify measurement results. The audit showed that the measurement fully complied with the requirements of the prescribed standards and results were confirmed.

Figure 2.16 Measuring the quality of universal service in domestic traffic



The measurement of the number of complaints and compensation claims shows that users submitted 40,492 complaints to HP regarding the provision of universal service in 2024, which is about 33 percent more than in 2023, when 30,509 complaints were received. Total complaints were equally divided between domestic and international traffic. The bulk of user complaints concerned the loss of postal items and exceeding delivery deadlines. HP resolved about 99 percent of total complaints within the legal deadline. The results presented in the Report show that the quality of universal service provision was satisfactory.

Universal service provider's postal network

The universal service provider is obligated to establish, maintain and develop **the postal network** throughout the HR territory in order to ensure the accessibility of universal service in the manner prescribed by the PSA and the Ordinance, which additionally prescribes the density of the access point network. In 2024, HAKOM, as in previous years, continued to monitor and analyse the HP postal network with a particular focus on checking compliance with the prescribed criteria related to the density and working hours of postal offices.

In line with the strategy of relocation of postal offices, HP continued to move some unprofitable postal offices to more frequented locations, thereby ensuring better service accessibility for users and preventing the closure of these offices, while improving conditions for both users and employees. HP, with the aim of streamlining business operations and user needs, also adjusted the working hours of postal offices so that working hours of several offices changed. HAKOM, within the scope of its competence, controlled these procedures, making sure that they complied with the provisions in effect of the PSA and the Ordinance. The said changes did not erode the prescribed criteria, so that the number of postal offices remained unchanged at the end of 2024: 1,016 offices distributed throughout the HR territory, with their density exceeding the legally prescribed minimum.

HP, as the universal service provider, must enable access to its postal network to other postal service providers, consolidators and postal service users within universal service, and HAKOM, with a view to adjusting the conditions of access, carried out a procedure amending the provisions of the Ordinance relating to network access.

Monitoring and analysing the conditions and development of the postal services market

Within the scope of its competence, HAKOM continuously **monitors and analyses the condition and development of the postal services market**. For this purpose, it continued to collect different statistical, financial and other data from postal service providers on a quarterly and annual basis. The collected data were processed and used for analyses that informed HAKOM's insights in market trends and its regulatory decisions.

The collected data were also used to comply with the requirements of the EU authorities competent for monitoring the condition of the EU's postal market (EC, ERGP, UPU) by means of various

questionnaires and reports, to respond to various external queries (media, providers, etc.) and to meet the requirements of various government bodies and institutions (MSTI, CBS, CCA, etc.).

The most important indicators of the condition of and developments in the postal services market were regularly published on HAKOM's website, accompanied with an updated list of postal service providers and the list of services they provided. HAKOM also regularly maintained the prescribed database relating to the registry of postal service providers. In 2024, the monitoring of the operations of individual companies in the field of e-commerce for the possible performance of activities that would indicate the performance of postal services continued.

Other regulatory activities and tasks

In 2024, within **other regulatory activities**, pursuant to its Annual Work Programme, HAKOM carried out procedures related to the registration/unlisting of postal service providers. It also verified the compliance of amendments to the general terms and conditions and price lists of postal service providers with the PSA. HAKOM issued multiple expert opinions and explanations as to the implementation of the PSA and other regulations adopted pursuant to the PSA, ensuring the consistent application of legal provisions in the postal services market. HAKOM carried out inspection supervisions and the analyses of submitted exemptions from the delivery obligation, verifying the delivery of postal items within the universal service obligation.

In November 2024, the conference Day of Postal Services Market – Trends and Opportunities in the Postal Services Market, was organised in Zagreb. The conference brought together key stakeholders in the sector, such as the representatives of postal service providers, the Ministry of the Sea, Transport and Infrastructure, the Ministry of Finance, the Croatian Chamber of Economy, the Croatian Bureau of Statistics, the Croatian Competition Agency, academia, e-Commerce Croatia and consumer associations. The aim of the event was to exchange experience and insight into future developments in the postal services market of the HR and the EU, which enabled HAKOM to continue the open dialogue with the stakeholders of the postal services market in the HR.

Every working day, HAKOM enabled users to obtain information via various channels, including telephone, electronic mail, social networks and the Ask Us application on HAKOM's website. HAKOM's experts participated in various panels and events organised by consumer protection associations, where users were provided important information regarding their rights in relation to the provision of postal services. These activities were aimed at raising the awareness of users and ensuring the protection of their rights in the postal services market.

⁸ Mreža poštanskih ureda mora biti ustrojena tako da jedan poštanski ured posluje u prosjeku na površini najviše do 80 km², odnosno za najviše 6000 stanovnika te da mora biti minimalno 700 redovitih poštanskih ureda

PLANNING AND REALISATION OF ACTIVITIES

Aktivnosti na tržištu poštanskih usluga						
No..	Activity	Result	Planned completion	Strategic goal	Realisation	Implementation assessment
1.	Analyse the organisation of the postal network	Amendments to the Ordinance on the provision of universal service	IV	4.2	Analysis carried out and proposal for the new organisation of the postal network prepared	Proceeding as planned
2.	Collect and process data on the postal services market	Reports on postal services market indicators	Ongoing	2.1	Annual and quarterly reports on market indicators published	Achieved
3.	Meet the requirements pursuant to the Regulation on cross-border parcel delivery services	Data submitted to EC bodies	II	4.1	Data collected, processed and published	Achieved
4.	Control the fulfilment of universal service obligation	Verified delivery, postal network density, postal offices' working hours, etc.	Ongoing	1.2	Compliance of the Decision on the relocation of postal offices and the Decision on the working hours of postal offices with the Ordinance verified	Achieved

¹⁰ Mreža poštanskih ureda mora biti ustrojena tako da jedan poštanski ured posluje u prosjeku na površini najviše do 80 km², odnosno za najviše 6000 stanovnika te da mora biti minimalno 700 redovitih poštanskih ureda

¹¹ Neredoviti poštanski ured je poštanski ured u kojemu davatelj univerzalne usluge, najmanje dva dana u tjednu obavlja univerzalnu uslugu

5.	Analyse the five-day delivery obligation	Review of the conditions related to the five-day delivery	III	1.2	Analysis carried out	Achieved
6.	Control the calculation of the price cap for a part of universal service	Verified key parameters that influence the price cap and price adjustment	Ongoing	1.2	Analysis and verification carried out and new Decision adopted	Achieved
7.	Monitor and analyse prices and discounts for universal service	Affordable and cost-oriented prices for all users	Ongoing	1.2	Analysis carried out	Achieved
8.	Monitor and analyse prices and discounts for interchangeable postal services	Application of prices in accordance with the postal service price list	Ongoing	1.2	Analysis carried out	Achieved
9.	Control the conditions and prices of access to the universal service provider's postal network	Access to the universal service provider's postal network enabled to all users under equal conditions	Ongoing	2.1	Conditions and prices verified	Achieved
10.	Resolve regulatory disputes	HAKOM's decisions	Ongoing	2.1	There were no disputes	Achieved
11.	Review the obligations of all postal services providers	Verified providers' registrations/removals, logbook keeping, general terms and conditions, price list, status changes, etc.	Ongoing	2.1	Harmonisation of the general terms and conditions and the price lists of 13 postal services providers with the PSA	Achieved

12.	Monitor the impact of e-trade and digitalisation on the postal services market and the emergence of new postal services provision methods	Registration of new postal services providers and new services; equal conditions created for all market stakeholders	Ongoing	2.2	Monitoring new applications	Achieved
13.	Supervise the implementation of the accounting separation obligation	RFS audit Compliance statement	III	2.1.	HP's RFS audit performed and Decision on compliance adopted	Achieved
14.	Establish the unfair financial burden on the universal service provider (net cost)	Revision of requests for the reimbursement of net costs Decision on the net cost amount	IV	2.1	Decision adopted	Achieved
15.	Analyse the Report on the quality of provision of universal service	Revised Report and corrective measures	III	1.2	Revision report	Achieved
16.	<i>Activities under items 16. and 17. from the 2024 Annual Work Programme are shown in a table in the chapter Consumer Protection</i>					
18.	Provesti inspeksijske nadzore u području poštanskih usluga	Supervision administrative acts	Ongoing	4.2	4 inspection supervision decisions issued Report on inspection supervision activities	Achieved
19.	Izdati stručna mišljenja	Expert opinions	Ongoing	4.2	There were no expert opinions	Achieved



03

RAIL SERVICES

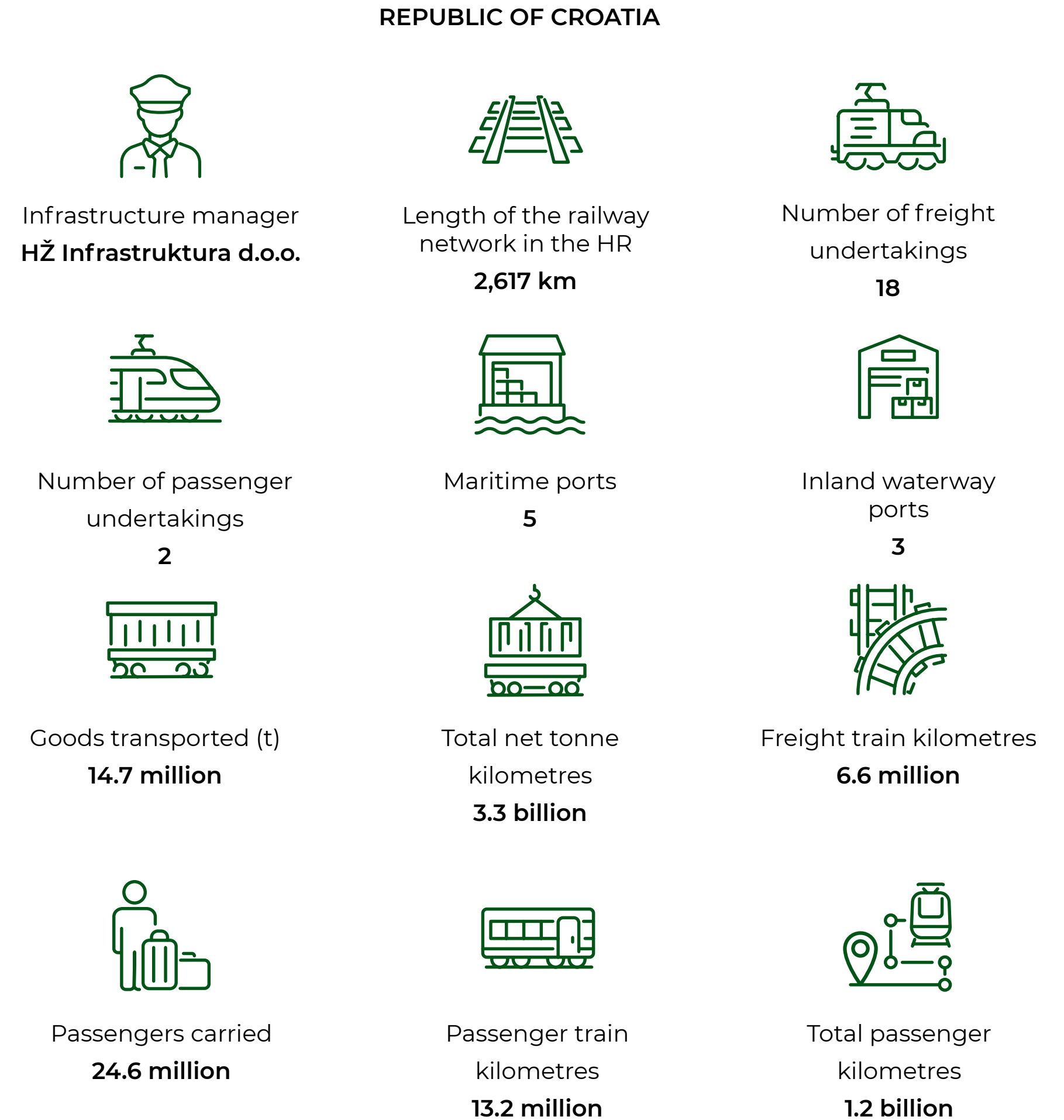
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RAIL SERVICES

The rail services market in the HR includes services provided to railway undertakings and other applicants subject to compliance with the rights and obligations relating to the provision of rail services under national and EU legislation. Pursuant to the Railway Act (RA), the railway infrastructure is defined as public good in general use that must be available to all railway undertakings under equal and transparent conditions. The liberalisation of the railway market provided for access to the railway infrastructure and service facilities, and all services provided by them, to all applicants for access to infrastructure capacities.

Through its activities, HAKOM strives to encourage market competition with non-discriminatory approach to the railway infrastructure, service facilities and rail services and to ensure equal terms for all applicants for the allocation of infrastructure capacity.

Figure 3.1 Basic information on the railway infrastructure and operation of railway undertakings as at the end of 2024



MARKET OVERVIEW

Stakeholders in the rail services market

The infrastructure manager, HŽ infrastruktura d.o.o. (HŽI), is also the largest service facilities operator in the rail services market in the HR. The rail services market has grown more complex and more challenging as the number of active freight undertakings has increased, while there is only one infrastructure manager and a rising number of service facilities operators. Due to the unique characteristics of such a market HAKOM conducts reviews on a continuous basis in order to transparently and regularly publish railway-related services offered and for these services to be provided to all applicants in the same manner.

For the first time since the liberalisation of the freight transport the number of registered freight undertakings decreased. By regularly consulting the European Railway Agency Database of Interoperability and Safety, ERADIS, and by cooperating with the infrastructure manager, HAKOM established that there were 18 freight undertakings registered in the HR in 2024, down by 1 from the year before. However, out of these, 5 freight undertakings did not provide freight transport services in 2024.

In addition to the passenger incumbent, HŽ Putnički prijevoz d.o.o.(HŽPP), the company Rail Cargo Carrier-Croatia d.o.o. holds the licence for the provision of the service of railway passenger transport in the HR.

Figure 3.2 Rail services market in the HR in 2024

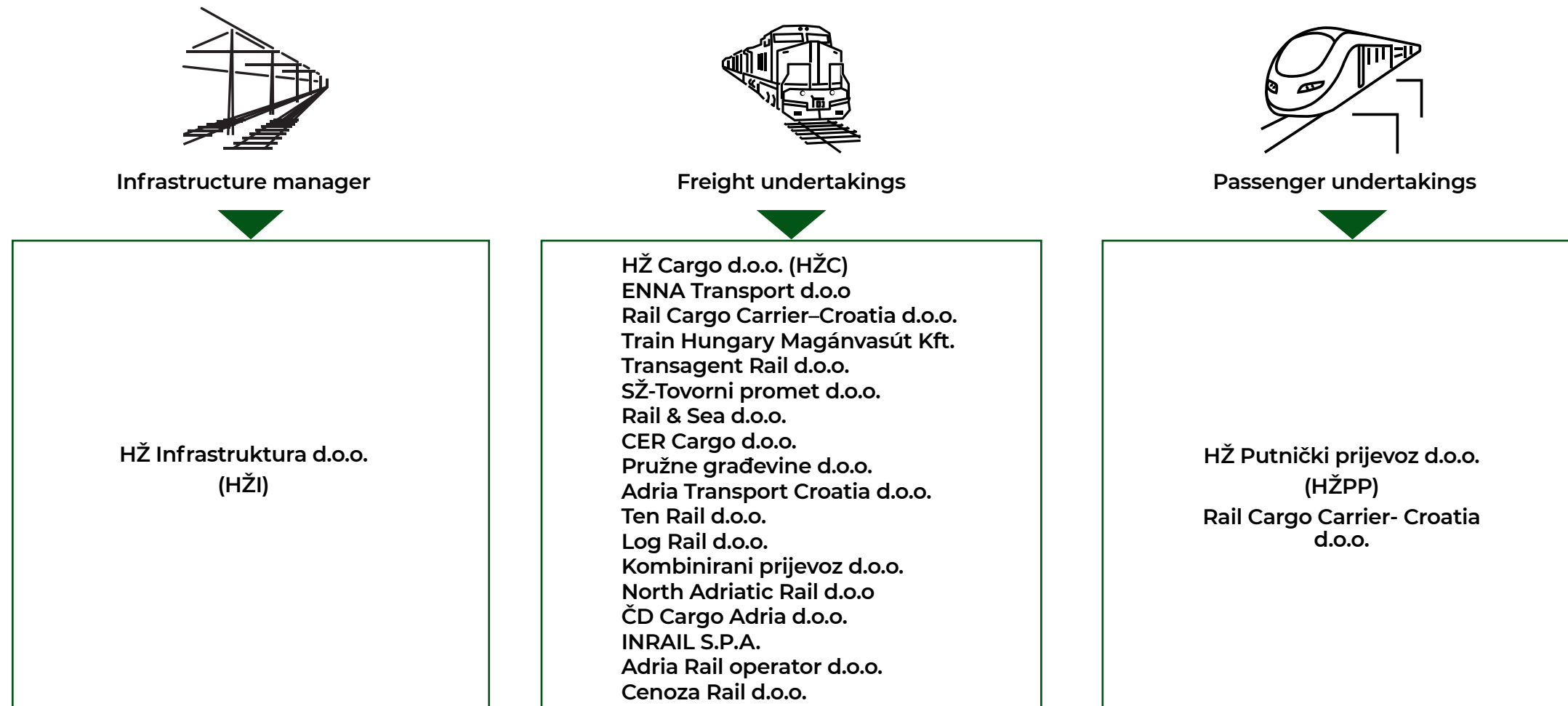
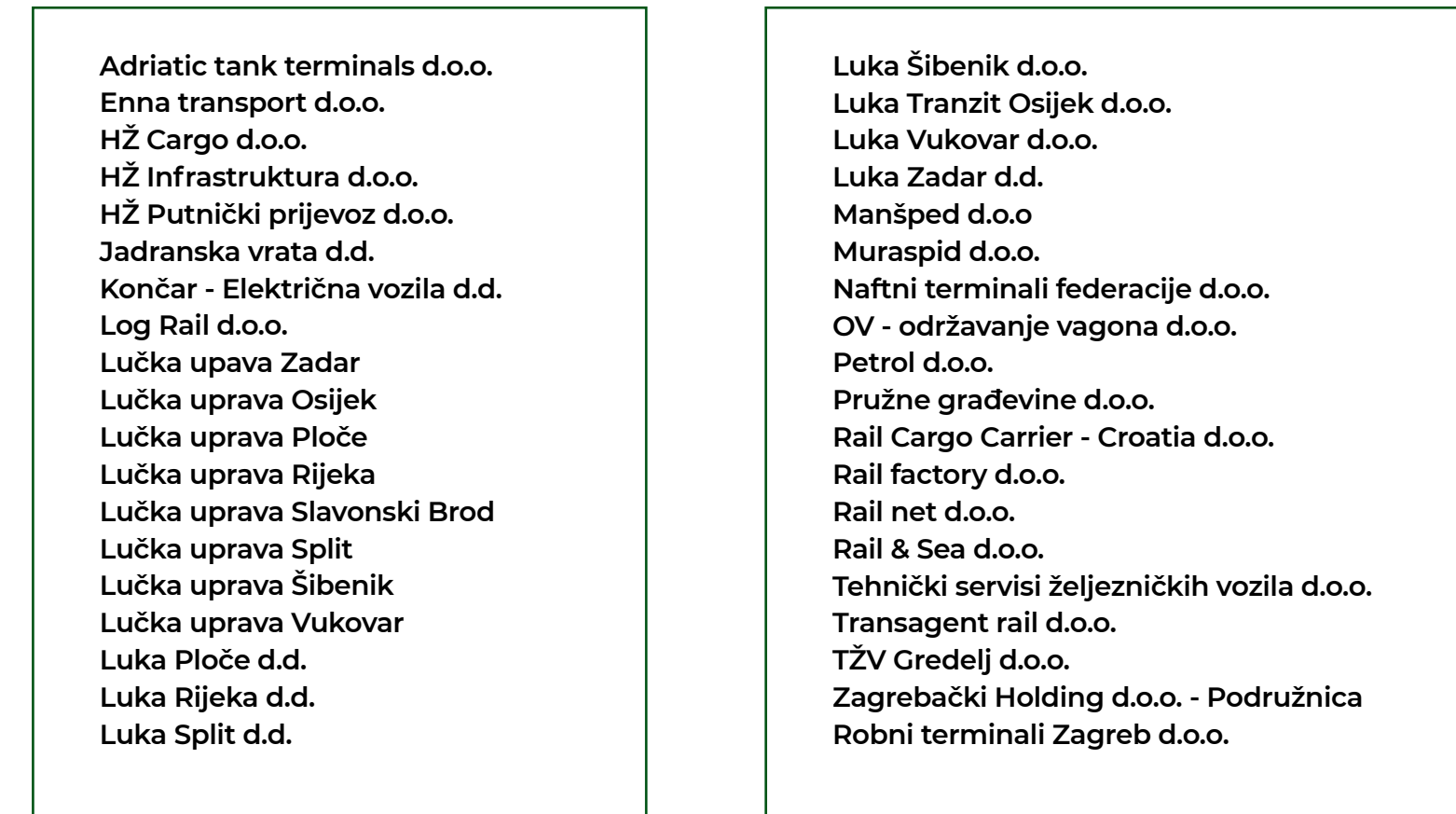


Figure 3.3 Service facilities operators in the HR in 2024



RAILWAY MARKET SERVICES

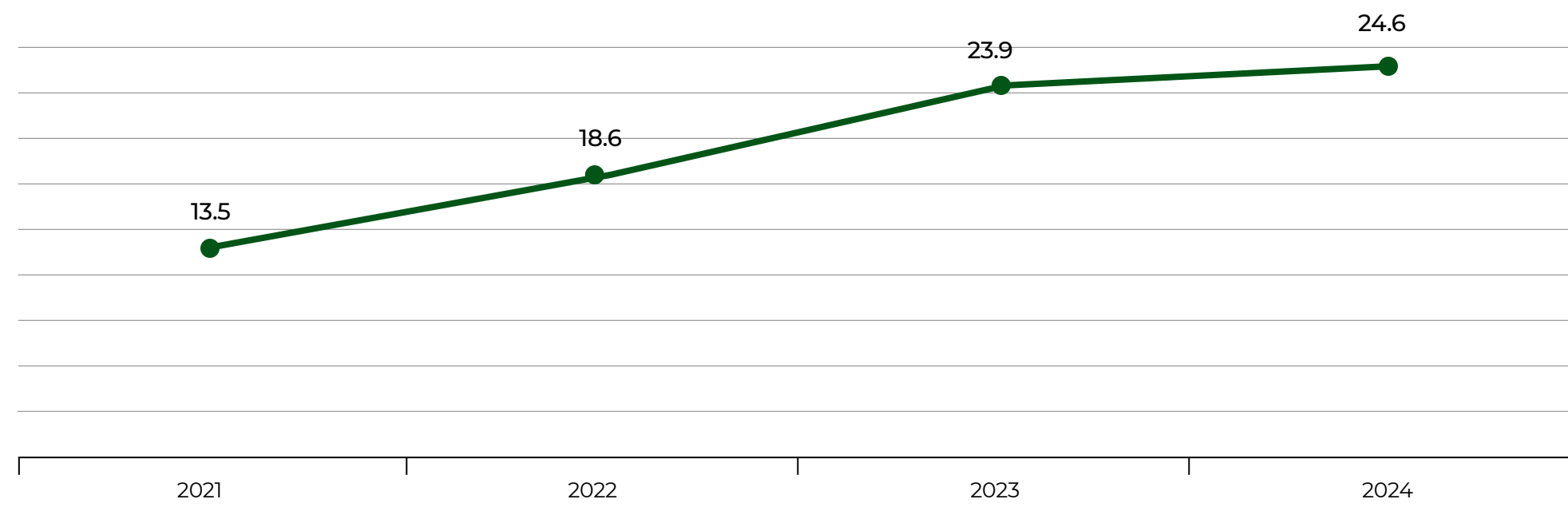
In accordance with the Act on the Regulation of the Rail Services Market and the Protection of Passenger Rights in Rail Transport (ARRSM), HAKOM monitors market competition in the rail services market and collect the data required for regulating the rail services market, as well as the data required for the statistical monitoring of the market. All newly registered undertakings are obligated to notify HAKOM of their registration. Data collection forms are sent to all undertakings in the rail services market on a quarterly basis, and the data collected are published and forwarded to the European Commission and IRG Rail on an annual basis.

Railway passenger transport

Although two passenger undertakings are registered in the railway market, in 2024 only HŽPP provided the service of passenger transport.

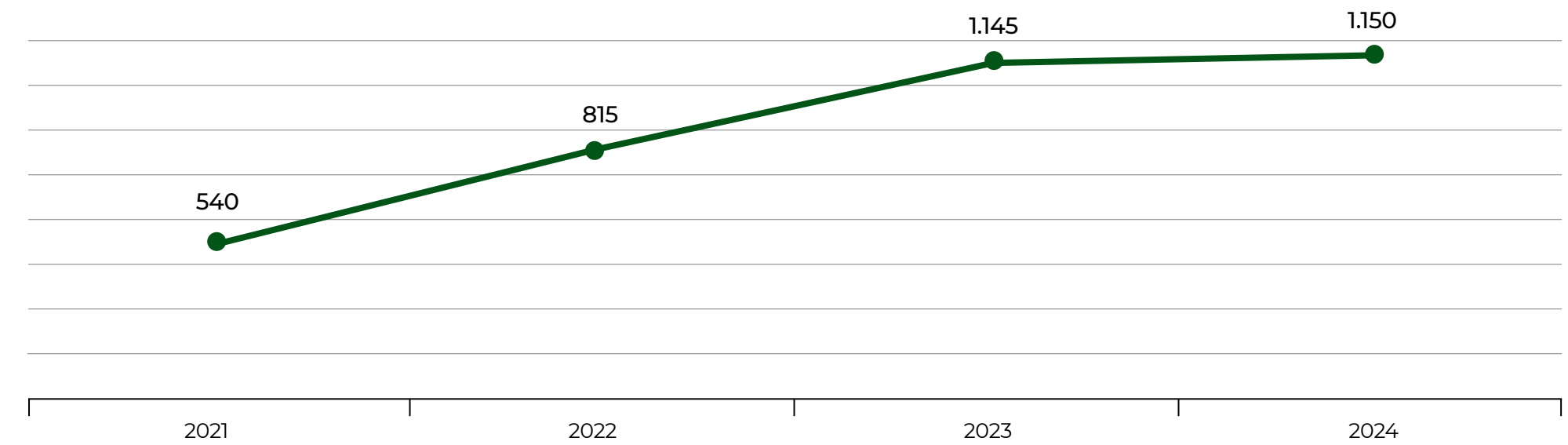
Following the COVID-19 pandemic, which strongly reduced the number of transported passengers, passenger rail transport has been on the rise since 2022. HŽPP data indicate that the number of transported passengers increased by 3.1 percent in 2024 from the previous year.

Figure 3.4 Number of transported passengers in 2024 (in million)



The number of passenger kilometres increased by merely 0.5 percent from the previous year. The said increase in the number of passengers and passenger kilometres was influenced predominantly by the continuation of the project of the Government of the Republic of Croatia on the free rail transport of primary and secondary school children and students and on the more favourable price of transport of regular students, pursuant to which students were provided the unlimited use of the railway network in the territory of the Republic of Croatia for a single monthly price of EUR 9.95. The third pilot project was the free rail transport of retired persons and persons over the age of 65. The project included 1.2 million retired persons and persons over the age of 65 who were given the opportunity of unlimited use of the railway network, that is, to travel in the territory of the Republic of Croatia via rail free of charge.

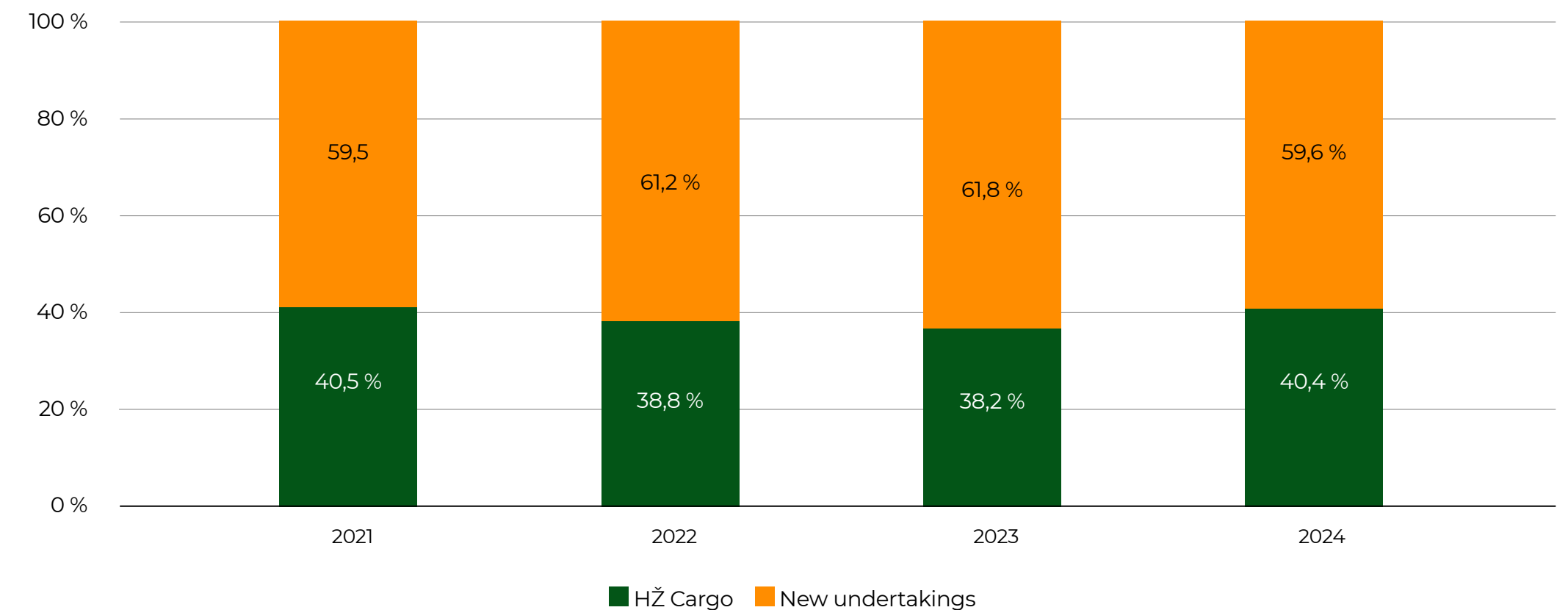
Figure 3.5 Passenger train kilometres in 2024 (in million)



Railway freight transport

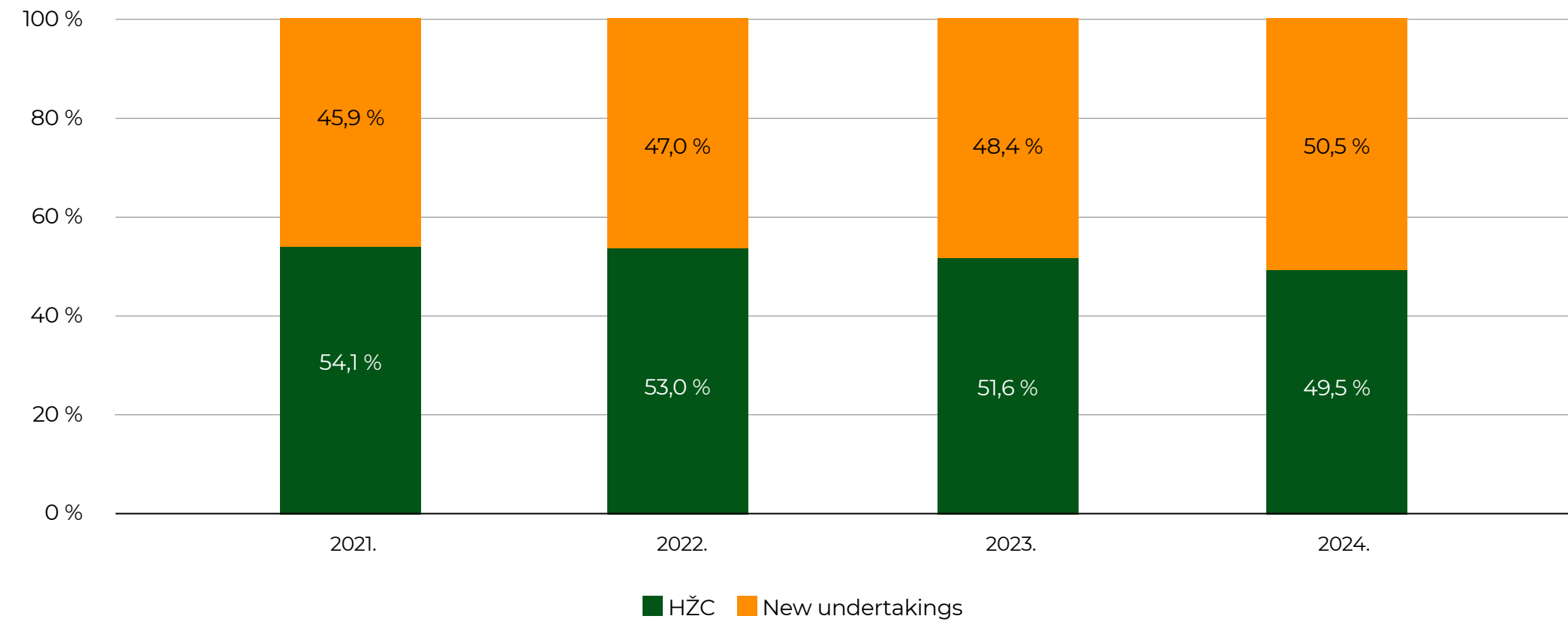
According to data collected on the operation of railway freight undertakings, their activity in 2024 increased. The railway network was used to transport a total of 14.7 million tonnes of goods, down 2.5 percent from the year before. Compared to the previous period, the share of new undertakings in total goods transported decreased by 2.2 percentage points.

Figure 3.6 Market shares by goods transported in railway freight transport



The number of total realised tonne-kilometres of all undertakings increased by 4.7 percent in 2024. New undertakings thus registered a rise in realised tonne kilometres of 9.3 percent, while the incumbent undertaking HŽC registered a 0.5 percent decrease from the year earlier. For the first time, the incumbent undertaking's market share fell below a half of the total number of net tonne kilometres.

Figure 3.7 Shares in tonne-kilometres in railway freight transport



Service facilities

Pursuant to the RA, service facilities operators as stakeholders in the rail services market represent legal persons responsible for operating one or more service facilities or facilities for the provision of one or more services to railway undertakings.

Pursuant to the RA, HŽI and service facilities operators are obligated to ensure all interested railway undertakings the right of access to the railway infrastructure as well as the use of tracks that connect maritime ports, inland waterway ports and other service facilities under equal, transparent and non-discriminatory terms. The information required by applicants for the provision of transport services must be contained in the Network Statement (NS) which, pursuant to the RA, HŽI creates for each timetable.

As part of the NS, HŽI also publishes a list of service facilities it operates, the services it provides and the associated charges. In accordance with Commission Implementing Regulation (EU)

2017/2177 of 22 November 2017 on access to service facilities and rail-related services, service facilities operators are obligated to publish and update service facility descriptions. Service facility descriptions are also published as an Attachment to the NS.

The register of rail services provided by service facilities operators is published on HAKOM's website and regularly updated.

RAILWAY INFRASTRUCTURE

A part of the railway network operated by the HŽI is the Mediterranean rail freight corridor 6 (RFC 6), established by Regulation (EU) 913/2010 concerning a European rail network for competitive freight, which corresponds to the Mediterranean corridor of the TEN-T network and the rail freight corridor Alps–Western Balkans (RFC 10), established together by four EU Member States (Austria Slovenia, Croatia and Bulgaria) and Serbia. The corridor connects Austria (Salzburg and Wels/Linz) with Svilengrad, a town on the Bulgaria – Turkey border. The latest amendments to the Regulation on the TEN-T network, adopted last year, positioned Croatia in the middle of another two corridors, the Baltic Sea – Adriatic Sea Corridor and Western Balkans – Eastern Mediterranean Corridor.

The intention is to integrate the basic network corridors and railway freight corridors into the “European smart corridors” in order to increase the synergy between infrastructure planning and transport management, as stated in the Communication from the Commission on Sustainable and Smart Mobility Strategy – putting European transport on track for the future and based on Regulation (EU) 2024/1679 of the European Parliament and of the Council of 13 June 2024 on Union guidelines for the development of the trans-European transport network, amending Regulations (EU) 2021/1153 and (EU) No 913/2010 and repealing Regulation (EU) No 1315/2013.

HŽI manages 2,617 km of the railway infrastructure in the HR, of which 2,341 km are single-track and 276 km double-track railway lines. In 2024, the length of electrified tracks remained at 1,013 km, some 38.7 percent of the total rail tracks in the HR. Of this figure, 1,010 km are with the alternating current system of electrification with 25 kV and 50 Hz, while the remaining 3 km are electrified with 3 kV DC power supply system. The electrification of railway lines in the HR continues to lag behind the EU average of 57¹⁸ percent. In addition to improving the quality of transport and reducing operating costs, electrification has a strong impact on gas emissions. All this makes it necessary to continue with further electrification and modernisation of the electric traction power system to achieve dependable and quality railway transport services while protecting the eco-system, which is the ultimate objective of all EU Member States.

¹⁸ [13th Annual Market Monitoring Report](#)

Infrastructure usage

The indicators of infrastructure usage are train-kilometres (tkm) realised by railway undertakings in the period under review. Pursuant to collected data and HAKOM’s analyses, railway undertakings realised 0.02 percent tkm more than in the previous year. New undertakings realised 3.7 percent tkm more, while the incumbent undertaking registered a fall of 3.6 percent from the previous year.

Figure 3.8 Total realised tkm in railway freight transport

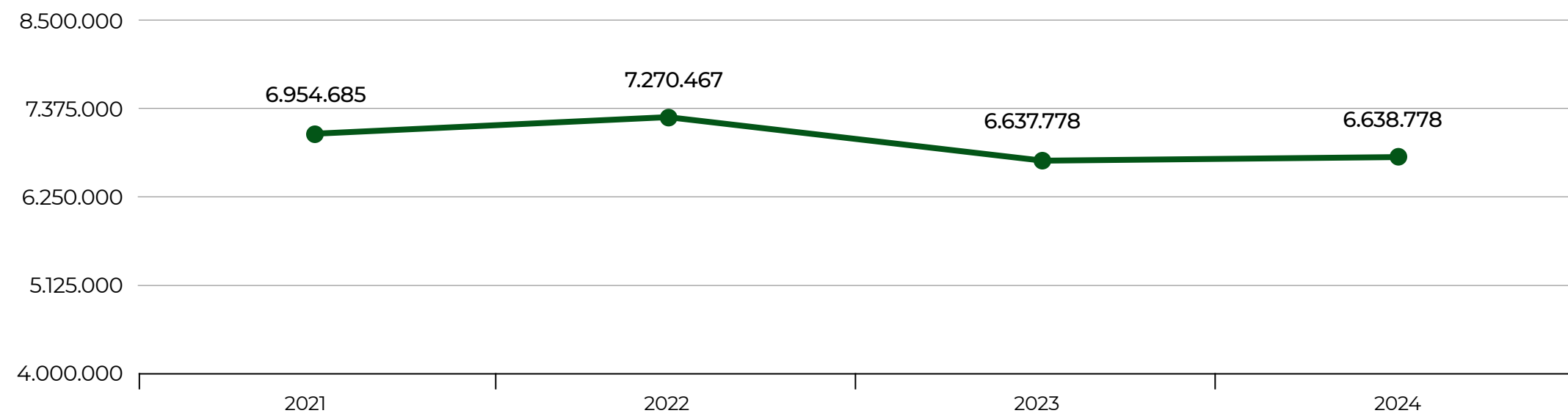
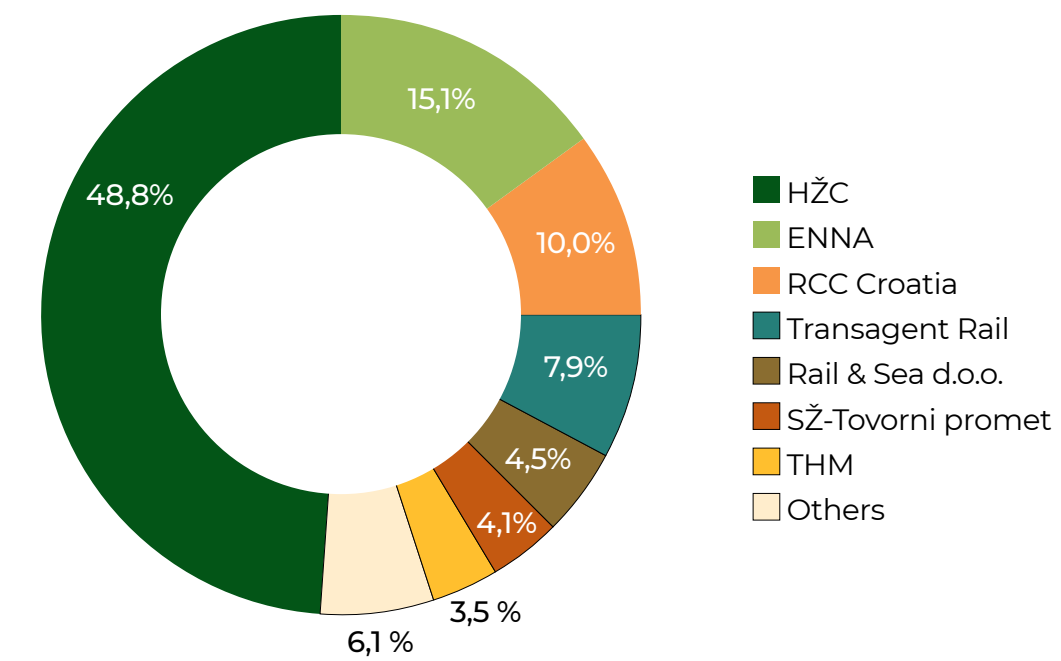


Figure 3.8 shows a graph of realised tkm by undertaking in 2024. Of 18 freight undertakings in the market, 7 accounted for a share of above 2 percent, while the remaining 11 undertakings together accounted for a share of 6.1 percent. HŽC as the incumbent undertaking continued to account for the largest market share, expressed in tkm, of 48.8 percent, while among the new freight undertakings, ENNA Transport d.o.o. accounted for the largest share.

Figure 3.9 Total realised tkm in freight transport by undertaking



Minimum access package

The minimum access package (MAP) is the most important service, that is, a group of services, provided by the HŽI, which includes:

- the processing of applications for the allocation of infrastructure capacity;
- the rights of use of the allocated infrastructure capacity, the use of railway infrastructure, including turnouts and nodes;
- the management of train traffic, including signalisation, regulation, train reception and dispatch, as well as communication and provision of information on train movements;
- the usage of available equipment for the supply of electricity required for towing trains;
- the provision of other information required to realise or provide the service for which the capacity has been allocated.

HŽI generated a total of EUR 16.57m from the MAP, of which passenger undertaking was charged EUR 7.78m and freight undertakings EUR 8.79m. The average price per train-kilometre for the use of the MAP in the HR in 2024 was EUR 0.83. However, the average amount of the charge per train-kilometres in freight transport was EUR 1.32, while the average amount per train-kilometre in passenger transport was EUR 0.59.

In 2024, HAKOM completed the project “Analysis of the cost distribution and charges calculation for MAP of the infrastructure manager in the HR”.

The charge for the MAP makes up the most important item in HŽI’s revenues. In addition to the RA and the ARRSM, the manner in which the charge is calculated is laid down by Directive

2012/34/EU establishing a single European railway area and Commission Implementing Regulation (EU) 2015/909 on the modalities for the calculation of the cost that is directly incurred as a result of operating the train service. The primary objective of this project was to analyse whether statutory provisions and the provisions of the said Directive and Regulation were correctly implemented and to ensure that the charges for the MAP and access to track lines to service facilities are set at the level of the cost directly incurred as a result of operating the rail service, as well as that the service is provided to all railway undertakings in a non-discriminatory manner. In the conclusion of the said project, HAKOM confirmed that HŽI fulfilled its obligation of demonstrating that charges were calculated in compliance with the RA and the ARSM and were in line with the methodologies and rules of the NS. Charges for the MAP were also confirmed to be non-discriminatory, that is, charged in the identical amount for the same service to all undertakings. Regardless of its conclusion, HAKOM made several recommendations for supplementing or changing the calculation and/or coverage of some variables of the formula for the MAP.

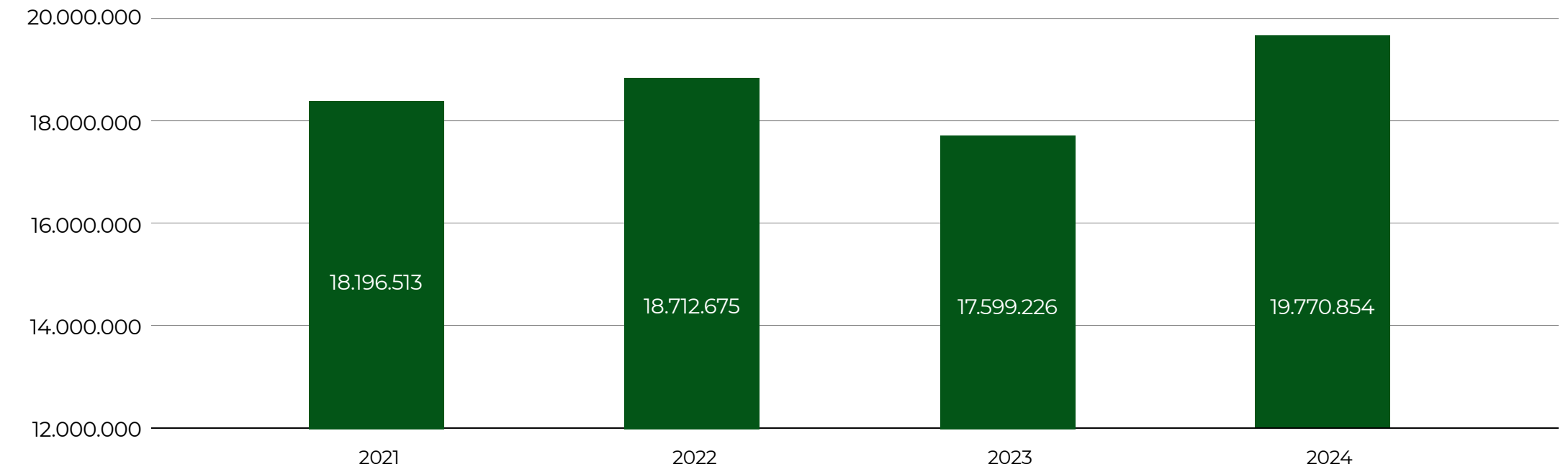
Revenues and charges of the infrastructure manager

The charges for rail services collected by the HŽI are related to the MAP, access to service facilities and services provided at those facilities, including track access to those service facilities and additional and auxiliary services. For the use of the MAP and track access to service facilities railway undertakings sign an Access Agreement with the HŽI, while separate agreements are concluded for other railway services.

HŽI is independent in defining the methodology for setting charges. It publishes the terms and conditions and the prices for other railway services in the NS, in accordance with the provisions of the RA. HŽI and service facilities operators are independent in calculating the price for access and usage of railway services, while HAKOM's role is to supervise the infrastructure manager and service facilities operators in relation to the setting of and the amount of these charges, as well as to check whether they are calculated in accordance with the provisions of the RA and the methodology and rules of the NS. In addition, HAKOM is authorised to supervise negotiations between the applicants and infrastructure manager regarding the amount of charges for railway services for the purpose of equal and non-discriminatory access to these services. In 2024, HŽI generated EUR 19.8m in revenues from all railway services, which is 12.3 percent more than in 2023.

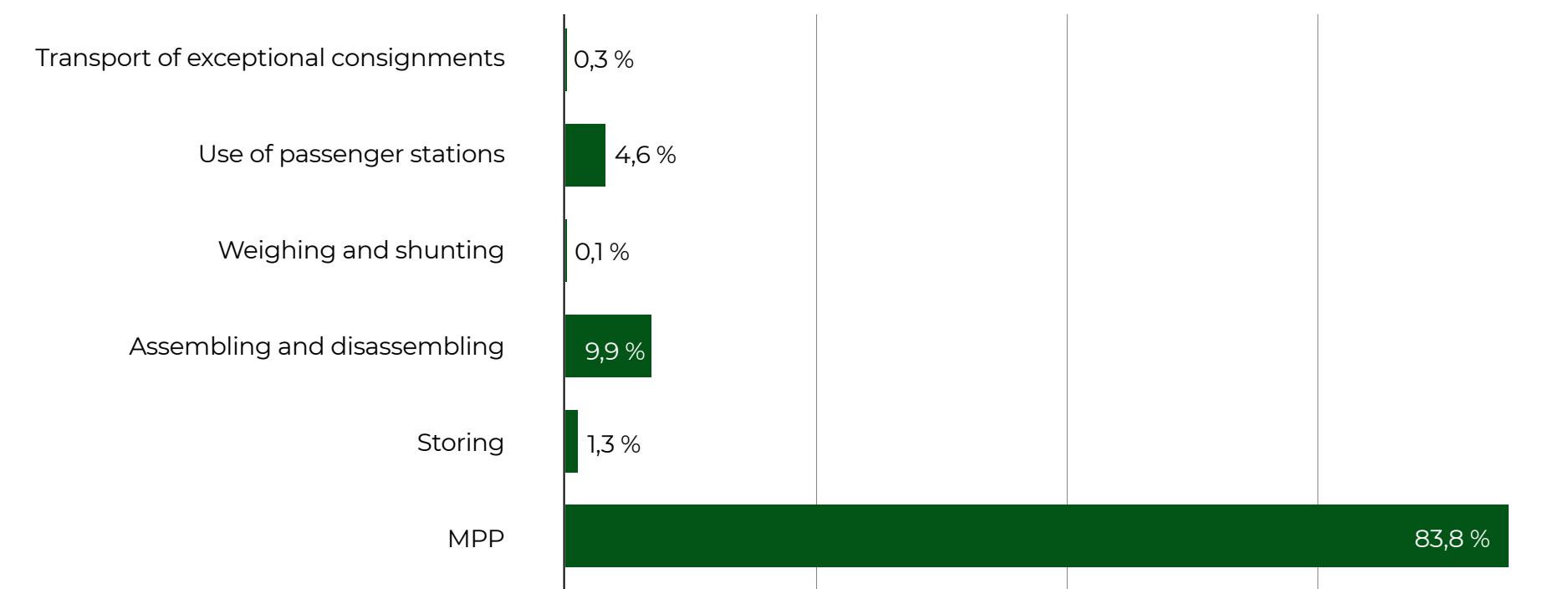
² Ostvareni prihodi za razdoblje od 2019. do 2022. prikazani su tako da su se iznosi koji su bili iskazivani u HRK podijelili s fiksnim tečajem od 7,5345 HRK za jedan EUR.

Figure 3.10 HŽI revenues from railway services (in EUR)



Of the total amount of revenues generated from railway services, approximately EUR 16.57m, or some 84 percent, were generated by the MAP.

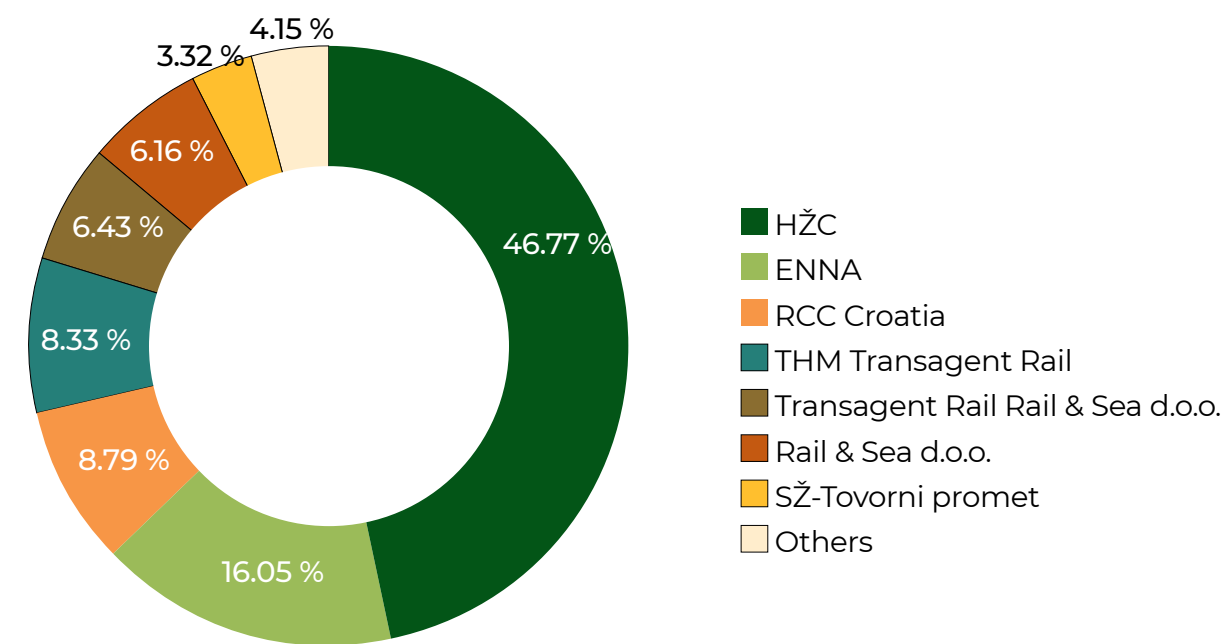
Figure 3.11 Shares in revenues by type of HŽI rail services



Revenues of freight undertakings

In the total revenues generated from the transport of goods, 7 freight undertakings realised a share of above 2 percent. The share of the other 11 undertakings was below 2 percent, collectively amounting to 4.15 percent. HŽC, as the largest undertaking, continued to account for the largest share in total revenues from the transport of goods.

Figure 3.12 Shares of freight undertakings in revenues from the total transport of goods



REGULATORY ACTIVITIES

Infrastructure manager's Network Statement

Pursuant to its competence in the area of regulating the rail services market, HAKOM checks the content of the NS on an ongoing basis and in the draft phase of the document analyses the content and compliance with regulations and notifies the infrastructure manager on possible necessary amendments to disputed provisions. In addition to the relevant 2024 NS, HAKOM monitored and reviewed amendments to the 2025 NS and the 2026 NS and registered an increase in the price of the minimum access package in the 2025 NS from the 2024 NS by 10 percent for freight undertakings and by 11 percent for passenger undertakings. In addition, it registered an increase in the prices of the minimum access package in the 2026 NS from the 2025 NS of 9 percent for freight undertakings and 11 percent for passenger undertakings. HAKOM further compared charges for services at service facilities that were published in the 2023 NS and the 2024 NS and established an increase in the charges in the 2024 NS, in item 7.3.4.4 Charges. In view of the substantial increase in the said charges and further increase in the relevant charges published in the first amendments to the 2024 NS, HAKOM invited HŽI to provide an explanation for the increase and evidence of the costs included in the calculation of the basic price for the relevant charges together with the methodology for setting these charges in the relevant NS. HŽI provided the requested documents and the methodology used and explained that the increase in charges was the result of the increase in the price of the work hour of employees involved in the provision of services, as is guaranteed to HŽI employees under the collective agreement.

Verifying the compliance of service facilities' description with Regulation 2017/2177 – correction of the amount of charge for the use of fuelling facilities

Pursuant to the RA, a service facilities operator is obligated to submit to the regulatory authority data on any changes to the amount of charges, and the manner and conditions of providing rail services 15 days in advance.

In 2024, Petrol d.o.o. (Petrol), referring to the planned investments in individual fuelling facilities and to the diminishing quantities of delivered diesel fuel, requested approval from HAKOM to change the amount of charge for the use of fuelling facilities for providing diesel fuel to locomotives, from EUR 0.0465 per litre of delivered fuel paid by undertakings to EUR 0.06769 per litre. Although HAKOM does not grant approval for the amounts of charges, pursuant to the ARSM it is ex officio authorised to re-examine the manner of setting charges as well as the amount and structure of charges for railway services. HAKOM, having been monitoring the situation at the service facility for the provision of diesel fuel for a number of years, analysed the justification for the planned investments in individual, less utilised fuelling facilities from the submitted documentation, giving Petrol its opinion regarding further steps.

In its opinion HAKOM stated that an increase of 45.6 percent would constitute a significant financial burden on all railway undertakings, without any technological or other change to the manner the service is provided and suggested that Petrol conduct an analysis of the justification of planned investments in individual, less utilised, fuelling facilities, which may affect the overall profitability of operations in this segment. It was established that the lease was the most significant cost item, directly affecting how the amount of charge for the use of fuelling facilities was formed, so HAKOM further suggested that it would be prudent to contact the landlord regarding the correction of the amount of the lease price.

In conclusion, HAKOM stressed that the current correction in the amount of charge for the use of fuelling facilities, in case the amount of lease is not reduced, may be related exclusively to the reduction in the delivered quantity of diesel fuel and that it may be additionally corrected only in case of considerable investments. In addition, HAKOM underlined that its opinion regarding the correction of the amount of charge for the use of fuelling facilities did not preclude the possibility of launching other relevant procedures in accordance with respective regulations.

Analysis of regulatory financial statements

To prevent the infrastructure manager, service facilities operators or rail undertakings from disrupting market competition, especially through excessive and/or discriminatory charges for

rail infrastructure access, unequal realisation of access rights, mutual subsidies, excessive and/or discriminatory prices for additional or auxiliary services, HAKOM undertakes all the necessary monitoring measures, including verifying compliance with provisions on accounting separation.

HAKOM uses the RFS to regularly collect financial data from the infrastructure manager, which it needs to get the picture of competitiveness in the rail services market, primarily for the purpose of monitoring and control of the structure and the level of charges for access to the railway infrastructure. In 2024, HAKOM received the RFSs of HŽI, HŽC and HŽPP, which they are required to submit, and all statements complied with the prescribed submission instructions and deadlines.

Quality of HŽI services – Control of the charged minimum access package to HŽ Putnički prijevoz d.o.o. in the cases of the substitution of trains with buses

HAKOM ex officio launched administrative proceedings against the infrastructure manager for the purpose of controlling the implementation of the collection of charges for the minimum access package and charges for the allocated but unutilised infrastructure capacity. It was established that the infrastructure manager, contrary to Article 48, paragraphs (1), (4) and (5) and Annex 2, item (1) of the RA charged the passenger undertaking regarding the 2022/2023 timetable a charge for the minimum access package for the unused infrastructure capacity and thereby acted in contravention to Article 52, paragraph (2) of the RA and item 4.8.3 of the 2023 Network Statement, that is, that it failed to collect the charge regarding the 2022/2023 timetable for the allocated but unused infrastructure capacity when the passenger undertaking frequently did not use the allocated line or its portion. Specifically, the infrastructure manager, pursuant to the provisions of the agreement on access to the railway infrastructure of the Republic of Croatia signed with passenger undertakings regarding the 2023/2024 timetable, charged the minimum access package to the passenger undertaking when it substituted trains with buses in the cases when the undertaking was not able to use the allocated capacity due to works on the railway infrastructure that were not announced in the Network Statement. The undertaking also had to pay for the use of the line when the undertaking was responsible for the substitution of trains with buses, that is, when it was unable to use the allocated capacity. In both situations the railway undertaking had to pay for the line although the train did not run and no costs for the use of the railway infrastructure were incurred. HAKOM issued a decision ordering the infrastructure manager to bring its practices in line with the mentioned legal provisions and amend the relevant provisions of the agreement on access to the railway infrastructure of the Republic of Croatia, which it signed with passenger undertakings relating to the 2023/2024 timetable. This was complied with via the signing of an Annex to the agreement with passenger undertakings HŽ Putnički prijevoz d.o.o. and Rail Cargo Carrier - Croatia d.o.o., to be applied as of 1 June 2024. HAKOM's decision thus eliminated the unlawful business practice which the infrastructure manager used in the market in connection to passenger undertakings.

Organising conferences

A conference was held in March at the Borongaj University Campus in Zagreb under the title “*Po kojem voznom redu vozimo?*” (What is our timetable?) organised by HAKOM and Savez za željeznicu (Railway Association). The objective of the conference was to spur open dialogue among the stakeholders in the railway transport market, the operation of which depends on a high-quality railway timetable, but also with the scientific community, public bodies and local self-government units. The stress was laid on the importance of the timetable in passenger transport with special stress on punctuality, frequency and good connectivity of all traffic junctions providing passengers good connections to continue their journey, while in relation to freight transport stress was laid on the importance of stable train lines among ports and border crossings, which is quite challenging during times of major infrastructure works. While passenger transport has the alternative of substituting trains with buses, no such alternative is available for freight transport. Therefore, the need for more frequent and better coordination among undertakings and infrastructure manager was reiterated at the conference.

HAKOM organised an International Conference on the Single Rail Market regarding regulatory experiences and challenges in the railway markets in Slovenia, Austria and Croatia, which was held in November and attended by almost a hundred participants. As it was stressed at the conference, different countries have different specific rules which oftentimes complicate the goal of creating a single European market. Variations in technical specifications and the lengthy process of obtaining permits can limit interoperability and delay cross-border services, as well as discourage investments in the railway. At panel discussions participants were united in the opinion that all European markets faced their own challenges and that there were still many obstacles to be overcome in order to establish a more efficient European railway space.

Coordination meetings on railway track closures

HAKOM continued to regularly monitor the operations of the infrastructure manager by attending regular monthly meetings on railway track closures that HŽI is obligated to hold with railway undertakings pursuant to Article 12, paragraph (5) of the RA and in accordance with the Commission Delegated Decision (EU) 2017/2075 of 4 September 2017 replacing Annex VII to Directive 2012/34/EU of the European Parliament and of the Council establishing a single European railway area.

System of quality control indicators in freight transport

The establishment and implementation of a system of transport quality indicators is a legal obligation of the infrastructure manager as prescribed by Article 51, and Annex 5, item (2) of the RA. Following the development of the application for figures shown in the system of freight transport quality

indicators, HAKOM conducted a comprehensive analysis based on data available on HŽI's official website "Portal za pristup infrastrukturi" (Portal for infrastructure access) for all railway undertakings registered in the system of freight transport quality indicators for the period from 1 January 2024 to 30 June 2024.

In addition to the said analysis of indicators obtained from the mentioned Portal, within the framework of this project HAKOM also conducted a comprehensive analysis of the system of quality indicators on the sample of 14 IRG-Rail member states and carried out research based on a survey containing 4 questions by which it obtained answers from 17 regulatory authorities of IRG-Rail member states. The answers indicated that the infrastructure manager in the HR had the shortest prescribed time for submitting objections regarding disagreements with the alleged causes of delays in the information system of the infrastructure manager. In addition, only one other infrastructure manager had a higher prescribed tolerance threshold for delays in freight transport than the HR infrastructure manager, whereby the system of calculating charges for delays included trains that are delayed by more than 90 minutes at their final destination as compared to the arrival times scheduled in the timetable.

Based on all conducted activities under this project, HAKOM concluded that, in essence, HŽI met its obligation to establish a system of quality indicators for all railway undertakings, including the system of resolving disputes related to the system of quality indicators in freight and passenger transport.

However, irrespective of the above conclusion and based on conducted analyses, HAKOM arrived at the opinion that it would be prudent to amend certain provisions of chapter 5.7 of the 2025 NS in order to achieve the purpose of legislative provisions of Article 51, paragraph (1) of the RA, and for the system to encourage freight undertakings and the infrastructure manager to reduce disturbances to the lowest possible measure and improve the efficiency of the railway infrastructure through the system of quality indicators.

Non-binding opinion to the draft HŽI Operating plan for 2024

Pursuant to Article 20, paragraph (3) of the RA, the infrastructure manager is obligated to adopt a business plan by the end of February of the year for which the plan is adopted, at the latest. HAKOM conducted a comprehensive analysis of the plan and in its non-binding opinion, it, in essence, concluded that the draft operating plan was drafted in great detail and comprehensively, containing all the necessary integral parts which the plan of an undertaking of HŽI size and importance needed to include.

The financial projections of investments are processed in great detail and contain a great number of useful information (provided that the amounts and deadlines are well-planned and feasible) not only for HŽI but for all stakeholders that are in any way included in the railway sector. They provide basic data and summarised amounts of planned investment activities in 2023, including the data on amounts plan-

ned to be financed from EU funds, as well as actual amounts (how much of total planned investment activities is related to projects of renewal and modernisation of the existing railway infrastructure, and how much to projects of construction of new lines).

In conclusion, due to the exceptional, and not only financial, but also general economic importance of investment projects, HAKOM stressed that it was necessary to plan projects and amounts which were realistically feasible. Following these realistically and objectively planned important investment projects it is necessary to undertake all possible business efforts to realise these plans in their full scope and within the set completion deadlines because they impact transport in general, as well as the quality of transport services, and ultimately the state budget, when the assets drawn from EU funds are not realised in accordance with contracted deadlines.

HAKOM also warned that in addition to investment projects full attention should be paid to activities of infrastructure subsystem management in order to avoid the high costs of renovation caused by inadequate maintenance. Moreover, as the Annual plan itself states: "in the previous 30 or so years the major part of rail tracks was not included in the renovation cycle which resulted in worn down infrastructure capacities and exceeded usage life of railway tracks, rendering it impossible for regular maintenance measures to suffice in maintaining tracks in line with the technical standards required for safe transport at envisaged train speeds".

PLANNING AND REALISATION OF ACTIVITIES

PLANNING AND REALISATION OF ACTIVITIES						
No.	Activity	Result	Planned completion	Strategic goal	Realisation	Implement. assessment
1.		Control - Publish amendments to the Statements Regulatory compliance analysis	Ongoing	2.1, 2.2, 4.2	Network Statements	Achieved
2.	Supervise the implementation of the 2025 Network Statement and all amendments	Control Publish amendments to the statements Regulatory compliance analysis	Ongoing	2.1, 2.2, 4.2	Network Statements	Achieved

3.	Supervise the preparation, publishing and implementation of the 2026 Network Statement	Control – - Publish the draft - Publish the Statement Regulatory compliance analysis	Ongoing	2.1, 2.2, 4.2	Network Statements	Achieved
4.	Control of compliance of the service facilities descriptions with Regulation 2017/2177	Analysis of compliance with the Regulation	Ongoing	2.1, 2.2, 4.2	Analysis completed and Opinion on the correction of the amount of charge for the use of fuelling facilities issued	Achieved
5.	Resolve regulatory disputes	Resolved cases	Ongoing	2.1, 2.2, 4.2	There were no claims	Achieved
6.	Keep the register of rail services of service facilities operators	Register operational and updated	Ongoing	4.2, 4.3	Published updated register	Achieved
7.	Control charges for rail services	Charges comply with regulations	Ongoing	4.2, 4.3	Correction of the charge for fuelling facilities	Achieved
8.	Analysis of the calculation of charges for services provided in the service facilities of infrastructure managers	Analysis prepared	IV	4.2, 4.3	Analysis completed	Achieved
9.	Analyse regulatory financial	Report	Ongoing	4.2, 4.3	RFS	Achieved

10.	Supervise rail services market – transparent and non-discriminatory conditions for the provision of services	Non-discriminatory and transparent conditions of access to the network and service facilities	Ongoing	4.3	Supervision completed and Decision related to HŽI and control of MAP issued	Achieved
11.	Carry out inspection supervisions in the area of rail services	Published supervisory administrative acts Published annual report	Ongoing	4.3	Altogether 8 inspection supervision decisions issued Report on inspection supervision activities	Achieved
12.	Collect and process data on the rail services market condition	Quarterly and annual data analysis Data disclosure	Quarterly/ Annually	4.3	Published annual and quarterly reports on market indicators	Achieved
13.	<i>Activities under items 13. and 14. of the 2024 Annual Work Programme are shown in the chapter Consumer Protection</i>					
14.						
15.	Cooperate in the preparation of regulations in the area of the rail services market and rail passenger rights protection and harmonisation with EU regulations (Regulation 2012/782)	Analysis and proposals for improvement prepared	Ongoing	4.1	Proposals prepared, Amendments to the ARRSM	Achieved
16.	Reporting to the EC and MSTI in the framework of rail market supervision	Report	IV	4.3	Link to EC announcement	Achieved

04

END USER PROTECTION

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PROTECTION OF ELECTRONIC COMMUNICATIONS END USERS

Aiming to achieve a high level of protection of users of electronic communications services, HAKOM carries out a series of activities, of which the most important ones are related to the resolution of disputes between end-users of services and operators, and to providing information to service users, with special attention being awarded to the needs of special social groups, harmonisation of regulations with actual market requirements and monitoring of how operators implement applicable regulations.

HAKOM continued its practice of informing and educating end users through different communication channels. Information on services, rights and obligations of users and operators is available on HAKOM's official website. Users are provided with the opportunity to submit queries through different communication channels (direct telephone contact with HAKOM's experts, regular mail, e-mail, the Ask Us application and social media). In 2024, users could also ask questions over the phone every working day from 9 a.m. to 11.30 a.m. and from 12.30 to 3.30 p.m., while replies to queries submitted via the Ask Us application and social media were provided within five working days, on average. An information leaflet with information every user should know when using electronic communication services was made available in digital form, while printed copies were distributed to counselling venues, consumer associations and operators.

Users were also informed through direct contacts with beneficiaries and the representatives of consumer associations, appearances of HAKOM's experts on TV and radio shows concerning consumer topics and through cooperation with other authorities competent for consumer protection policies. The annual meeting with the representatives of consumer protection associations regarding the rights of users and obligations of providers of services in the area of electronic communications services, postal and rail services was held in September 2024. In addition, in cooperation with consumer associations, HAKOM held 15 lectures on user rights and operator obligations (e.g. in the Town of Krk, in Čakovec, Crikvenica, Zagreb, Vinkovci, Vukovar, etc.).

Throughout the year users continued to be provided with unlimited access to HAKOM's regularly updated applications: HAKOMetar, HAKOMetar plus, Cost Estimator, and the Do Not Call Register. HAKOM continued to update its Privacy Calculator – which is a game warning users about different possibilities of fraud and the dangers of disclosing personal information.

Aiming to **protect children** in the most efficient possible way, training was provided to 76 classes of primary school children (in grades four to eight), while all fifth grade children in the Republic of Cro-

atia were given a brochure with advice about dangers and safety online, protection of their privacy and personal data, behaviour on and the responsible use of social media. Further, on the occasion of the marking of the Safer Internet Day, cooperating with the Partners in Learning association, CAR-NET and the National CERT, HAKOM participated in the Quest for a Better Internet conference on 6 February 2024, which stressed the need for better prevention of electronic violence, protection of children's personal data, and creation of a safer virtual environment, as well as the need for better quality internet content for children and young people.

The international conference An Accessible Future was organised on 12 June 2024, the focus of which was, as in previous years, on how to deal away with challenges faced by **persons with disabilities** in the modern society. The objective of the conference was to bring together policy creators and regulators, the industry and the media, and technology and standardisation experts on one side and on users, persons with disabilities, on the other, as well as to raise awareness on this topic in society in general. Within the framework of the project "Pristupačnost 2024" (Accessibility 2024) the designated website was maintained and updated with new offers.

One of HAKOM's key activities in consumer protection, which enables consumers to resolve their issues with operators without incurring costs of initiating proceedings before courts is **the resolving of disputes between users and operators**. In 2024, altogether 715 disputes were resolved, which is an increase of 3.19 percent from 2023 and an upward change in the otherwise six years long trend of declining number of disputes. However, since the number of disputes depends on numerous various factors (number of users, to what extent users are (un)informed of their rights, services offered, changes to technology used for providing the service, etc.), these specific circumstances need to be taken into consideration when assessing their significance.

The results of resolving disputes are analysed twice a year for better market monitoring and navigation and are published in the [Semi-annual](#) and [Annual reports on disputes of end-users in electronic communications](#). These reports are primarily intended for operators to improve their dispute and complaint resolving practices in the first and second instance. The annual report indicated a mild increase in the number of disputes but also improved operator practices when it comes to resolving objections and complaints.

Figure 4.1 Number of disputes in electronic communications from 2021 to 2024

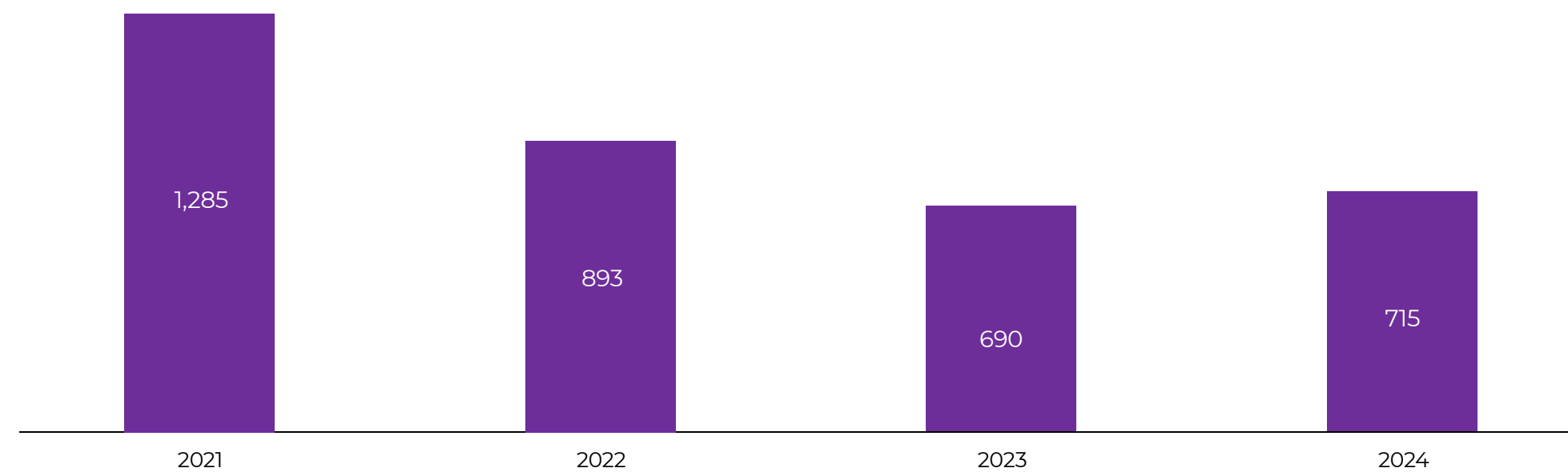
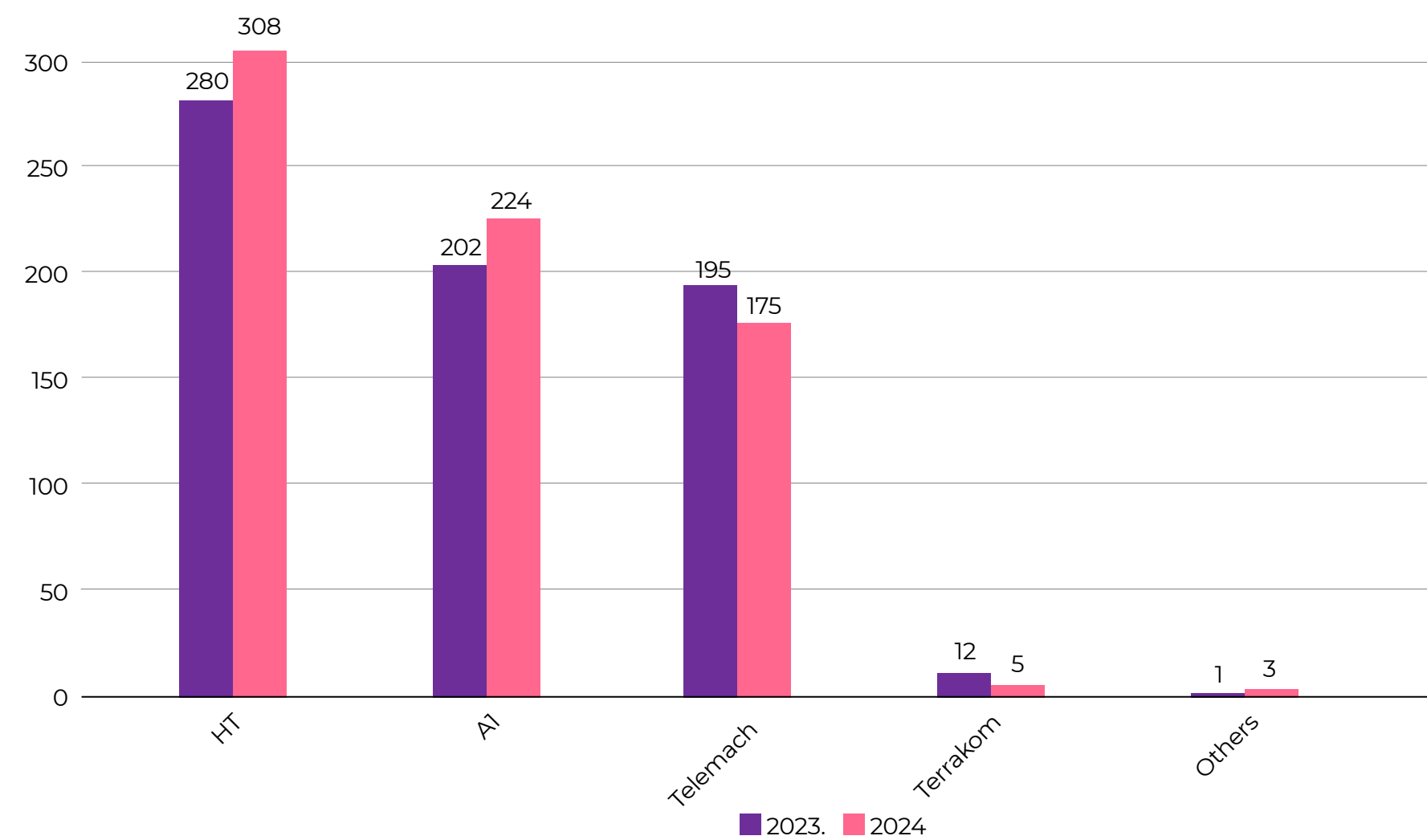
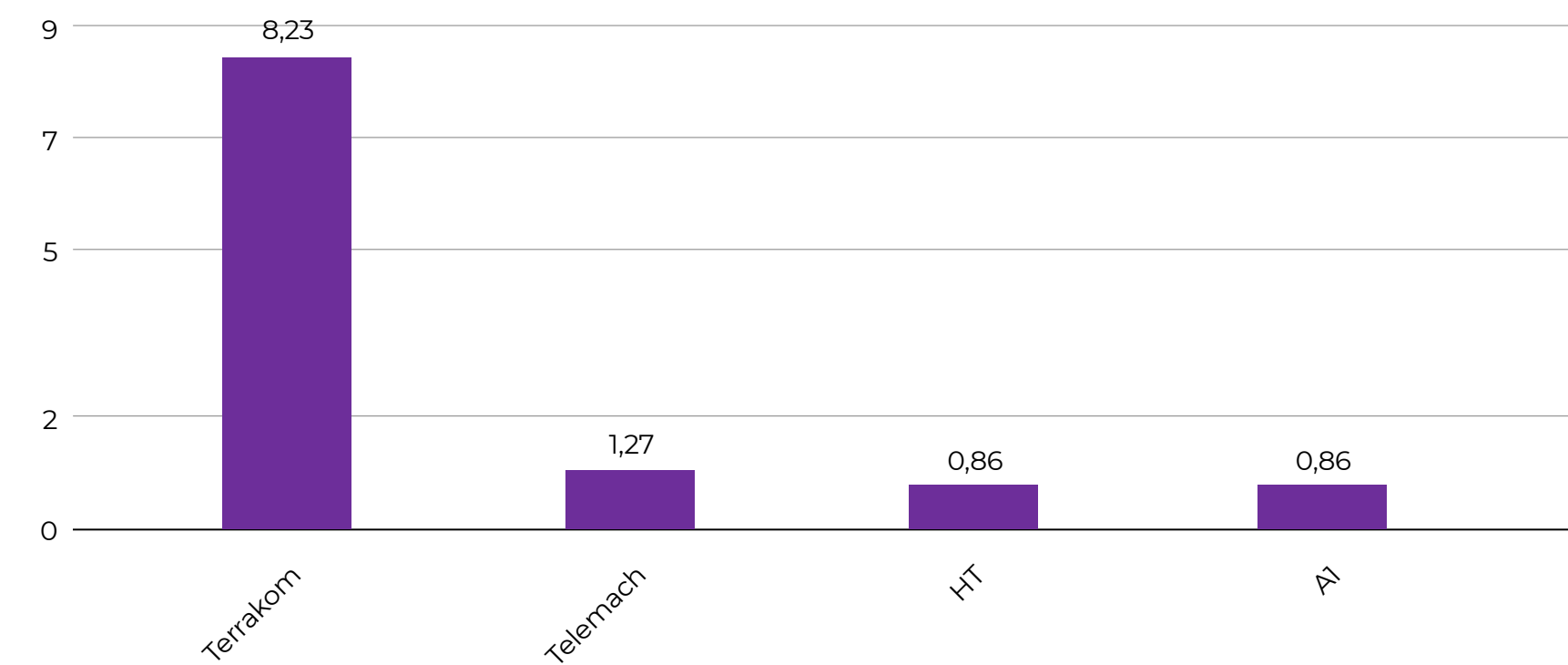


Figure 4.2 Number of disputes by operator in 2023 and 2024



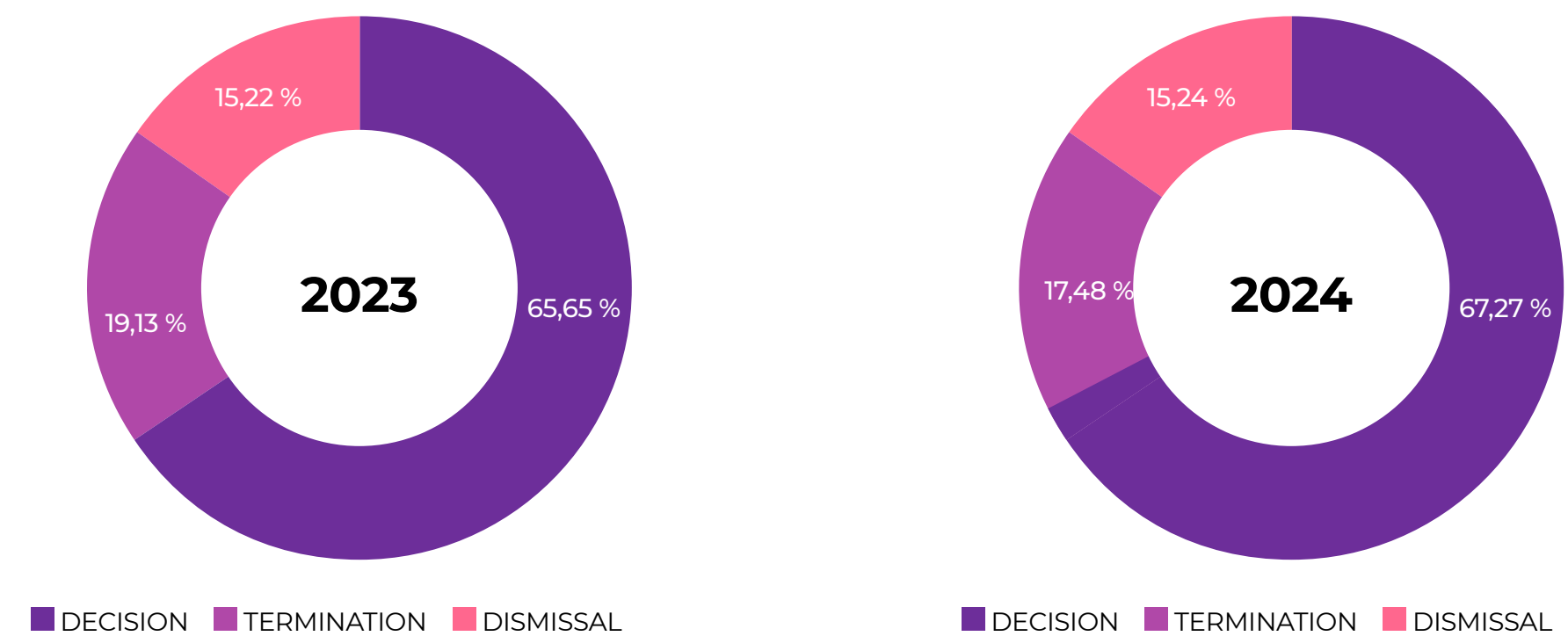
* Includes Iskon Internet which merged with HT on 1 January 2024.

Figure 4.3 Average number of disputes per 10,000 users



Of the total number of user requests for dispute resolution in 2024, 234 were resolved by adopting a decision on dismissal or termination without the need to deliberate the merits of the case. In 2024, the share of such resolutions in the number of resolved disputes declined moderately, accounting for 32.73 percent, while in the previous year it totalled 34.4 percent. The decisions on termination were predominantly reached because the operator subsequently, after the end user turned to HA-KOM, changed its initial decision adopted when resolving the complaint and the end user raised no objections. The decisions on dismissal were predominantly adopted due to the expiry of statutory procedural deadlines for dispute resolution.

Figure 4.4 Share of disputes by type in 2023 and 2024



Most disputes between operators and users in 2024, 481 of them, were resolved by a HAKOM decision. The ratio of decisions in which HAKOM confirmed the second instance decision of an operator to decisions in which they were not confirmed is a measure of correct treatment by operators. Specifically, in the cases when operators' services, in particular their consumer complaint commissions, proceed as HAKOM would proceed in a particular case, HAKOM's decision in the dispute is negative for the user, i.e. HAKOM confirms the decision reached by the operator regarding such complaint. The fact that in 2024, 26.6 percent of decision were positive for the user, and this share totalling 34.7 percent in the year before, indicates and improvement in the work of operators' services in resolving user objections and complaints.

Figure 4.5 Ratio of positive to negative decisions for the user in 2023 and 2024

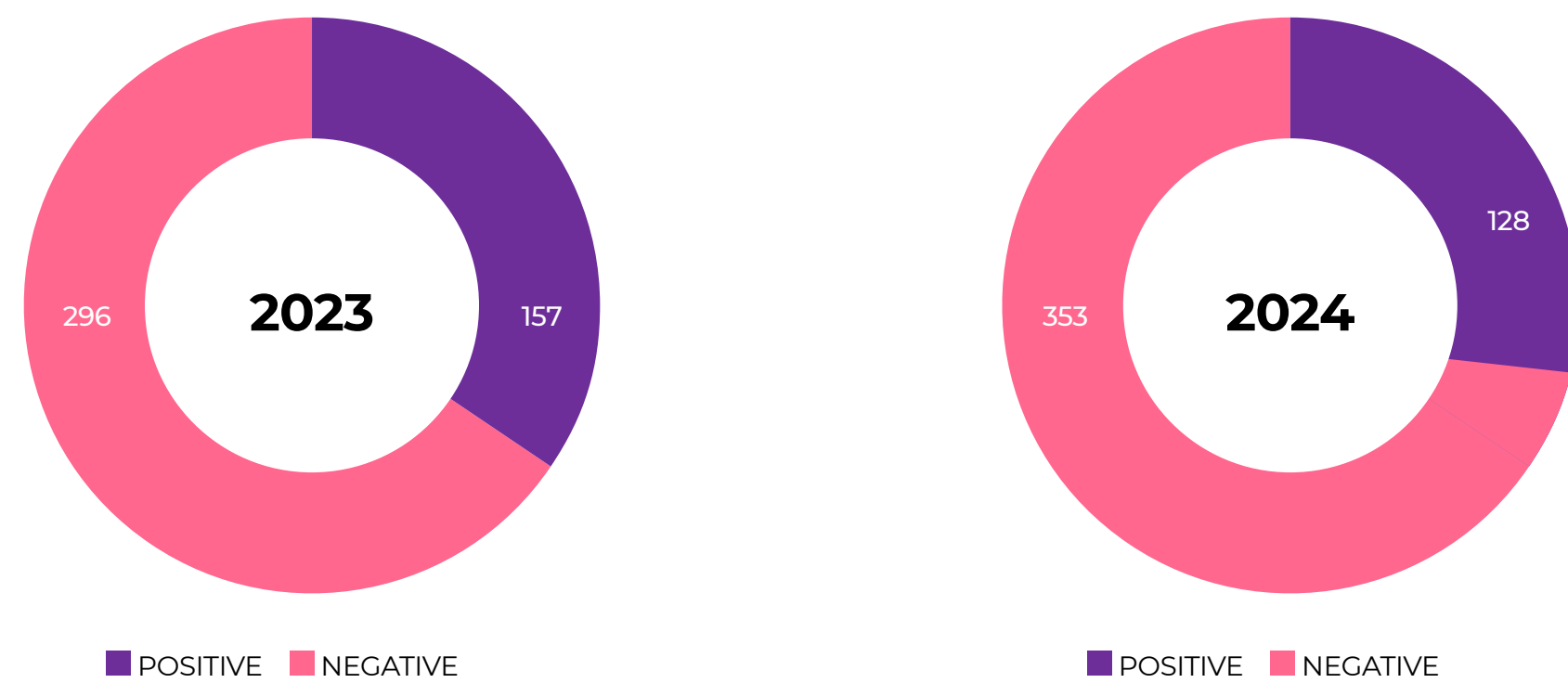
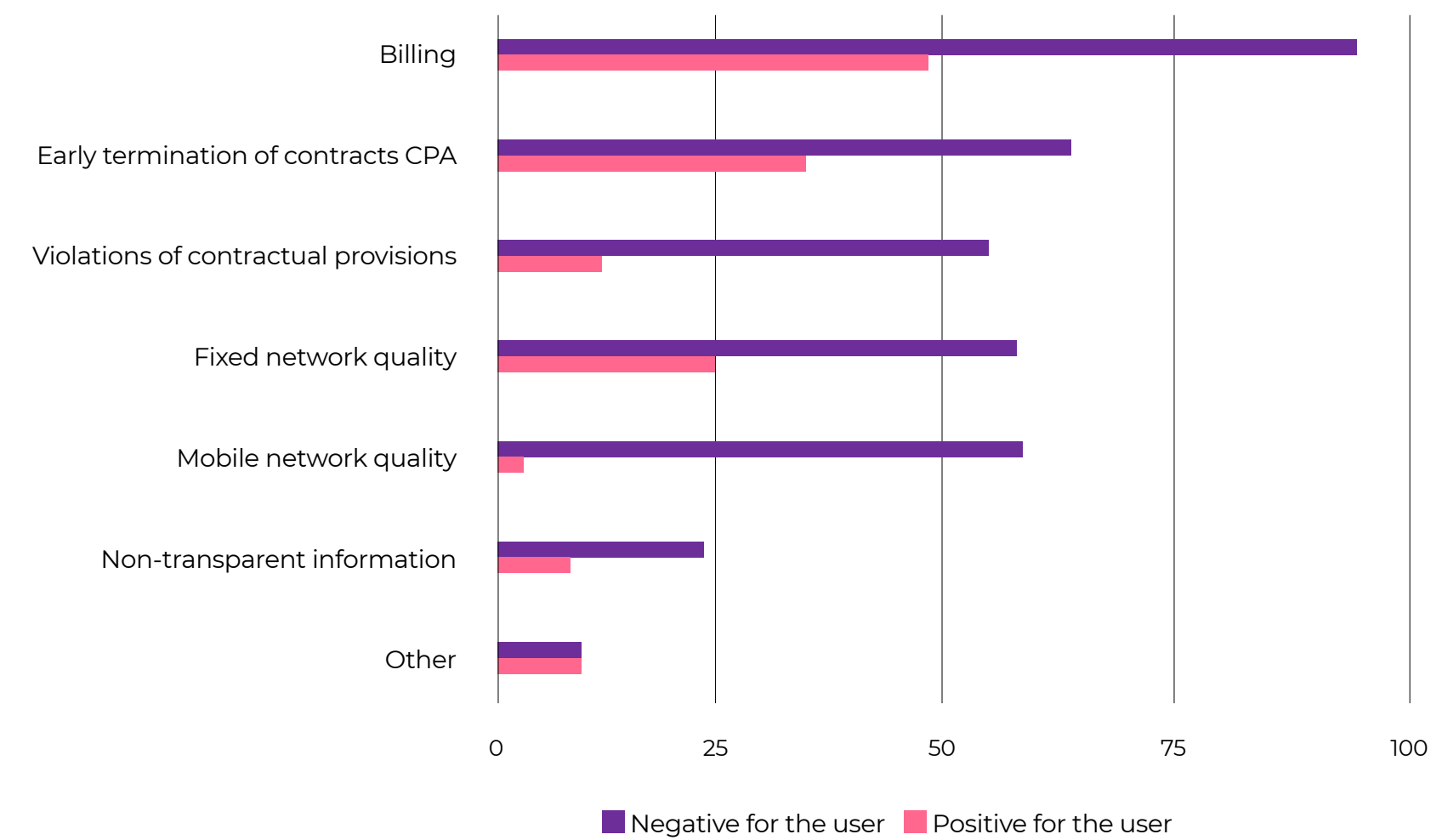


Figure 4.6 Ratio of decisions by reasons for dispute in 2024

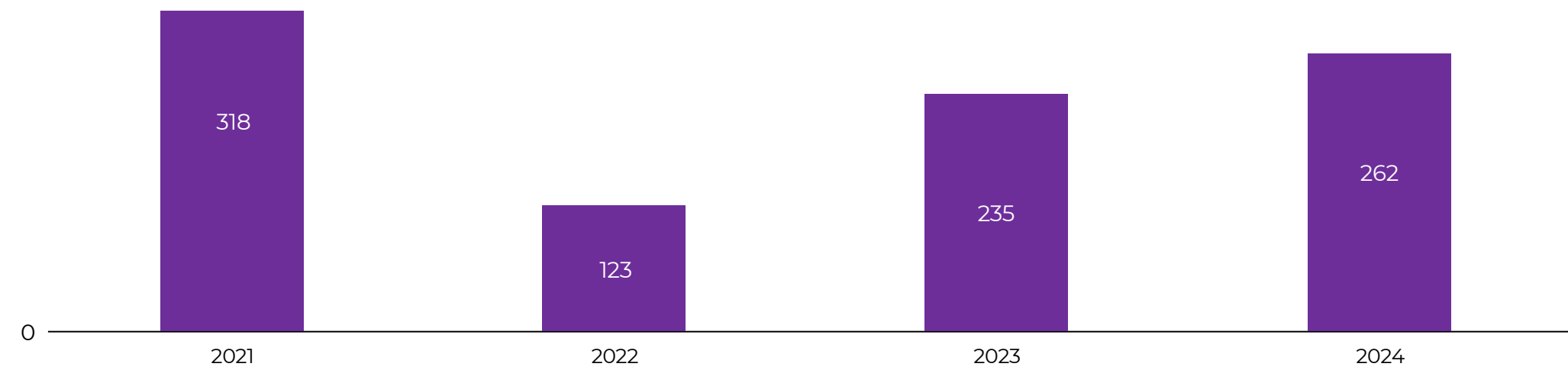


PROTECTION OF POSTAL SERVICES USERS

Similarly as in the segment of electronic communications, the protection of users in the postal services market was primarily related to the resolving of disputes and problems identified in the market, as well as to informing and educating users. In 2024, HAKOM received 11 percent more dispute resolution requests and 14 percent more submissions than in 2023. At the beginning of 2024, a greater number of consumer complaints was related to problems in the operation of consumer services, so postal inspectors resolved the issues through on-site inspection supervisions.

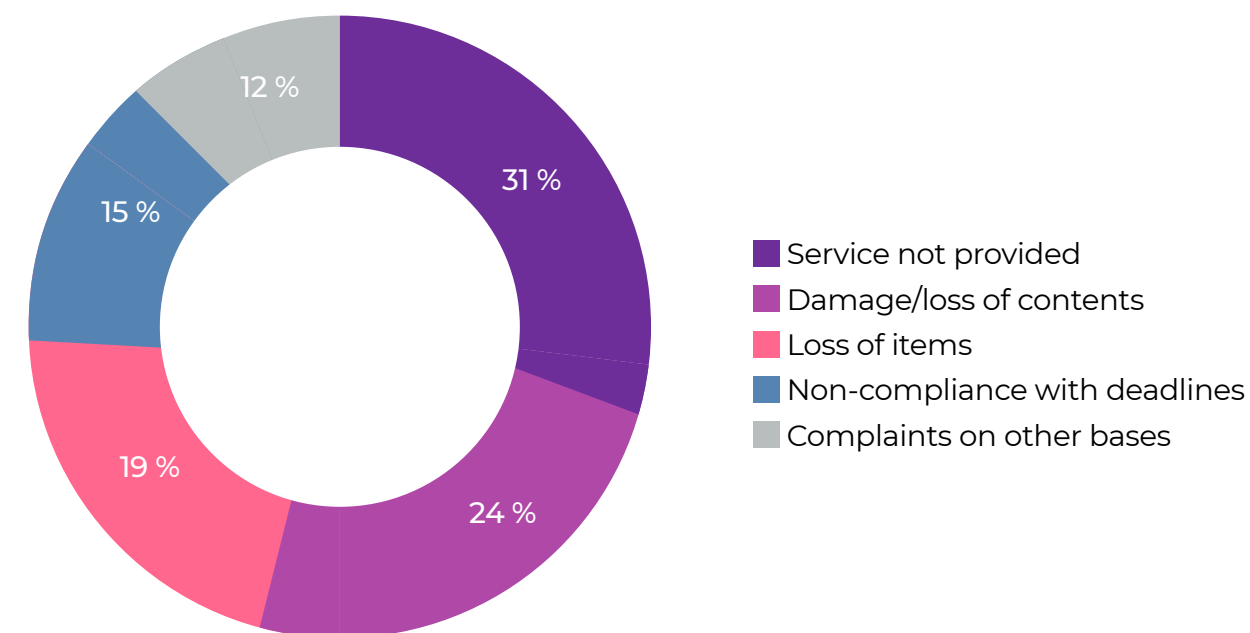
In all, 262 dispute resolution requests were received in 2024. The largest number of the total received requests, 223, or 85 percent, were related to disputes with the universal service provider, HP, and the remaining 15 percent were related to other postal services providers.

Figure 4.7 Number of user disputes in the postal services market



According to the type of complaint, the majority of user complaints referred to failure to provide a postal service and failure to provide a postal service in the full extent, followed by damage/loss of contents. As compared to the previous year, there is a visible decline in the share of complaints relating to the loss of postal items and an increase in the share of complaints about services not provided and non-compliance with deadlines.

Figure 4.8 Shares of types of complaints in received requests in the postal services market



The largest number of dispute resolution requests was related to the performance of universal service, with the most requests being related to services connected with regular parcels (27 percent) and registered mail (27 percent). Users complained the most about services in domestic postal traffic, which accounted for 82 percent of all dispute resolution requests.

In 2024, HAKOM resolved a total of 305 disputes, of which 235 were addressed in 2024 and 70 were transferred from 2023. Altogether 159 requests were rejected pursuant to a decision, while 63 were granted or partially granted. In 19 cases a decision on termination was reached (at users' requests because they resolved the disputes amicably with postal service providers), while 64 cases ended with the adoption of a decision on dismissal because the requests in question did not fall within complaints covered by Article 54 of the PSA, were not submitted in a timely manner or were submitted by unauthorised persons.

Of other noteworthy activities relating to the protection of postal services users, there is the workshop on vulnerable users held in Vienna in June of 2024, organised by the European Regulators Group for Postal Services (ERGP), of which HAKOM is an active member. At the said workshop, the representatives of numerous international bodies, European regulators and leading global stakeholders in the postal market discussed potential regulation and the most appropriate way of defining the term of vulnerable users of postal services and their needs. These activities ultimately resulted in the adoption of a joint document on vulnerable users, which was forwarded for information to the European Commission. In addition, for the first time HAKOM organised a Postal Conference, holding a regular round table in September for the purpose of informing consumer associations about all relevant topics in the postal services market relating to the protection of the rights of postal services users.

PROTECTION OF PASSANGERS IN RAIL SERVICES

Pursuant to the ARRSM, HAKOM is also competent for the protection of passenger rights and for resolving passenger complaints against the decisions of consumer complaints commissions of railway undertakings.

In 2024, passengers were entitled to submit written complaints to railway undertakings or train station operators whose average annual traffic exceeds 10,000 passengers per day for the protection of their rights prescribed by Regulation (EU) 2021/782 of the European Parliament and of the Council on rail passengers' rights and obligations, which entered into force on 7 June 2023, the ARRSM, the Act on Transportation Contracts in Railway Traffic, the RA and the General terms and conditions of the passenger transportation contract.

Legal protection is provided in three instances. The first instance is the railway undertaking or the train station operator, the second is the consumer complaints commission of the railway undertaking/station operator and the third instance of legal protection for passengers is HAKOM. The time limits for submitting complaints and requests to HAKOM are regulated by the ARRSM. In 2024, 13 passenger complaints were received and 8 decisions pursuant to passenger complaints were adopted, of which 4 were dismissed, 1 rejected, 2 were granted in full and 1 was partially granted.

The most frequent reasons for passenger complaints referred to the implementation of the Regulation and the General terms and conditions of the transportation contract (tariff for the transport of passengers in domestic traffic – Tariff 101), i.e. to ticket refunds, quality standards, timetables, assistance to persons with disabilities, frequent delays and passenger information. In 2024, HŽPP received 7.480 passenger complaints in the first instance. Almost half of the complaints referred to ticket refunds, followed by train delays, while other complaints referred to staff performance, timetables, train composition, Tariff 101, the working order of cars, the ISPRO sales system and cleanliness.

A share of activities related to **the rights of passengers with disabilities or reduced mobility** was carried out within the framework of the Accessibility 2024 project. It was aimed at assisting the passenger undertaking and train station operators to better understand the current needs of passengers with disabilities or reduced mobility and optimise or improve their operations. The following activities were carried out as part of the project:

- analysis of the situation in relation to the education of staff of the railway undertaking and train station operators on procedures and communication with persons with disabilities and reduced mobility in the context of the results of research carried out within the Accessibility 2023 project;
- identification of results and elements of the workshop which would contribute to the increase in competences of staff in communication and treatment of persons with disabilities and reduced mobility;
- defining the workshop plan and the way to include contributions of persons with disabilities;
- preparation of educational workshop elements, workshop elements with the contributions of persons with disabilities and the preparation of the questionnaire for assessing participant satisfaction;
- a pilot workshop;
- presenting the role of assisted communication and communication panels for increased accessibility and social inclusion to responsible persons of HŽPP and HŽI;
- production of communication panels with elements necessary for train travel and the placement of a specimen at the Main Train Station in Zagreb.



PLANNING AND REALISATION OF ACTIVITIES

Na temelju ZTRŽU-a, u HAKOM-ovoj nadležnosti je i područje zaštite prava putnika za rješavanje zahtjeva putnika protiv odluke Povjerenstva za reklamacije potrošača pri željezničkom prijevozniku.

User and passenger protection activities						
No.	Activity	Result	Planned completion	Strategic goal	Realisation	Implementation assessment

Protection of users of electronic communications

31.	Resolve user disputes with electronic communications operators	Administrative acts	Ongoing	1.1, 4.2	715 disputes resolved	Achieved
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32.	Analyse the work of operator consumer complaints commissions	Semi-annual and annual reports	I and III	1.1	Analysis conducted. Semi-annual report and Annual report published	Achieved
33.	Cooperate with the representatives of operator consumer complaints commissions	Recommendations for improvements in the processing of consumer complaints	Ongoing	1.1	8 meetings held with operator representatives	Achieved
34.	Analyse general terms and conditions, special conditions and price lists	Amendments due to deficiencies	Ongoing	1.1 4.2	11 general terms, 3 special conditions, 236 amendments to price lists analysed; operators requested to make necessary amendments and changes	Achieved
35.	Monitor and measure the quality of provided services, simple and transparent selection of service providers	Applications under construction: HAKOMetar HAKOMetar-plus Cost Estimator	Ongoing	1.1	Available >99% of the time	Achieved
36.	Maintain Do Not Call Register and cooperate with the MESD, traders and users	Register operational, accessible to users and traders	Ongoing	1.1	Available >99% of the time	Achieved

37.	Inform and educate users	Brochure, leaflet and video Workshops and lectures, media appearances, social media posts	Ongoing	1.1	Leaflet provided to users, brochure published and provided to all 5th grade students in the HR, 15 workshops held with associations, 80 posts on social media, 15 guest appearances / media statements	Achieved
38.	Increase accessibility for persons with disabilities	Accessibility of services and products to persons with disabilities Project with FEEC PWD conference held	Ongoing IV II	1.1	Data collected from operators Project with the Faculty of Electrical Engineering and Computing completed, PWD conference held	Achieved
39.	Respond to user inquiries	Responses given in the shortest possible period	Ongoing	1.1	Data collected from operators Project with the Faculty of Electrical Engineering and Computing completed, PWD conference held	Achieved

40.	Educate and raise awareness of the protection of children in electronic communications	Safer Internet Day marked in February Workshops for children and young people	Ongoing	1.1.	Lectures held in 76 primary school grades, conference Quest for a Better Internet held, 5 media appearances, Privacy Calculator updated	Achieved
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41.	Issue and publish expert opinions	Expert opinions	Ongoing	1.1	No opinions provided	Achieved
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Protection of postal services users

	Resolve user disputes with postal services providers	HAKOM's decisions	Ongoing	1.1	305 disputes resolved	Achieved
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	Respond to queries and submissions of users and other stakeholders in the postal market	Responses to users and other stakeholders	Ongoing	4.2	Responses provided to 337 submissions	Achieved
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Protection of rail services users

	Resolve user disputes of rail passengers	Cases resolved	Ongoing		8 decisions	Achieved
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	Conduct supervision inspections in the area of the protection of passenger rights	Published supervisory administrative acts Published Annual Report	Ongoing		11 inspection decisions issued Report on conducted inspections	Achieved
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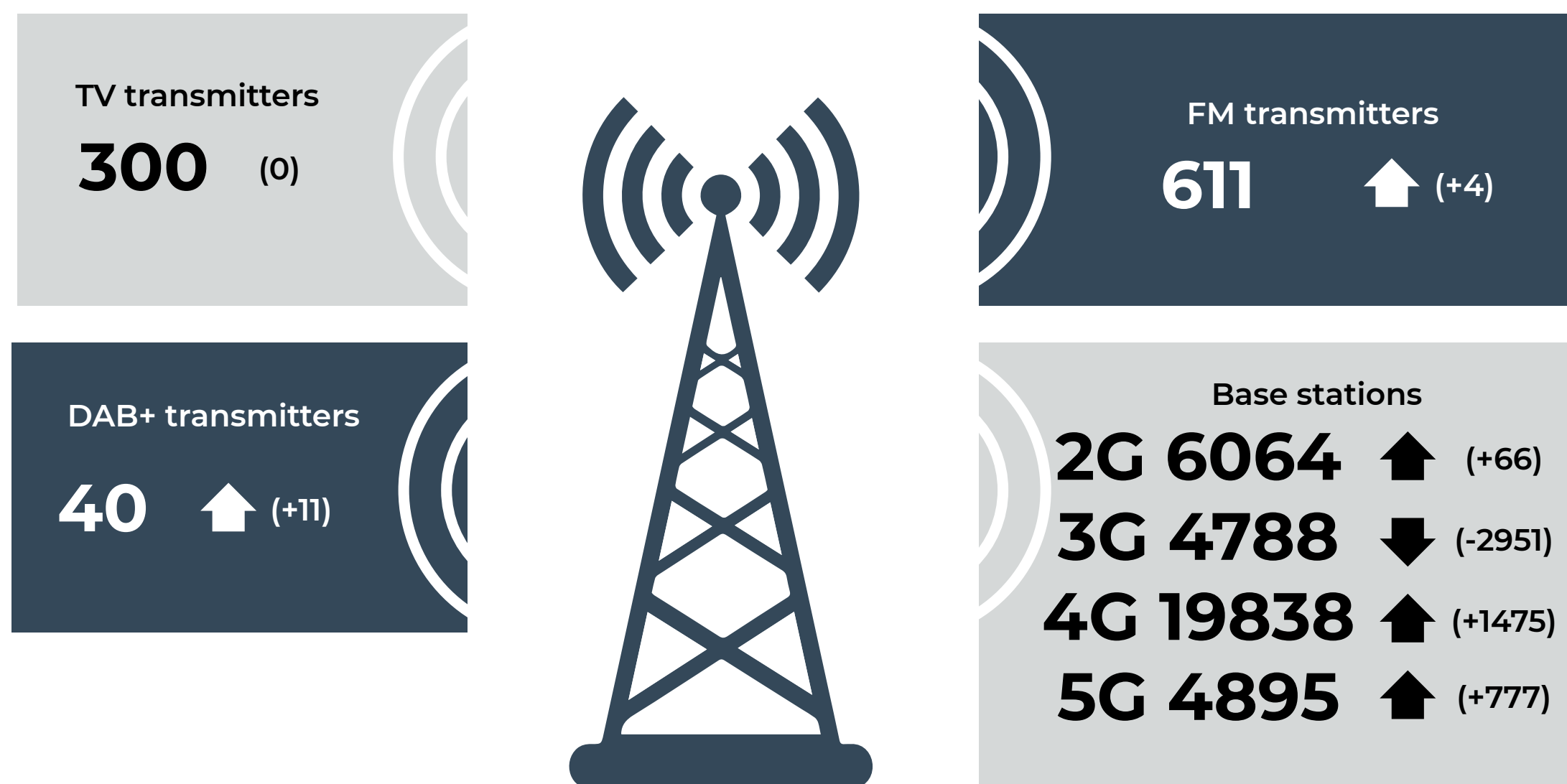


05

RF SPECTRUM MANAGEMENT

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Figure 5.1 Basic data on radio stations



RF SPECTRUM MANAGEMENT

Effective management of the RF spectrum, as one of naturally limited resources of interest to the Republic of Croatia, is one of HAKOM's main tasks. In order to perform this task, HAKOM determines spectrum use, creates allocation plans and radiofrequency plans, defines network technical parameters, issues licences and approvals for the RF spectrum use and performs spectrum control and monitoring on the national and international levels, thereby adhering to the principles of objectivity, transparency, competitiveness, proportionality and non-discrimination. The RF spectrum use in the HR is internationally coordinated in accordance with the regulations of the ITU, CEPT and international implementation treaties, and is additionally harmonised among EU Member States and neighbouring countries. As a limited natural resource, the RF spectrum is important in the development of electronic communications, with terrestrial wireless broadband networks, and the increasingly important complementary contribution of satellite, non-terrestrial networks (NTNs) communications, ensuring a seamless connectivity in the future

development of all branches of the industry and economy. Effective RF spectrum management and control are necessary to ensure a smooth operation of radiocommunication services that provide for the safety of human health and life and the protection of property.

EFFICIENT USE OF THE RF SPECTRUM

By monitoring technological developments and the needs of RF spectrum users and keeping an eye on the effective use of the RF spectrum, in 2024 HAKOM prepared and proposed to the MSTI amendments to the Radiofrequency Allocation Table, which lays down the purpose of radiofrequency bands for radiocommunication services in accordance with Radio Regulations of the International Telecommunications Union (ITU).

In May 2024, HAKOM organised the Day of New Technologies conference, which focused on satellite communications and the non-terrestrial networks (NTNs), and on this occasion also unveiled the results of assessments conducted this year on the quality of services provided by terrestrial public mobile communications networks in Croatia.

Given predictions that new generations of wireless communications, namely the further development of 5G and 6G networks, will break the boundaries of current terrestrial systems and achieve uninterrupted coverage (seamless connectivity) precisely through NTNs, the conference aimed to highlight all the advantages of introducing satellite communication technologies and present a range of applications in various fields. NTNs include GEO, MEO, and LEO satellite constellations, High Altitude Platform Systems (HAPS), Low Altitude Platform Systems (LAPS), and Air-to-Ground (A2G) networks. Satellite communications, or NTNs, are currently being considered as a vital technology for achieving the coverage of isolated areas in light of the development of 5G and 6G networks. The company ING servis d.o.o. presented its activities, which encompass the development of numerous satellite systems worldwide with a special focus on antenna systems, satellite data links, satellite telephony and wireless communications in general. The representatives of the company Kymeta discussed the development and use of flat panel antennas for LEO and GEO satellites and a presentation was held on the progress of the CroCube project under which it was planned to launch its own satellite into the orbit, as was realised at the end of the year. The Croatian company Amphinicy Technologies shared its knowledge of the development and use of software in satellite industry. A virtual presentation was held by David Goldman, Vice President of Satellite Policy at SpaceX, who presented the development and latest achievements of Starlink. HAKOM presented the latest results of independent quality measurements of network and services provided by mobile operators in the HR. The results included measurements of voice and data service performance collected in 31 cities and along five thousand kilometres of roads and highways in the territory of the HR.

Within the framework of the International Symposium ELMAR, held in September 2024, in co-

operation with the company Odašiljači i veze d.o.o. (OIV) HAKOM organised a special session under the title “5G in Broadcasting”, presenting the current developments and achievements of this technology, its potential and regulatory and technical challenges faced by the stakeholders and potential users of electronic communication and audio-visual services, the industry and the academia in several interesting presentations. In addition to international operator representatives, representatives of broadcasters, equipment manufacturers and regulators their perspective on 5G in Broadcasting in Croatia was presented by HAKOM and OIV.

HAKOM also participated in an international conference on electronic communications held in Ohrid (Republic of North Macedonia), the International Regulatory Conference 2024, in May 2024, sharing its experiences in the segment of international replanning of the VHF III band for the purpose of a more efficient use of the RF spectrum without interferences and the implementation of the digital radio (DAB+) in a presentation under the title “DAB re-planning and implementation in Croatia”.

HAKOM’s GIS portal was upgraded and modernised in 2024, implementing a new GIS platform and GIS browsers for a more efficient management of digital data and improved reliability. In addition, access to public data was improved, making available to the public data on the ownership of base stations in public mobile communications networks and radio stations as part of the GIS browser of radio stations.

Within the scope of its regular activities of RF spectrum management, HAKOM issues licences for the RF spectrum use, decisions on the revocation of licences, approvals for services of particular importance and compliance certificates to radio stations, and, in accordance with the Ordinance on fiscalisation in cash transactions, certificates confirming inability to establish an internet connection to exchange data with the Ministry of Finance and the Tax Authority.

Tablica 5.1. RF spectrum management – documents issued

Type of document issued	Quantity
RF spectrum use licences	6,019
Licence revocation decision	92
Approvals for services of particular importance	5
Compliance certificates	4,865
Fiscalisation certificates	1

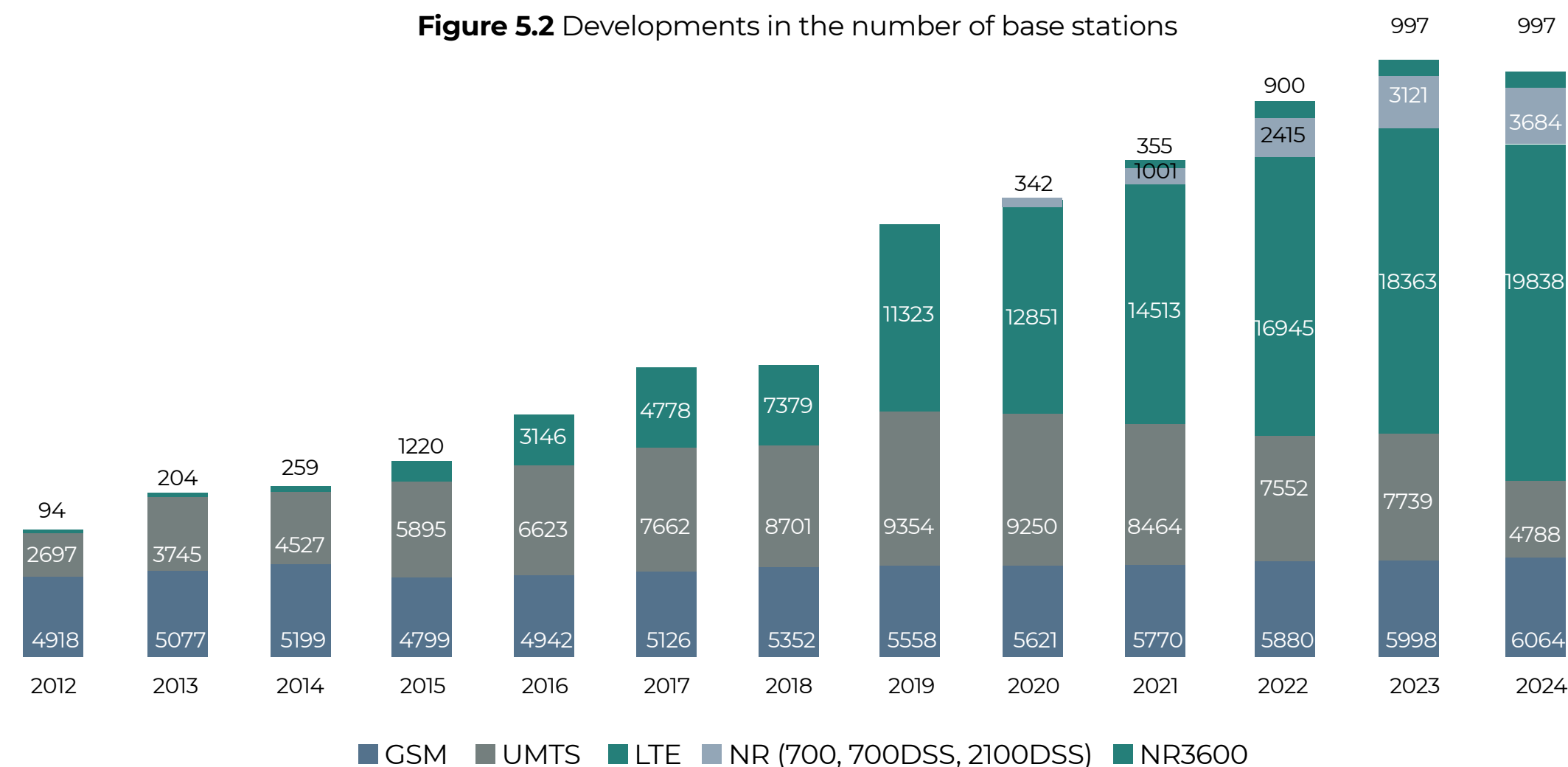
As part of its regular activities pursuant to the licences issued for the use of the RF spectrum, HAKOM issued 22,079 invoices for the use of the RF spectrum.

As part of the e-Agency programme, HAKOM completed the implementation of the new ERP system in 2024, which includes issuing licences for the use of the RF spectrum, issuing decisions on the revocation of licences, preparation of calculations and issuing invoices for charges for the use of the RF spectrum. In addition, new functionalities were implemented in the office management system, improving the efficiency of staff and enabling automatic sending of documents to users via e-mail.

PUBLIC MOBILE COMMUNICATIONS NETWORKS

In 2023, HAKOM allocated the radiofrequency spectrum for mobile communications networks in the 800 MHz (791-821/832-862 MHz), 900 MHz (880-915 MHz/925-960 MHz), 1800 MHz (1710-1785/1805-1880 MHz), 2100 MHz (1920-1980/2110-2170 MHz), 2600 MHz (2500/2570/2620-2690 MHz) frequency bands at the national level for the period from 19 October 2024 onwards. Since the spectrum amount and frequency allotment per operator is different from the allocation in line with old licences, in the second quarter of 2024, in cooperation with operators, HAKOM agreed on amendments to licences for the purpose of achieving a harmonised plan of transfer to new frequencies. In view of the complexity of the procedure and in order to ensure the continuity of service quality for all users, the transfer was envisaged in several phases by frequency bands in the period from 18 May to 18 October 2024, when all operators started to use the radiofrequency spectrum in line with the parameters of new licences.

As at 31 December 2024, the three operators at the national level reported 4,865 5G base stations (including the NR 700, NR700DSS, NR2100DSS and NR3600 technology). Early in 2025, HT fully discontinued the 3G network and started using the released radiofrequency spectrum for new technologies.

Figure 5.2 Developments in the number of base stations

The 5G working group continued its work in 2024, focusing primarily on the implementation of 5G networks and meeting the terms of the licences which contribute towards the meeting of the goals of the National Plan for Broadband Development 2021-2027. At the meeting of the 5G working group late in 2024 operators listed as the main reasons for difficulties in the implementation of 5G networks the failure to adopt Regulation on the Standards for the Development of Electronic Communications Infrastructure and Other Associated Facilities (hereinafter: Regulation), lack of infrastructure (access roads, HEP electrical connections), slow and inefficient bureaucracy and unresolved property law relations.

With regard to areas not covered by the satisfactory signal strength and areas of special interest not covered by satisfactory signal strength, in 2023, all three operators of mobile communications networks applied for the extension of the time limit to meet the obligations regarding coverage under permits for certain locations. HAKOM adopted decisions on amendments to time limits for locations covered in the unified plan, which was to be adopted together with the adoption of the new Regulation. An extension of 18 months was granted starting from the entry into force of the Regulation, which entered into force in the meantime, on 11 March 2025, making 11 Septem-

ber 2026 the final deadline for compliance in these locations. For the remaining locations, not granted the extension, inspection procedure was launched to check compliance with the terms of the use of the RF spectrum pursuant to the licences.

In addition, at the meeting of the 5G working group, HAKOM held a presentation on the possibilities of applying under the fourth call for proposals for the Connecting Europe Facility - Digital (CEF Digital) for the co-financing of projects in the area of European quantum communication infrastructure, core connectivity for global digital gateways and 5G large-scale pilots, which include 5G smart communities and 5G coverage along major transport routes.

In 2023, holders of licences for the 3600 MHz frequency band at the regional level were, at their request, granted extension for compliance with the obligation to put into operation at least one base station. In 2024, all licence holders met the conditions and submitted requests for undergoing technical inspections and thus complied with all obligations under their licences for the use of the radiofrequency spectrum.

In 2024, as part of carrying out activities pursuant to the **National Plan for Broadband Development 2021-2027**, HAKOM, in cooperation with the Ministry of Health, as part of a public campaign, published and presented educational materials (animations and infographics). Two round tables were held in October 2024 on the topic of “Non-ionizing electromagnetic fields – health impacts“ in Osijek and Zagreb. These activities were aimed at raising awareness and informing the public on non-ionising radiation, with special emphasis on explaining the influence of electromagnetic fields on health, especially in the context of the Europe’s 5G strategy in the digital decade as the foundation for digital and green recovery, improvement in the quality of life and protection of public health. The gathered key stakeholders expressed their support for the continued communication with the expert and general public, the need for scientific and expert verification of data sources and monitoring and verifying of research on exposure to electromagnetic fields and their health impacts. In the spirit of prevention, those gathered all stressed the importance of promoting healthy life habits, physical activity and rational use of communication and new technologies, public access to the monitored results of electromagnetic field measurements and the plan of continued communication of technical and health aspects of new technologies.

PRIVATE MOBILE COMMUNICATIONS NETWORKS

As regards mobile communications networks, a total of 1,705 licences were issued for fixed stations and 253 licences for movable stations in 2024. The existing analogue networks are gradually transitioning to digital technology and all new networks are used exclusively in the digital mode. The Croatian Firefighters Association still uses the analogue repeaters in the 136-174 MHz frequency band. Some county firefighters' associations have built their own digital networks within the same band, while a decision on the unified firefighters' network at the level of the Croatian Firefighters Association has still not been adopted.

The development of the 5G technology has enabled the use of the RF spectrum for broadband networks for own uses, i.e. networks with the local use of the RF spectrum in limited geographical areas, such as industrial complexes, industrial parks, university and research centres - campuses, exhibition venues and fairs as well as agricultural and forest areas. After the adjustment of regulations over the previous years, in early 2024 HAKOM issued the first licence for the use of the RF spectrum for a broadband network for own use within the RF band of 2575-2615 MHz.

Intensive cooperation with the Ministry of Defence continued in 2024, which was characterised by the increased scope of issued necessary authorisations for the use of the RF spectrum by the Ministry of Defence and for the purposes of NATO forces.

The operation of private mobile communications networks at the international level was coordinated with Slovenia, Austria and Hungary, the countries that the Republic of Croatia has signed coordination agreements with.

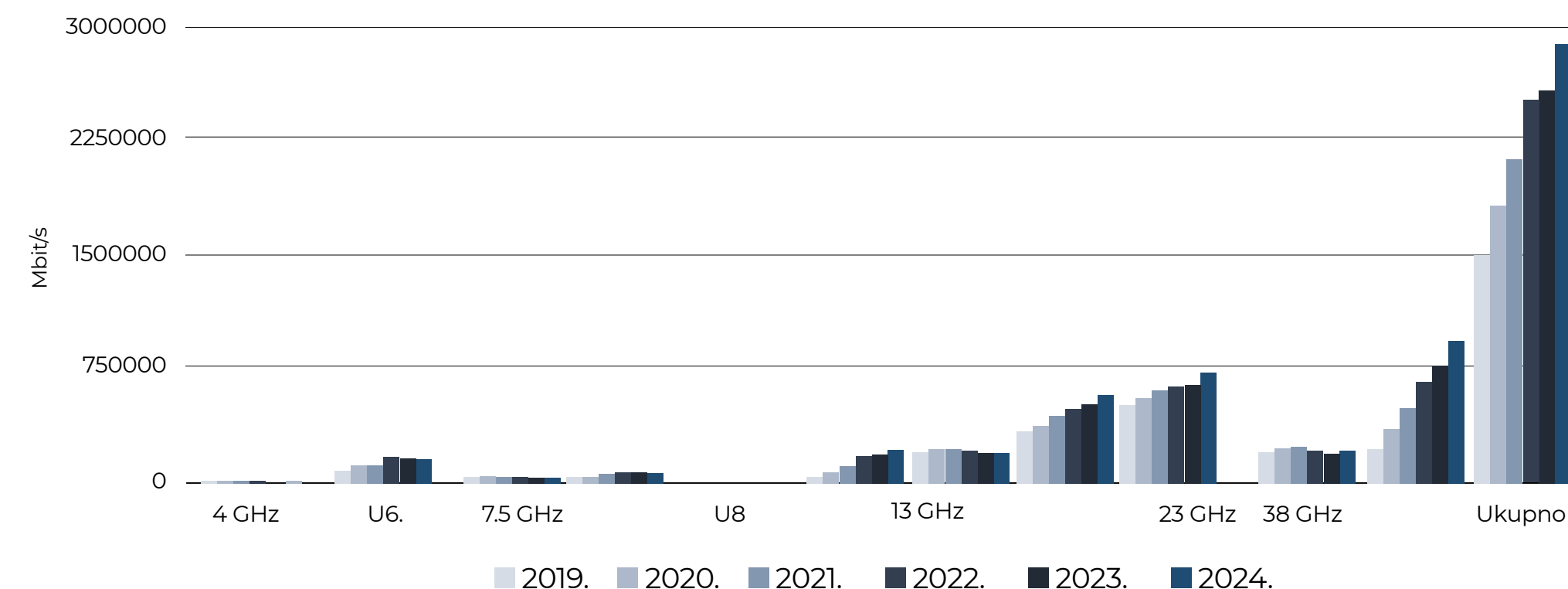
Cooperation started with the Ministry of the Interior, Croatian Civil Aviation Agency and Croatia Control on the use of additional radio devices on unmanned aerial vehicles and use of electronic countermeasures against them.

MICROWAVE AND SATELLITE NETWORKS

A total of 1,437 licences and 4 authorisations for microwave links were issued in 2024, of which 432 were for new links, 320 were licences for amendments to technical parameters of existing links (predominantly due to an increase in the transfer capacity of the operator of mobile communications networks) and 685 were for the extension of the validity of existing links. The total number of active microwave links at the end of 2024 was 5,067, which is an increase of 3.6 per cent from the end of 2023.

The total transfer capacity of microwave links increased by 11.7 percent from the year before, continuing the upward trend. This was a result of further upgrades to mobile communications networks and the need for ensuring an increasingly higher transfer capacity to end-users. This trend is expected to continue in the coming years, with additional requests for the increase in transfer capacity of microwave links being expected due to greater usage of 5G networks. The growth in the transfer capacity in the 11 GHz, 18 GHz, 23 GHz and 70/80 GHz frequency bands was noticeable, paired with a stagnation in the upper 6 GHz (U6), 7,2 GHz, lower 8 GHz (L8) and upper 8 GHz (U8) and 28 GHz frequency bands, and a fall in the lower 6 GHz (L6), 7.5 GHz and 13 GHz frequency bands, while there are no more active microwave links in the 4 GHz frequency band.

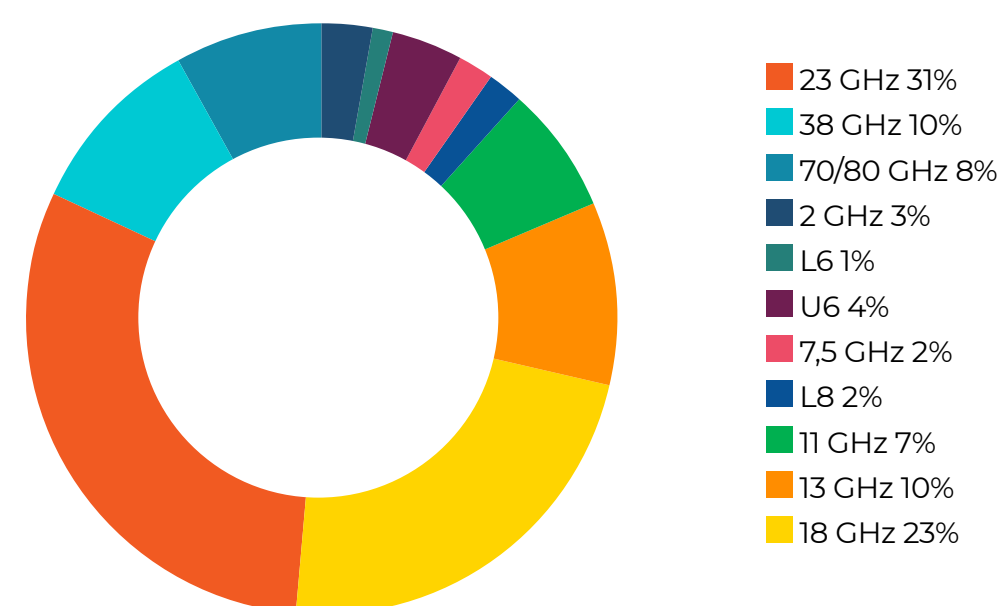
Figure 5.3. Transmission capacity of microwave links over the years



The links from the 4 GHz frequency band relocated to the lower 8 GHz (L8) frequency band in the past four years, as is visible from increases in the number of links and transfer capacity in that frequency band during the respective period. The upward trend in transfer capacity in the 11 GHz frequency band continued, which for the first time during 2024 exceeded the transfer capacity of the 13 GHz frequency band, for which it continues to be the alternative due to saturation and lack of available radio channels at certain locations. This was also reflected in a further decline in transfer capacity in the 13 GHz frequency band, which is currently at a slightly lower level than the capacity registered at the end of 2019.

The comparison of the realised transfer capacity of a certain frequency band and the share in the total number of active microwave licences is also interesting. Firstly, it needs to be stressed that the 2 GHz frequency band is used for analogue microwave links for the transfer of the modulation of radio broadcasters from the location of the studio to the location of the FM transmitter and that it cannot be compared with the transfer capacity of digital microwave links. It is evident that almost three quarters of the total number of active microwave licences are accounted for by links from the 18 GHz, 23 GHz, 38 GHz and 70/80 GHz frequency bands, which are primarily used for the transfer of traffic from base stations of the operator of mobile communications networks at distances of up to 15 km. It is noteworthy that microwaves from the 70/80 GHz frequency band, which make up 8 percent of the total number of total microwaves, account for almost a third of total transfer capacity of all microwaves in the HR. This is possible due to the use of very wide channels (up to 4500 MHz), which make it possible to realise exceptionally large transfer capacities and for which, due to the simplified licencing procedure, charges for the use of the RF spectrum are much more favourable than for other frequency bands.

Figure 5.4 Microwave licences by frequency band



The average transfer capacity of digital microwave links in 2024 was 581 Mbit/s, which is an increase by more than 7.5 percent from the previous year.

Within the framework of the international coordination of radio frequencies and pursuant to the HCM Agreement for fixed service, the frequency register of all coordinated microwave links was sent to all countries that are the signatories of the HCM Agreement in the coordination zone.

Responses were provided to 12 requests by signatory countries of the HCM Agreement, which resulted in the coordination of 493 microwave links.

As part of its regular activities, HAKOM processed requests for satellite link licences and applications for the installation of radio stations in the satellite service (operating on the basis of issued general licences). In 2024, three SA licences were issued for the use of the RF spectrum in the satellite service and 3 applications for the construction of SNG radio stations, which serve for the satellite transfer of live video and audio signals, were received.

The received coordination requests for terrestrial stations in the satellite service and satellite networks were analysed and processed in accordance with the ITU procedures, with altogether 67 such requests processed.

The first Croatian satellite CroCube was successfully launched on 21 December 2024 from the US Vandenberg base as part of the SpaceX Bandwagon-2 mission to the LEO orbit at an altitude of 510 km. HAKOM completed the procedure for the entry of the use of the radio frequency of the CroCube satellite network with the International Telecommunications Union (ITU) via the ITU's electronic system for the registration of satellite networks, with the previous selection of radio frequencies carried out by the International Amateur Radio Union (IARU).

After Croatia was allowed the subscription of the geostationary orbital position for the fixed satellite service plan (FSS plan) at 63 degrees East at the World Radiocommunications Conference (WRC-23), the ITU Radiocommunication Bureau (ITU BR) published the technical characteristics of Croatia's new allotment in the FFS plan in its BR International Frequency Information Circular (Space Services), (BR IFIC) No. 3017 of 19 March 2024. This officially ended the procedure of ensuring orbital and frequency resources for the national coverage of the HR within the framework of the fixed satellite service via the geostationary orbital position pursuant to Annex 30B to of the ITU's Radio Regulations.

The Union Secure Connectivity Programme, which launches the development of a secure communication line among EU Member States and establishes a common European satellite network at the low, medium and geostationary orbit, commonly known as IRIS2 (Infrastructure for Resilience, Interconnectivity and Security by Satellite), entered into force on 13 January 2024. Within the programme, MSTI authorised HAKOM to sign on behalf of the HR the administrative agreement among the EU Member States on the coordination and registration of the said satellite network in accordance with ITU regulations. On 16 December 2024, the European Commission signed a concession agreement with the SpaceRISE consortium, consisting of the three leading European operators: Eutelsat, SES and Hispasat, the subject of which is the development, imple-

mentation and management of the multi-orbital satellite network within the framework of project IRIS2. The envisaged commencement date for the provision of services is in 2030.

RADIO AND TELEVISION NETWORKS

The work on the planning and optimisation of analogue radio networks in the 87.5 to 108 MHz (FM) frequency band continued in 2024. There were altogether 155 analogue radio networks (FM) operating in the HR at the end of 2024: 11 public networks (HRT: 3 at state and 8 at regional levels) and 144 commercial networks. Due to interest for launching new radio stations and improving the quality of coverage by existing radio stations, HAKOM conducted a series of technical analyses in order to determine whether it was possible to approve these new requests. In addition, in 2024 HAKOM prepared and submitted to the Agency for Electronic Media (AEM) the technical parameters for opening a public tender for extending 3 concessions to perform the activity of providing the media service of radio. The AEM was also regularly submitted notifications on amendments to the technical parameters of existing radio stations as well as responses to queries on the existence of technical conditions for awarding new concessions in individual areas.

In addition to the regular activities related to the international harmonisation of the technical parameters of radio stations, in 2024 HAKOM held bilateral meetings with the regulatory authorities of the Republic of Hungary and the Republic of Serbia to discuss open and unresolved FM coordination requests. It should be stressed that the bilateral meeting with the representatives of the Republic of Serbia on the adjustment of the radio frequency spectrum in radio broadcasting was the first bilateral meeting in almost ten years and in this context constituted a significant improvement in coordination. The procedures for the adjustment of FM frequencies in eastern Croatia were relaunched, successfully harmonising multiple important FM transmitters in Slavonia which are a part of the existing HRT radio networks and of other FM broadcasters operating at the national, county or town levels.

In 2024, on the DAB+ digital radio platform, which has been transmitting in the VHF III (174-230 MHz) frequency band since 2021, new broadcasters entered the existing multiplex M1 with a network of 40 transmitters, thus gradually creating a need for a new multiplex and the construction of new transmitters at the regional or national levels. This represented the continuation of the process of international harmonisation of the technical parameters of transmitters of DAB+ digital radio with an aim to ensure the technical preconditions for continued implementation of this platform.

With regard to the process of replanning of the **VHF III (174-230 MHz)** frequency band in the territories of the Adriatic-Ionian group of countries (Italy, Slovenia, Croatia, Bosnia and Herzegovina, Montenegro, Albania and Greece), activity intensified in 2024, so HAKOM participated in a total of 9 multilateral and 2 bilateral meetings. This resulted in the harmonisation and their acceptance of the technical parameters of transmitters of DAB+ digital radio with the majority of group Member States. Great progress was also achieved in the harmonisation of a new more efficient plan, that is the allocation of available frequency resources in the VHF III band aiming to ensure the future operation of the digital radio platform without interferences. The signing of the multilateral framework agreement by the Adriatic-Ionian group of countries together with the new plan for the VHF III frequency band is expected in 2025.

There were no significant changes in the **UHF TV frequency area** in 2024. There are still 4 terrestrial digital television networks with national coverage and 2 networks with coverage at the local level in operation. All national and local free-to-air networks, for multiplexes M1 and M2 in the territory of the Republic of Croatia and for L1 in local areas, transmit DVB-T2 H.265/HEVC encoded signal in HD quality. Two national networks transmit DVB-T2 multiplex MUX C and MUX E, H.264/AVC encoded signal. Within multiplexes MUX C and MUX E, the EVO TV platform transmits Pay-TV programmes.

In accordance with GE84 and GE06 international agreements, the harmonisation of radio stations with neighbouring countries (Albania, Austria, Bosnia and Herzegovina, Montenegro, Italy, Hungary, Slovakia, Slovenia and Serbia) continued in 2024. As part of the process, HAKOM received and processed multiple international requests for harmonising the technical parameters of radio broadcasting (FM, T-DAB and DTT) radio stations and launched several procedures for harmonising the technical parameters of Croatian radio stations. In addition, it regularly analysed international coordination requests for radio broadcasting radio stations for their possible impact on transmitters in the Republic of Croatia, which were submitted via ITU's Radiocommunication Bureau International Frequency Information Circular (BR IFIC). In all, 1,172 coordination requests were prepared and processed.

SPECTRUM CONTROL

HAKOM is competent for ensuring the efficient use and effective management of the RF spectrum. For this purpose, it has set up a system of control and measuring centres and stations in the entire territory of the Republic of Croatia. The system of control and measuring stations is

used to control and monitor radio frequencies, perform measurements for frequency planning purposes and to identify and eliminate interferences in the RF spectrum.

Four control and measuring centres have been established in the four largest cities that are operationally supplemented with remotely controlled unmanned stations. For the daily tasks of RF spectrum control and other technical tasks within its competence, HAKOM also uses special purpose control and measuring vehicles equipped with adequate measuring equipment. As part of its daily and periodical measurements from immovable control and measurement stations, HAKOM carried out 4,900 measurements in 2024, supplemented by some 800 field measurements. All envisaged measuring campaigns were successfully completed in line with the 2024 measurement plan. Their focus was on the protection from interferences, measuring EMFs, verification of the coverage of mobile telecommunications network and checking of compliance of WAS/RLAN devices with valid general licences in the 5 GHz frequency band. The operation of radio stations with microwave links and radio broadcasting radio stations was checked for compliance with the conditions in the issued licences. In addition, measurements required for frequency planning and international frequency coordination were also carried out, especially those for the purpose of cooperation within the Radio Spectrum Policy Group of the EC – RSPG.

Detailed measurements were also conducted regarding **mobile telecommunications networks** in the territory of the entire Republic of Croatia to check compliance with the conditions under Regulation (EU) No 531/2012 on roaming on public mobile communications networks within the Union (TSM Regulation). The measurements were conducted for the purpose of publishing future detailed maps of mobile telecommunications networks. Within the framework of checking compliance with the transparency requirements under the TSM Regulation regarding the speed of internet access in mobile telecommunication networks, detailed measurements were carried out of the key indicators of the performance of mobile telecommunications network operators.

HAKOM commissioned an **independent survey of key performance indicators of mobile telecommunications networks** and gathered the relevant indicators of user experience in the networks of mobile communications network operators. The results were presented to all operators with the objective of improving the service offered to end-users.

Interferences

Identifying and eliminating the sources of interferences in radio communications ensures a smooth operation of electronic communications systems and related services. Special attention is awarded to state administration bodies competent for search and rescue, emergency services, maritime and air traffic control radio communications that are important for protecting human life and property,

as well as to operators of mobile electronic communications. The number of reported and eliminated interferences by domestic RF spectrum users was 103, slightly more than in 2024, with a higher share in maritime services. In the last quarter of the year operators of mobile electronic communications reported a considerable number of interferences.

A campaign of **measuring interferences of radio and TV signals in coastal areas** was carried out in the summer months with the aim of monitoring the situation and presence of interference at frequencies allocated to the HR pursuant to international agreements and plans for radio and television frequencies (GE84 and GE06). Measurements conducted in 2024 confirmed that there was a certain number of interferences from FM radio stations from the Italian Republic disrupting quality reception of Croatian radio programmes along the most part of the coast. In the FM frequency area, the impact of interferences was measured in relation to more than a hundred Croatian FM radio frequencies along the coast and on Croatian islands. Some 805 reports of interferences were sent in 2024.

Protection from EMFs

Tijekom 2024. obavljena su mjerenja elektromagnetskih polja (EMP) na područjima povećane osjetljivosti u svrhu zaštite zdravlja od EMP-a. Pravne osobe ovlaštene za obavljanje mjerenja EMP-a redovito su dostavljale rezultate mjerenja te je i time utvrđeno poštovanje normi.

In 2024, electromagnetic field (EMF) measurements were carried out in the areas of increased sensitivity with an aim of protecting human health from EMFs. Legal persons authorised for EMF measuring regularly submitted measurement results, confirming compliance with the set standards.

All measurement reports, indicating the location of the measurements, are available to the public on HAKOM's GIS portal. This portal also enables browsing through data on the locations and basic technical characteristics of base stations in public mobile communications networks and radio stations in broadcasting service. This way citizens can always access measurement data published thus far. HAKOM also notified the Office of the Ombudswoman of the Republic of Croatia on all measurements of exposure to electromagnetic fields that it had conducted in the territory of the Republic of Croatia in 2023 to be checked against the conditions from the Ordinance on the protection from electromagnetic fields (OG 146/14, 31/19). Reports on exposure to electromagnetic fields in the areas of increased sensitivity are available at HAKOM' website. The reports contain detailed descriptions of locations of measurements conducted for all relevant base stations. In 2024, HAKOM registered an increased number of measurements establishing increased levels of electromagnetic fields. These reports were used by HAKOM as the basis for inspection supervisions ordering the reduction in the exit strengths of radio stations whose work caused increased levels of EMFs.

PLANNING AND REALISATION OF ACTIVITIES

Aktivnosti upravljanja RF spektrom						
Br.	Aktivnost	Rezultat	Planirani završetak	Strateški cilj	Ostvarenje rezultata	Ocjena provedbe
1.	Verify the meeting of conditions from licences for public mobile communications networks	RF spectrum use in accordance with licences	IV	2.3	Verified conditions from licences: - Decisions to postpone compliance with a part of obligations Inspection supervision procedure launched	Achieved
2.	Head and organise the 5G working group	Working group meetings and required documents	Ongoing	4.2	Working group meeting held, progress report on the introduction of 5G networks within of the 2024 NPBD submitted	Achieved
3.	Organise an event (conference) to promote new technologies	G Day Conference	II	1.1	HAKOM's conference Day of New Technologies held	Achieved

4.	Harmonise RF spectrum internationally	Implementing agreements on spectrum use with neighbouring countries and individual radio stations harmonised	Ongoing	2.3	Two technical agreements signed with Hungary and Serbia; RF spectrum harmonisation carried out in line with ITU regulations; a total of 1,753 coordination requests by radio stations processed	Achieved
5.	Amend the Ordinance on the RF spectrum use and RF spectrum allocation plans	Ordinance on the RF spectrum use and allocation plans ready for adoption in accordance with international regulations, interest shown and market and technology development	III	3.2	Proposal of amendments to the Ordinance on RF spectrum use and tables submitted to the MSTI	Achieved
6.	Issue compliance certificates	Certificates for radio stations that comply with conditions	Ongoing	4.2	Some 4,865 compliance certificates issued	Achieved
7.	Issue licences for the RF spectrum use pursuant to submitted applications	HAKOM's administrative acts	Ongoing	2.3	Some 6,019 licences and 5 authorisations for the use of the RF spectrum issued	Achieved

8.	Prepare calculations and issue annual invoices for the RF spectrum use for valid licences	Annual invoices for the RF spectrum use	Ongoing	2.3	Some 22,079 annual invoices for the RF spectrum use prepared and issued	Achieved	14.	Control the levels of electromagnetic fields (EMFs)	GIS browser of radio stations and EMF measurements Measurement reports	Ongoing	4.2	Some 33 measurements, publicly available GIS browser with measurements	Achieved
9.	Plan and optimise radiocommunication networks	Efficient use of the RF spectrum: improved coverage of existing networks; conditions for operation of new networks ensured	Ongoing	2.3	Some 164 parameters for planning and optimising existing radiocommunication networks set	Achieved	15.	Implement Measuring operation – WAS/RLAN in the 5 GHz frequency band	Detailed measurement reports	Ongoing	2.3	90 measurements	Achieved
10.	Control the radio-frequency spectrum regularly	Measurement reports on conducted measurements	Ongoing	2.3	Some 4,831 measurements	Achieved	16.	Implement the measuring operation – verification of coverage and measuring of key performance indicators of mobile telecommunications networks	Detailed measurement reports	Ongoing	2.3	Measurement report	Achieved
11.	Resolve international interferences	International meetings International interferences requiring additional communication removed	Ongoing	4.2	Some 17 interferences	Achieved	17.	Maintain control and measuring system	New measuring equipment Calibrated measuring equipment	Ongoing	2.3	All instruments calibrated and adjusted and new equipment procured	Achieved
12.	Resolve domestic interferences	Domestic interferences removed	Ongoing	2.3	Some 103 interferences	Achieved	18.	Perform inspection supervisions	Supervision administrative acts	Ongoing	4.2	A total of 8 inspection decisions Report on inspection supervisions issued	Achieved
13.	Implement the measuring campaign — Italian interference	Measurement report Reports on the removal of interferences	III-IV	4.2	Some:806 reports	Achieved							

06

BROADBAND COMPETENCE OFFICE (BCO)

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In addition to its regulatory tasks, HAKOM also has a role of the Broadband Competence Office (BCO) and a special organisational unit that performs BCO's tasks has been set up within HAKOM. As the Croatian BCO, HAKOM is a member of an EU-wide Broadband Competence Offices Network ([BCOs Network](#)) and regularly participates in the BCOs Network's activities. The main BCO's task is to foster broadband access development at all levels, which includes promoting infrastructure investments through the use of available co-financing, monitoring the realisation of expressed commercial interests, encouraging demand for VHCNs and co-operating with all interested stakeholders. The BCO also provides support to competent authorities in the implementation of strategies, plans and programmes for broadband access development.

In 2024, cooperation with stakeholders focused on the use of funds under the Connecting Europe Facility – Digital (CEF Digital). The fourth call for grants under the CEF was announced on 22 October 2024. It was the last call under the multiannual work programme until 2024 and the last one in which funds were allocated as grants. Since the previous three calls recorded a relatively low interest from Croatian applicants, it was important to encourage operators to prepare projects for this call in a timely manner. The BCO participated in the Info Day concerning the fourth call for proposals, organised by the European Health and Digital Executive Agency (HaDEA). The Croatian Info Day was organised in cooperation with HaDEA with the participation of interested operators, equipment manufacturers, representatives of the academia and other interested stakeholders. The BCO also held individual meetings with operators and the representatives of institutions and the academia regarding potential projects. As a result of these activities, 6 projects applied under the call in which Croatian companies were project holders or partners.

Any relevant information concerning broadband access was regularly published on BCO's website. Responses were also provided to all received user queries within a short period.

Cooperation with ministries was continued, primarily with the MSTI and the MJPADT, regarding the implementation of strategies, plans and programmes of broadband access development. HAKOM is a member of the working group for the national Policy Programme Path to the Digital Decade, and the BCO participated in the monitoring and reviewing of the programme and preparing a report for the EC.

Cooperation with international bodies and work in international working groups also continued. The BCO participated in a meeting with the EC regarding the preparation of the Digital Decade Report and in a meeting with the World Bank regarding the needs for other forms of broadband access financing. As part of its regular activities, the BCO participates in BCO Network's workshops on different topics related to broadband access development and use. In addition, the BCO

is also involved in the work of EC and BEREC expert working groups concerning the 5G QoS mapping and Digital Decade key performance indicators (DD KPIs).

NATIONAL FRAMEWORK PROGRAMME

The implementation of [20 projects](#)¹⁹ for which co-financing contracts were signed under the [National Framework Programme for the Development of Broadband Infrastructure in Areas Lacking Sufficient Commercial Interest for Investments \(NFP\)](#) ended on 31 December 2024. In its role of the Competent Authority for the NFP (CAFP), HAKOM monitors the implementation of the NFP regarding the built infrastructure, i.e. covered addresses and households and the number of users in accordance with the signed co-financing contracts. The projects were implemented based on the previously granted Broadband Infrastructure Development Plans (BIDPs), of which 16 were implemented under model A (private DBO model; DBO – Design, Build, Operate) and 4 under model B (public DBO model). In 2024, the projects were completed and financed with the own funds of operators or local self-government units because the possibility of absorption of co-financing funds ended with the end of 2023. The projects covered 118 local and regional self-government units. Total eligible investment costs amounted to EUR 149m, of which EUR 82m was allocated through grants from the financial perspective 2014 – 2021.

The target value of the coverage to be realised through the implementation of these projects initially included 131,445 households, in accordance with the Operational Programme Competitiveness and Cohesion 2014 – 2020 (OPCC). In October 2023, at the meeting of the OPCC Monitoring Committee, this indicator was reduced to 118,300 households and at the end of 2023, the coverage of 128,876 households was realised, thus the key programme indicator was fulfilled. By the end of 2024, 194,325 addresses, 143,278 households and 232,044 users were covered, which is the realisation of over 98 percent according to all indicators in the covered areas. All projects implemented under model B have a one hundred percent realisation, while for the majority of the projects implemented under model A, the realisation is about 99 percent. The only project with a slightly smaller realisation is BIDP Kaštela (88 percent). However, it is a project with the largest coverage of 19,410 households and 22,093 addresses. Taking into consideration the time limit and the period of project implementation, the final coverage realised in the BIDP Kaštela area can be deemed to be very good.

¹⁹ The contract for the project that was implemented based on the Broadband Infrastructure Development Plan (BIDP) Donja Voća was terminated in 2022 at the request of the competent authority.

Figure 6.1. Implementation of NFP projects at the end of 2024

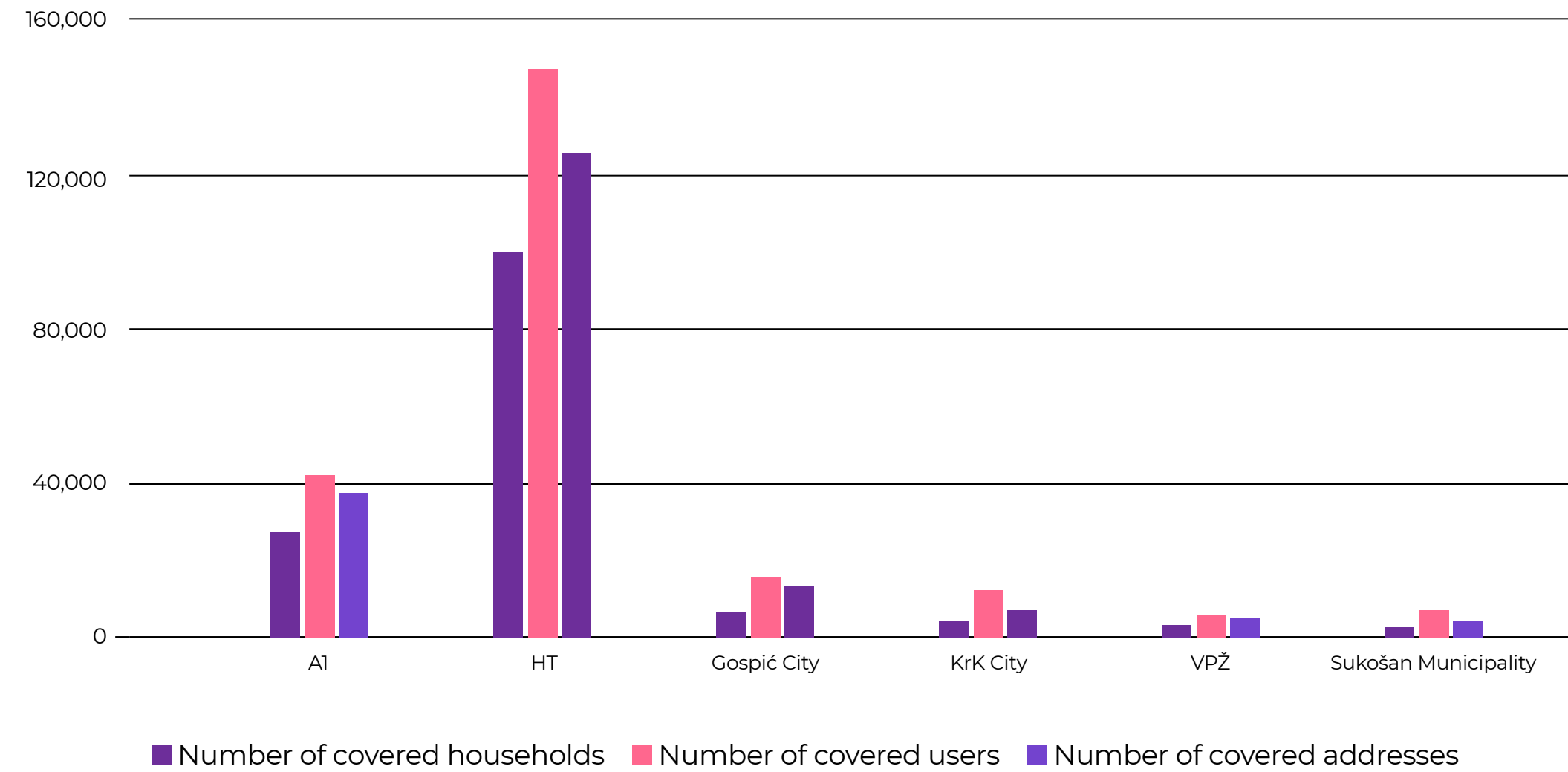
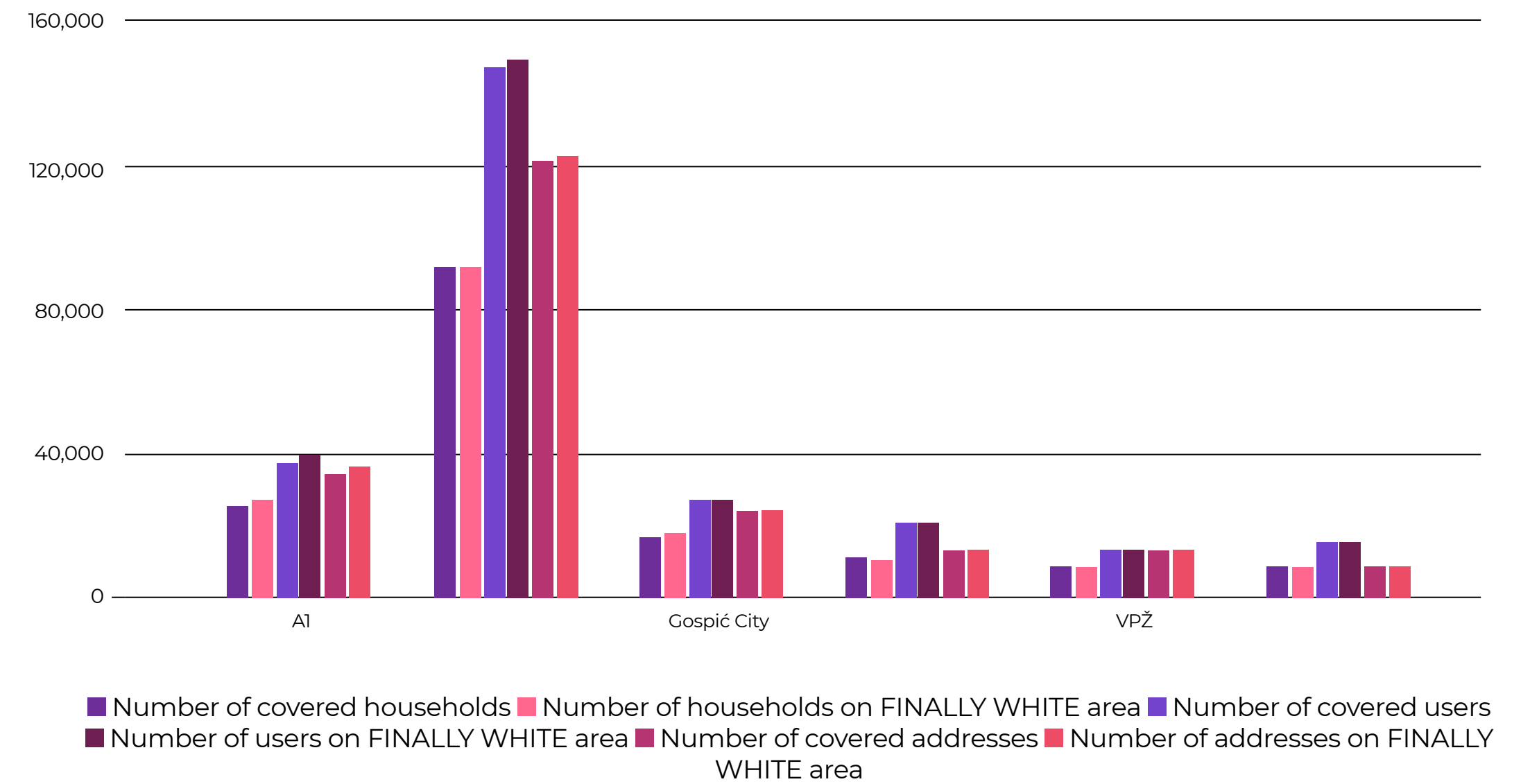


Figure 6.2. Comparison of contracted and realised indicators at the end of 2024



Based on the collected data on the NFP implementation, HAKOM prepared a report that was submitted to the EC in the first quarter of 2025. The basic information on project implementation is also published on BCO's [website](#).

Monitoring of commercial interest

With regard to the NFP implementation, HAKOM also **monitored the realisation of market interests** expressed during the preparation of BIDP projects. AI Hrvatska d.o.o., Hrvatski Telekom d.d., Infrastruktura d.o.o., Pro-ping d.o.o. and RUNE Crow d.o.o. expressed market interests in specific areas initially proposed for realisation through BIDPs. Expressions of interest covered slightly more than 157,000 addresses, of which over 93 percent was realised. The largest part of the remaining addresses will be realised in the course of 2025.

NRRP

Under the National Recovery and Resilience Plan (NRRP) from 2021 to 2026, additional grants in the amount of EUR 106m are ensured for the continuation of the implementation of the NFP. The objective of the financing of the second set of NFP projects is to ensure the accessibility of VHCNs for additional 100,000 households. In 2023, the Directorate for EU Funds of the Ministry of the Sea, Transport and Infrastructure carried out a procedure for the allocation of grants under the NRRP. All 46 BIDPs with a valid certificate of compliance with NFP's structural rules, issued by the CAFP, had the right to participate in the procedure. Thirty-two BIDPs entered the final stage of the procedure and, in 2024, an additional EUR 13m was ensured for the co-financing of these projects through the reallocation of funds under the NRRP. Until the end of 2024, 22 co-financing contracts were signed, with a total share of grants amounting to EUR 106,178,246. In 2025, the aim is to ensure funds for all eligible projects through an additional reallocation of funds. As a result, in the first four months of 2025, additional eight contracts were signed for which the co-financing share amounted to EUR 32,906,071. The mentioned [30 projects](#) cover a total of 172,613 addresses and the building of infrastructure for their coverage has been co-financed with EUR 139,084,318.

With regard to the implementation, most projects are in the preparatory stage and conducting public procurement for the purchase of the equipment and hiring contractors. Project design and the obtaining of necessary licences and approvals have been initiated for a small number of projects. Implementation stages are regularly updated and published on the [CAFP's](#) website.

PLANNING AND REALISATION OF ACTIVITIES

Aktivnosti razvojnih programa i BCO-a						
No.	Activity	Result	Planned completion	Strategic goal	Realisation	Implementation assessment
1.	Cooperate with ministries, agencies and business entities with regard to NFP and NRRP implementation (MRDEF, MSTI, CFCA, operators)	Activities related to NFP and NRRP implementation carried out	Ongoing	3.2	Updated data in HAKOM's databases and on CAFP's website	Achieved
2.	Participate in the work of the Operational Programme Competitiveness and Cohesion (OPCC) Monitoring Committee	Participation in Committee meetings Monitoring progress in achieving specific OPCC objectives	Ongoing	4.2	OPCC Monitoring Committee 21st meeting held	Achieved
3.	Monitor the implementation of measure C2.3 R4-11 from the NRRP	Written reports on NRRP implementation	Quarterly	3.3	NRRP	Achieved
4.	Monitor the implementation of operators' commercial interests	Report on the implementation of operators' commercial interests	Quarterly	3.3	Monitoring of commercial interest	Achieved

5.	Inform the European Commission on the implementation of the NFP and measure C2.3 R4-11 from the NRRP	Report on the implementation of the NFP and the NRRP	IV	5.1	NFP	Achieved	9.	Cooperate with international bodies and participate in meetings of the European BCO Network and in the work of other international groups	Cooperation realised and the level of expertise raised Meetings	Ongoing	3.3, 5.2	Meeting with the World Bank held Participation in 23 BCO European Network's meetings Participation in the work of BEREC RAMM WG (seven meetings) Participation in the CEF workshop organised by HaDEA	Achieved
6.	Carry out activities of the Broadband Competence Office (BCO)	Content of the BCO website regularly updated and relevant Coordination of bodies included in BCO activities	Ongoing	3.1, 3.2, 3.3, 4.2	11 new posts published on BCO's website .	Achieved							
7.	Consultation with and information of the public and interested stakeholders with regard to broadband development	Consultation conducted and information provided Workshops held	Ongoing	3.3	Responded to 33 inquires of users and interested stakeholders National CEF Info Day organised	Achieved							
8.	Cooperate with stakeholders with regard to broadband development	Cooperation realised Work in expert groups Meetings	Ongoing	3.3	Eight meetings with operators held. Work in the expert working group for the national Policy Programme Path to the Digital Decade continued Two meetings with Carnet and one with Ruđer Bošković Institute held	Achieved							

07

HAKOM'S OTHER ACTIVITIES

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REGULATORY FRAMEWORK

In 2024, HAKOM actively monitored the changes in EU legislation in the electronic communications, postal and rail services markets. These markets represent the basis of HAKOM's competence, and market and technological developments lead to regulatory changes at the EU level, which, consequently, result in the broadening of HAKOM's powers to new areas or the redefining of existing powers.

Among relevant regulations in which HAKOM participated in 2024, the following are noteworthy: Regulation (EU) 2024/1309 of the European Parliament and of the Council of 29 April 2024 on measures to reduce the cost of deploying gigabit electronic communications networks (Gigabit Infrastructure Act, GIA), Draft Proposal of the Act on the Implementation of Regulation (EU) 2022/2065 on a Single Market for Digital Services and Amending Directive 2000/31/EC (Digital Services Act, DSA), the Cybersecurity Act (Official Gazette 14/2024) of 15 February 2024 and the Cybersecurity Ordinance (Official Gazette 135/2024) of 22 November 2024.

With regard to the Digital Services Act, it is noteworthy that HAKOM was appointed the **Digital Services Coordinator of the Republic of Croatia**. The Coordinator's main tasks include the activities of national competent authorities in the implementation of the Digital Services Act.

Based on the new legislative framework on cybersecurity, HAKOM became the **national competent authority in the digital infrastructure sector** for entities that are providers of public electronic communications network and/or services.

HAKOM regularly cooperated with competent ministries with regard to the transposition of the acquis and monitored the implementation of subordinate legislation falling within its competence. The overview of all regulations in which HAKOM cooperated/participated in 2024 is shown in the table below.

Table 7.1 Cooperation on regulations

NO.	ACT	COMPETENT AUTHORITY
1.	Draft Proposal of the Act on the Implementation of Regulation (EU) 2022/2065 on a Single Market for Digital Services and Amending Directive 2000/31/EC (Digital Services Act, DSA)	MJPADT
2.	Cybersecurity Act (Official Gazette 14/2024) and the Cybersecurity Ordinance (Official Gazette 135/24)	Security and Intelligence Agency (SOA)
3.	Proposal of the Decision designating the national authority for public regulated services	Information Systems Security Bureau – ISSB

4.	Proposal of the Decision designating the providers and users of emergency communication services and establishing Coordination for the emergency communication system of the HR	MSTI
5.	Draft Proposal of the Act on the Implementation of Regulation (EU) 2022/868 on European data governance and amending Regulation (EU) 2018/1724 (Data Governance Act, DGA)	MJPADT
6.	Draft Proposal of the National Programme for Children and Youth in the Digital Environment	MLPSFSP
7.	Draft Proposal of the National Cyber Crisis Management Programme	SOA
8.	Draft Proposal of the Open Data Policy of the HR and the accompanying Action Plan	MJPADT
9.	Draft Proposal of the Act on the Implementation of Regulation (EU) 2023/988 on general product safety	MoE
10.	Draft Proposal of the Act on the Implementation of Regulation (EU) 2023/1542 of the European Parliament and of the Council concerning batteries and waste batteries	MEPGT
11.	Draft Proposal of the Act on Requirements for Accessibility of Products and Services	MLPSFSP
12.	Draft Proposal of the Act on Amendments to the Construction Act	MPPCSA
13.	Draft Proposal of the Act on Emergency Infrastructure	Mol

BEREC CHAIRMANSHIP

On 1 January 2024, the President of the Council of HAKOM, Tonko Obuljen, took over the role of the Chair of BEREC, the Body of European Regulators for Electronic Communications, after having been elected to this function in 2022.

This also implied HAKOM's additional involvement as the Chair of regulators and brought about many responsibilities, while also emphasising HAKOM's expertise and credibility among European regulators.

The involvement was intensive and multi-layered, including the leading and moderating of meetings, harmonisation of positions among BEREC members in adopting documents foreseen by the Work Programme (more than 50 topics), coordination of cooperation with the European Commission and other stakeholders both within and outside the EU, as well as presenting BEREC positions at the European and international levels. Chairmanship activities began in 2023, when HAKOM had the role of the BEREC Incoming Chair and continued in 2025 with HAKOM's role as the Outgoing BEREC Chair.

BEREC is an expert body in the area of electronic communications consisting of the representatives of national regulatory authorities and the EC. Its scope of work and the manner of work are governed by the BEREC Regulation (EU) 2018/1971. In accordance with the [Organisational Charts](#) (BEREC and the BEREC Office), decisions at BEREC are adopted by the Board of Regulators and the Management Board, while the BEREC Office provides administrative and technical assistance in BEREC's work, including financial, organisational and logistic support. Decisions are prepared at the level of BEREC's Working Groups. Representatives of national regulatory authorities, as experts (12 working groups as support to the Board of Regulators and three working groups as support to the Management Board) participate in their work. In addition to the work in the Working Groups, HAKOM experts also co-chair two BEREC's Working Groups: End User and Cybersecurity.

DSA

The Digital Services Act regulates online intermediaries and platforms, such as online platforms for trade, social networks, platforms for content sharing, trade in applications and travel and accommodation platforms. Its goal is to prevent illegal and harmful activities online and the dissemination of disinformation. The implementation of the Act guarantees the security of users and the protection of fundamental rights as well as fair and open environment on online platforms.

Pursuant to the [Decision²⁰ of the Government of the HR](#), on 15 February 2024, HAKOM was appointed Digital Services Coordinator (DSC), whose primary task is the coordination of activities of national competent authorities in the implementation of the [Digital Services Act²¹ \(DSA\)](#), cooperation with the European Commission and coordinators of other EU Member States as well as participation in the work of the European Digital Services Committee.

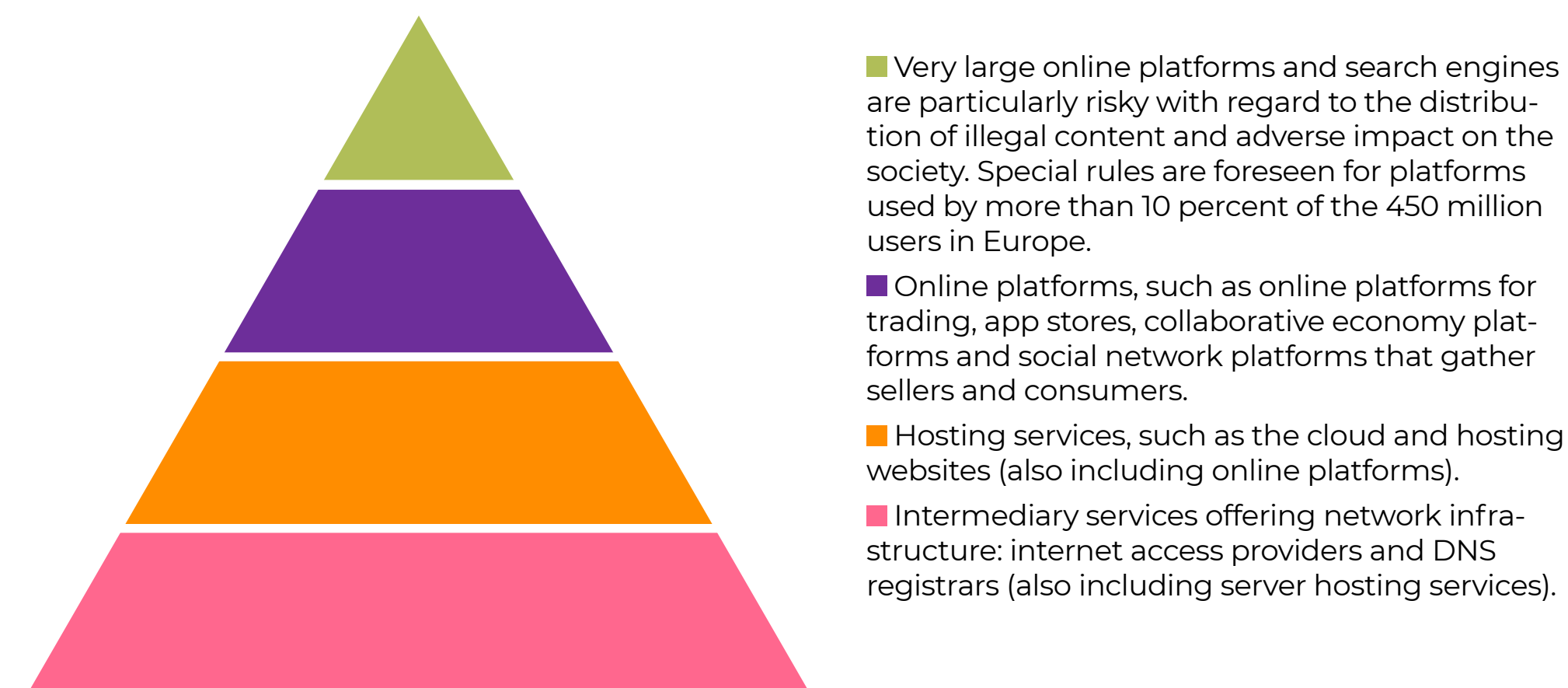
HAKOM thus appointed its representative to the Digital Services Committee and was actively involved in the work of all 8 working groups that assist the Committee in its advisory role for the European Commission, which is competent for the general implementation of the Act. The supervision over the enforcement of rights is divided between the Commission (primarily responsible for the platforms and search engines with over 45 million users in the Union) and the Member States (responsible for all other platforms and search engines according to the place of establishment).

²⁰ https://narodne-novine.nn.hr/clanci/sluzbeni/2024_02_19_306.html

²¹ <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32022R2065>

From 17 April 2025, HAKOM continued to perform the Coordinator role based on its statutory powers, when the [Act on the Implementation of the DSA²²](#) came into force. The Act, among other things, designates certain national authorities and their powers for the implementation of the DSA, legal remedies to the decisions of competent bodies and defined penalties for misdemeanours related to the infringement of the DSA.

Figure 7.1 Providers covered by the DSA (Source: EC)



The authorities competent to issue orders for the removal of illegal content and requests for the provision of information are designated depending on the type of the illegal content in question:

- the State Attorney's Office and the Ministry of the Interior for illegal content constituting a criminal offence or misdemeanour;
- the Croatian Personal Data Protection Agency for illegal content involving breaches of regulations governing the protection of personal data;
- the Customs Administration of the Ministry of Finance for illegal content infringing intellectual property rights;
- the State Inspectorate for illegal content violating regulations within the jurisdiction of the Inspectorate, in accordance with powers granted by specific regulations;
- the Ministry of Health for illegal content concerning violations in the area of healthcare, medicinal products and biomedicine, in accordance with the powers granted by a special law;

²² https://narodne-novine.nn.hr/clanci/sluzbeni/2025_04_67_857.html

- the Agency for Electronic Media for illegal content relating to violations in the field of electronic media, in accordance with the powers granted by special regulations;
- other authorities in accordance with the powers defined by specific laws governing their respective areas of competence.

Since the entry into force of the Act, these authorities may issue the above orders not only to the providers of intermediary services with a registered office in the Republic of Croatia, but also to the providers established in other EU Member States. Due to this exceptionally important power, HAKOM set up cooperation mechanisms already in the early phase and held a series of bilateral and multilateral meetings with the representatives of those bodies.

With the aim of raising public awareness about the DSA and about its role of the Coordinator, independently and in cooperation with institutions, such as the Representation of the EC in Croatia and CARNET as well as with the Safer Internet Centre, HAKOM organised or participated in numerous events (panels, round tables, etc.). HAKOM also participated in events of other competent authorities, domestic and foreign civil society organisations²³ and HAKOM's representatives gave several press interviews.

In addition, information on the impact of the DSA on the exercise of citizens' rights was published on HAKOM's official website. The brochure *Keys to a Safe Internet*²⁴ was also prepared in which, among other things, information on the DSA was provided in a child-friendly language. The brochure was distributed to five-grade pupils in all primary schools.

In the first quarter of 2025, HAKOM co-organised the conference Quest for a Better Internet to mark the Safer Internet Day. The conference focused on the prevention of cyberbullying, personal data protection and creating a safe digital environment for children and youth. HAKOM also presented the relevant DSA provisions at the conference.

HAKOM employees regularly participate in trainings organised by the European Commission. Meetings were held with organisations interested in the status of vetted researchers and access to data on very large platforms, as well as bilateral meetings with other Member States for the purpose of exchanging experiences with regard to the organisation of work and addressing international issues.

²⁰ GONG, Centre for Peace Studies, Croatian Law Centre, Office of the Ombudswoman, NER (OECD), DOT Europe, Democracy Reporting International, etc.

²¹ https://www.hakom.hr/UserDocImages/2025/zastita_korisnika/Klju%C4%8Ddevi%20sigurnog%20interneta%202025.pdf?vel=11026805

The Ordinance on the certification of trusted flaggers is currently prepared. Meetings with potential stakeholders were held on that topic and valuable experiences were gathered. In addition, preparatory activities towards domestic platforms were carried out. Some of them, with HAKOM's intermediation, are among the first ones included in the European Commission's single information system and the transparency register.

The year 2024 was particularly challenging because of several elections held in the course of the year, as the DSA also addresses the integrity of the election process and information space, i.e. the prevention of disinformation directed at the manipulation of voters.

HAKOM performed its role of the Coordinator for the DSA for the first time during the elections for the European Parliament, when no breaches of the DSA were recorded and at the end of the year during the presidential election at which very large online platforms and search engines also complied with regulations and no systemic risks related to the design or functioning of the system were observed, including algorithmic recommendations and other automated mechanisms.

With regard to the elections, HAKOM was appointed a permanent member of the National Cooperation Network, a mechanism established for the purpose of strengthening the coordination of all stakeholders included in the preparation and implementation of the elections. In March, HAKOM's representatives participated in a meeting of the National Cooperation Network, organised by the Ministry of Justice, Administration and Digital Transformation. Also, according to best practices, established by the EC and the Member States as guidelines for the preparation of elections in the EU, a risk assessment was carried out for the presidential election, taking into consideration the known circumstances. In November, with the support and presence of the EC, a round table was held at which all relevant participants were directly connected, which included very large platforms with a significant number of Croatian users (Meta, Google, X and TikTok), the State Electoral Commission (SEC) and the relevant civil society organisations that monitor elections or check facts (Gong, Faktograf). During the electoral weekend, HAKOM ensured the state of readiness, and the European Commission accentuated the success of the national approach at the meeting of the European Digital Services Committee. HAKOM shared the experiences from the electoral process within the Working Group 4, which addresses the protection of electoral integrity.

COOPERATION

International cooperation

Within the scope of achieving its strategic objectives, HAKOM continually develops and strengthens international cooperation, with special emphasis on active participation in the work of the **European regulators' networks: BEREC, IRG-Rail and ERGP**. These regulators networks are a key mechanism for the coordination of regulatory activities at the EU level and play an important role in ensuring the single market, legal predictability and a stable regulatory framework. Through participation in their work, HAKOM not only follows European trends and regulatory initiatives in a timely manner, but also actively contributes to their formation. HAKOM is also involved in many international events and is actively included in the work of relevant authorities, organisations and working groups connected with electronic communications, the radiofrequency spectrum, post and rail. A comprehensive overview of international cooperation in 2024 is presented in Table 7.2.

The year 2024 was marked by HAKOM's chairing **BEREC**, described in the previous subtitle of this chapter. HAKOM also actively contributed to the work of IRG-Rail and ERGP, where its representatives participated in numerous working groups, by drafting opinions and reports and exchanging good practices.

Within the cooperation at the **ERGP**, HAKOM's experts participated in the work of various working groups that addressed issues related to the universal service, regulatory accounting, the prices of postal services, the analysis of market developments and indicators, the quality of services, consumer satisfaction and protection, the cross-border traffic of postal items, the green transition process and other topics. A number of HAKOM's experts participated in preparing reports as drafters.

In parallel, the ERGP provided expert support to the EC by advising the Commission about future challenges of the European postal system, including the initiative to amend the Postal Directive, trends analysis, challenges and strategic guidelines for the forthcoming period, as well as about the application of new technologies in the postal industry. Plenary sessions were held in June 2024 in Vienna, Austria, and in November 2024 in Stockholm, Sweden.

Cooperation within **IRG-Rail** included the work of experts on numerous documents within IRG-Rail working groups. The topics addressed in the documents included the challenges to network access, the proposal of the EC regulation on the use of railway infrastructure capacity, an overview of international freight transport, the report on the SERA Directive, an overview of the policy on the sale of single, free and reduced-fare tickets, the report on rail freight corridors, an overview of charges and charging principles for passenger stations in the IRG-Rail member states, the guidelines

on market monitoring data collection and charges for traction current. These documents were presented and adopted at plenary meetings held in May and November 2024.

HAKOM's representatives regularly participate in the work of certain **European Commission committees**, such as **the Connecting Europe Facility Coordination Committee, the Radio Spectrum Committee (RSC), the Communications Committee (COCOM), the Telecommunication Conformity Assessment and Market Surveillance Committee (TCAM), the European Board for Digital Services and the Postal Directive Committee**.

In 2024, the work of HAKOM in the new **Digital Services Committee** was noteworthy. The Committee was established after the adoption of the DSA. It assists the EC in the implementation of acts at the EU level and challenges that arise. Within this Committee, eight expert working groups have been established that deal with different aspects of the DSA. HAKOM's experts joined the work of each group.

Among the expert working groups, it is relevant to single out the work in the **Radio Spectrum Policy Group (RSPG)** – a high-level advisory group assisting the EC in the development of RF spectrum policy. In 2024, through the RSPG sub-groups, HAKOM continued to participate actively in the work of the Good Offices Sub-Group for cross-border coordination, within which attempts were made to find the solution for the several year-long Italian radio interferences.

In November 2022, by applying the provisions of recital (72) and Article 45 of the EECC, HAKOM submitted **a request for good offices and the issuance of an RSPG opinion** and requested proposing a coordinated solution of cross-border harmful FM interferences caused by the Italian Republic. HAKOM primarily based its request on the EECC provisions “that radio spectrum is a public good that has an important social, cultural and economic value, Member States shall ensure the effective management of radio spectrum for electronic communications networks and services in their territory in accordance with Articles 3 and 4 of the EECC and shall respect relevant international agreements, including the ITU Radio Regulations and other agreements adopted in the framework of the ITU applicable to radio spectrum”. In 2024, the RSPG Good Offices Sub-Group on cross-border coordination worked intensively on creating preconditions for the development of the action plan with the accompanying time frame for the resolution of the mentioned issue. As the key element of the plan, the Italian administration worked on preparing the scheme for the voluntary release of frequencies of Italian broadcasters and ensuring funds for this process in 2025. However, until the end of 2024, the funds for the scheme of releasing frequencies were not ensured in the budget, so that it is expected that the activity will continue in 2025.

Taix project Republic of Montenegro

At the initiative of the Agency for Electronic Communications and Postal Services, organised by **TAIEX (Office of the EC for Technical Assistance and Information Exchange)**, in late October 2024, a series of meetings were held in HAKOM's premises with the objective to provide expert technical assistance and the transfer of knowledge of HAKOM's experts to colleagues from the Montenegrin regulator. Among other things, discussions were held on experiences in the field of universal service and RF spectrum management with an emphasis on spectrum allocation, setting charges, general authorisations, interoperability and, in particular, HAKOM's preparation and implementation of the 5G auction.

Table 7.2 Overview of international cooperation

	ORGANISATION/ INSTITUTION	DATA ON ORGANISATION/INSTITUTION	WORKING GROUP/SUB-GROUP	NUMBER OF MEETINGS IN 2024
EC COMMITTEES	Connecting Europe Facility (CEF) Coordination Committee	The committee that assists the EC in establishing measures of the Connecting Europe Facility (CEF)	/	1
	Radio Spectrum Committee (RSC)	The committee that assists the EC in preparing technical implementation measures that have the objective to harmonise conditions with regard to the availability and efficient use of the RF spectrum as well as the availability of information on the RF spectrum usage	/	4
	Communications Committee (COCOM)	The committee that assists the EC in adopting / implementing acts concerning the regulatory framework for electronic communications	/	3
	Telecommunication Conformity Assessment and Market Surveillance Committee (TCAM)	The committee that assists the EC in implementing the obligations under the RED Directive (Directive on the making available on the market of radio equipment)	/	3
	European Board for Digital Services	The board that contributes to the consistent application of the Digital Services Act and efficient cooperation between Digital Services Coordinators. It is responsible for the coordination of EC guidelines and analyses, Digital Services Coordinators and other competent authorities on new issues in the internal market with regard to the issues covered by the Digital Services Act and contributes to those guidelines and analyses. It also assists Digital Services Coordinators and the EC in supervising VLOPs and VLOSEs.	WG1 – Horizontal and legal issues WG2 – Working together WG3 – Content moderation and data access WG4 – Integrity of the information space WG5 – Consumers and online marketplaces WG6 – Protection of minors WG7 – Orders and criminal issues WG8 – IT Issues	Board meetings: 16; Working groups meetings: 50

EC EXPERT GROUPS	Digital Services Expert Group	The committee that assists the EC with information society issues	/		
	Postal Directive Committee	The committee that assists the EC in applying the legislation on common rules for the development of the internal market in postal services and enhancement of service quality	/	2	
	Radio Spectrum Policy Group (RSPG)	Develops opinions, which are meant to assist and advise the EC on radio spectrum policy issues, on coordination of policy approaches and, where appropriate, on harmonised conditions with regard to the availability and efficient use of the radio spectrum necessary for the establishment and functioning of the internal market. The European Parliament and the Council can also request advice from the RSPG.	6G Strategic Vision Good offices Spectrum strategic issues Below 700 MHz Band Upper 6 GHz Band World Radiocommunication Conference	/	19
	Commission Expert Group on Emergency Communications (EG112)	Pomaže EK-u u pripremi delegiranih akata u vezi s rješenjima za informacije o lokaciji pozivatelja, pristupom za krajnje korisnike s invaliditetom i usmjeravanjem do najprikladnijeg mjesta javljanja za javnu sigurnost (PSAP)	/		
	Submarine Cable Infrastructure Expert Group	Assists the EC in the implementation and preparation of legislative proposals in relation to the safety of submarine cables	/	3	
	High Level Group on Internet Governance (HLIG)	Assists the EC in coordination at the EU level in internet governance related issues	/	1	
	Expert Group on the transition to Web 4.0 and Virtual worlds	Assists the EC with a view to developing and promoting common, consistent European approaches on the development of virtual worlds and the wider technological transition to Web 4.0 to avoid a potential fragmentation of the Single Market, notably by ensuring coordination among Member States and existing relevant EU fora	/	2	
	European Union Agency for Cybersecurity (ENISA)	The EU agency dedicated to achieving a high common level of cybersecurity across Europe. HAKOM participates in the work of the Management Board.	/	3	

EC EXPERT GROUPS	European Competent Authorities for Secure Electronic Communications (ECASEC)	The expert working group of the EU, EEA and EFTA national authorities, as well as the national authorities of candidate countries. The objective is the discussion and agreement on a harmonised approach to telecommunication security and supervision of the EU telecommunications sector.	/	33
	Network and Information Systems (NIS) Cooperation Group 5G/Telekom sub-group	NIS Cooperation Group has the objective to ensure a high common level of security for network and information systems in the EU. Competent sectoral bodies are HR representatives and the Office of the National Security Council is the single point of contact.	/	3
	Administrative Cooperation Group – Radio Equipment Directive (AdCo RED)	EU cooperation in the field of market surveillance in the segment that relates to radio equipment with the objective of a harmonised application of the RED Directive	/	4
	Single European Railway Area Forum (SERAF)	Assists the EC in the preparation of delegated and other legislative acts and in the implementation of regulations concerning the single rail market	/	2
	National Enforcement Bodies for Rail Transport - NEB Forum	The forum under the auspices of the EC, where experiences are exchanged with the aim to establish best practices for the protection of the rights of passengers in rail transport, its harmonization and proposing changes to the legislative framework.	/	1
	European Network of Rail Regulatory Bodies (ENRRB)	The EC advisory body, which discusses issues and practices in the area of regulation of the rail services market of importance for the work of regulatory authorities.	/	2
EUROPEAN ORGANISATIONS	European Conference of Postal and Telecommunications Administrations (CEPT)	The European organisation established for the purpose of cooperation among national authorities for post and telecommunications. It consists of three main groups: ECC (Electronic Communications Committee), CERP (European Committee for Postal Regulation) and Com-ITU (Committee for ITU Matters). HAKOM participates in the work of Com-ITU, ECC and CERP.	/	3

EUROPEAN ORGANISATIONS	European Communications Committee (ECC)	The body within CEPT, responsible for technical and regulatory electronic communications issues and RF spectrum management. It consists of working groups that develop recommendations and decisions related to the frequency spectrum, numbering resources and other aspects of electronic communications.	WGSE (Spectrum Engineering) WGSE PT SE19 (Fixed Services) WGFm (Spectrum Management) WGFm PT22 (Control and Monitoring) Civ/Mil (Civil/Military) CPG (Conference Preparatory Group) PT FM44 (Satellite Communications) SRD/MG (Short Range Devices) EFIS/MG (ECO information system on radio frequencies use) ECC PT1 (Mobile Networks) WG NaN (Numbers and Networks) NaN1 (Future of Numbering Issues) NaN2 (Number Portability, Regulatory Issues) NaN3 (Emergency Services) FM 61 – WAS/RLANs and ITS SE21 – Unwanted Emissions FM 61 – WAS/RLANs and ITS SE45 – AS/RLAN in the 5925 – 7125 MHz Band	51
	European Committee for Postal Regulation (CERP)	A body of CEPT dealing with information exchange and coordination of postal policies among European countries. It focuses on regulatory, technical and economic issues in the postal sector.	CERP WG UPU	1

EU REGULATORS' NETWORKS				
Body of European Regulators for Electronic Communications (BEREC); BEREC Board of Regulators (Odbor regulatora); BEREC Management Board (Upravni odbor)	An independent body that gathers European national electronic communications regulatory authorities with the aim of harmonising the regulation of electronic communications, promoting competition and protection of end-users. It assists the European Commission and national regulatory authorities in the implementation of the EU regulatory framework for electronic communications. At request and at its own initiative, it provides advice to European institutions and, at European level, it supplements regulatory tasks performed by national regulatory authorities at the national level. It adopts decisions at the plenary meetings of the Board of Regulators and the Management Board.	Evolution of the fixed network Market Analysis Evolution of Wireless Networks Regulatory Framework Digital Markets Legal Remedies and Market Surveillance Sustainability Planning and Future Trends Roaming Cybersecurity End Users Open Internet ICT Communications	4 Board meetings and 4 Contact Network meetings; 331 meetings of working groups	
European Regulators Group for Postal Services (ERGP)	An advisory body to the EC that gathers national regulatory authorities for postal services from EU Member States. Its purpose is the promotion of harmonised and efficient regulation of the postal sector in the internal market. Decisions are adopted at plenary meetings.	Access and Interoperability Consumers and Market Indicators Cross-border Parcel Delivery Regulatory Framework Sustainability	2 plenary meetings and 2 meetings of the Contact Network	
Independent Regulators' Group (IRG Rail)	A network of independent regulatory authorities for the rail sector in Europe, promoting a single, competitive and sustainable internal railways market. Decisions are adopted at plenary meetings.	Access Emerging Legislative Proposals Market Surveillance Charges Access to Service Facilities Charges for Service Facilities	2 plenary meetings and 2 Contact Network meetings; 50 meetings of working groups	
Internet Corporation for Assigned Names and Numbers (ICANN)	A non-profit organisation that manages the global system of internet domains and IP addresses.	/	4	
Governmental Advisory Committee (GAC)	An advisory body within the ICANN that enables governments to give recommendations on public policy issues related to online resources management.	/	8	
International Telecommunication Union (ITU)	A specialised agency of the United Nations that coordinates the global issues of telecommunications and information technologies. HAKOM participates in conferences (plenary meetings and WRC), and in its everyday work it mostly participates in the work of the ITU-R (Radiocommunication Sector).	/		
Radiocommunication Sector ITU-R	Within the ITU, it manages the radiofrequency spectrum and the development of technical standards for radiocommunication systems throughout the world.	WPIC – Spectrum Monitoring		
Organisation for Economic Co-operation and Development (OECD)	An international organisation that promotes economic growth, financial stability and fosters trade cooperation among developed countries. It addresses digital policy through committees and working groups that develop guidelines for the digital economy, privacy and cybersecurity.	/		

INTERNATIONAL ORGANISATIONS				
Universal Postal Union (UPU)	A specialised agency of the United Nations that coordinates postal policies and rules among member countries at a global level	/		1
HCM (Međunarodni sporazum o koordinaciji)	A group that oversees and manages the application of the international agreement for the coordination of radio frequencies in the mobile and fixed services	HCM Plenary HCM MS – Mobile Service HCM FS – Fixed Service		3
European Mediterranean Regulators Group (EMERG)	A network of regulatory authorities for electronic communications from Europe and the Mediterranean (Albania, Algeria, Bosnia and Herzegovina, Egypt, Israel, Jordan, Kosovo, Lebanon, Libya, Montenegro, Morocco, North Macedonia, Palestine, Serbia, Tunisia, Turskiye), established for the purpose of strengthening cooperation, exchanging knowledge and harmonising regulatory practice. The organisation serves as a platform for discussion on common challenges in the electronic communications sector.	/		2 plenary sessions
Eastern Partnership Electronic Communications Regulators Network (EaPeReg)	A network of regulatory authorities for electronic communications from the Eastern Partnership countries (Armenia, Azerbaijan, Belarus (suspended for political reasons), Georgia, Moldova, Ukraine) and the European Union, established for the purpose of strengthening cooperation, harmonising regulations and fostering market development. The objective of the network is to support reform processes in the area of electronic communications through the exchange of experiences and good practices.	IRB EWG – Working group for independence of regulators and broadband infrastructure development REWG – Roaming Expert Working Group SEWG – Spectrum Expert Working Group		
RIPE NCC	Réseaux IP Européens (RIPE) is a forum open to all those interested in broadband IP networks. RIPE aims to ensure the administrative and technical coordination necessary to enable internet operation. HAKOM participates in round tables for the representatives of regulators and the public sector.	Working group for collaboration		3
IGF (Internet governance forum)	The UN convened Internet Governance Forum (IGF) serves for an equal gathering of stakeholders from different stakeholder groups in discussions on public policy issues related to the internet.	/		1

Domestic cooperation

Ministry of the Sea, Transport and Infrastructure (MSTI) – HAKOM continually cooperates with the MSTI in the area of electronic communications, postal services and the railway market.

Electronic communications – cooperation with the Directorate for EU Funds of the MSTI related to the allocation of funds under the NRRP for the continuation of implementation of the NFP. In cooperation with the MSTI, the proposal to supplement the measures of the Policy Programme Path to the Digital Decade 2030 with regard to 5G networks was prepared. Regular cooperation on preparing materials for high-level meetings, user queries and responding to questionnaires of international bodies also continued. Within the national working group (MSTI, SOA, HAKOM), the proposal of the Ordinance on the assessment of security risk of producers and suppliers of the equipment for electronic communications networks, adopted by the MSTI, was prepared. The MSTI is a member of the CRO-IGF Organisational Committee.

Postal services – cooperation was linked to the setting up of the postal network as well as reporting within international cooperation.

Rail services – in 2024, cooperation primarily referred to the preparation of the Draft proposal of amendments to the RA and the ARSM.

Ministry of External and European Affairs (MEEA) – HAKOM is a member of the Standing Group established by a Decision of the Government of the Republic of Croatia, which is responsible for harmonising positions, coordinating and monitoring common policies and activities to reach strategic and operational goals in the area of the implementation of restrictive measures, adopting procedures and general guidelines and, when necessary, making recommendations and giving opinions concerning the application of restrictive measures, and for other affairs expressly entrusted to it under the Law on Implementation of Restrictive Measures. The Standing Group is a body that makes proposals or initiates the inclusion of persons in the restrictive measures list of both the United Nations and the European Union. HAKOM is primarily responsible for a full or partial restriction of postal services and electronic communications. The MEEA is a member of the CRO-IGF Organisational Committee.

Ministry of Justice, Administration and Digital Transformation of the Republic of Croatia (MJADT) – HAKOM continued its cooperation with the MJADT, which was started during the implementation of the project Introduction of a quality management system in the public administration of the Republic of Croatia. The quality management system based on the Common Assessment Framework (CAF) was established. It is a European tool for improving quality in the public sector, which enables organisations to systematically improve their efficiency and efficacy.

HAKOM also cooperated with the MJADT with regard to the Policy Programme Path to the Digital Decade 2030 and, in 2024, a proposal was made to supplement the measures related to the further development of 5G networks.

Ministry of the Economy and Sustainable Development (MESD) – HAKOM cooperates with the Ministry of the Economy and Sustainable Development in the area of consumer protection and has its representative in the National Consumer Protection Council.

Ministry of Defence (MoD) – HAKOM participated in Cyber Coalition 2024, NATO's largest cyber defence exercise organised by the Allied Command Transformation (ACT). The aim of the exercise was to strengthen coordination and collaboration between the NATO alliance and its members and to improve the ability to deter, defend and counter threats in and through cyberspace. Intensive cooperation with the MoD continued on authorisations for the operation of MoD's communication systems and for the purposes of NATO forces.

Ministry of Health – Within the implementation of activities in accordance with the measures of the **National Plan for Broadband Development 2021 – 2027**, in cooperation with the Ministry of Health, HAKOM published and presented educational materials (animations and infographics) as part of a public campaign. In October 2024, two round tables on the topic of "Non-ionizing electromagnetic fields – impact on health" were held in Osijek and Zagreb.

Competition Agency (CCA) – Data were submitted for the purposes of the procedure of establishing the abuse of a dominant position, which was initiated by the CCA. In addition, as part of cooperation on the analyses of relevant markets, a positive opinion for the M2 and exM14 was requested and obtained (the opinion was received in 2025).

Croatian Railway Safety Agency and Air, Maritime and Railway Traffic Accidents Investigation Agency – For several years, HAKOM has cooperated with the Croatian Railway Safety Agency, the body responsible for the safety and interoperability of the railway system with the aim of preventing distortion of competition or for traffic safety, as well as with the Air, Maritime and Railway Traffic Accidents Investigation Agency.

State Bureau of Statistics – HAKOM regularly submits statistical data on the market it regulates to the Bureau.

State Inspectorate of the Republic of Croatia – When required, HAKOM cooperates with the State Inspectorate of the Republic of Croatia with regard to the Do not Call Register.

CERT – In 2024, HAKOM cooperated with the National CERT with regard to computer security incidents reported by operators in 2024. After the implemented categorisation pursuant to the Cybersecurity Act, operators will report any types of incidents to the national incident-reporting platform – the PiXi platform.

In February 2004, in cooperation with the Partners in Learning association and National CERT, HAKOM organised a conference entitled “Quest for a Better Internet” to mark the Safer Internet Day.

SOA – As a member of the national working group for the implementation of Directive NIS2, which was coordinated by the Security and Intelligence Agency (SOA), HAKOM participated in the drafting of the new Cybersecurity Act and the Ordinance on cybersecurity.

Emergency Services (112, 192, 193, 194, 195 and 1987) – In 2024, HAKOM cooperated with the emergency services of the Republic of Croatia (112 – MoI Civil Protection Directorate, 192 – MoI, 193 – CFA, 194 – CIEM, 195 – MSTI Maritime Safety Directorate and 1987 – HAK) to ensure the establishment of good quality and accessible communication, i.e. communication channels towards emergency services.

Faculty of Electrical Engineering and Computing of the University of Zagreb (FER) – Cooperation with FER on HAKOM's Accessibility programme was continued. In 2024, the 2024 Accessibility Project was completed, which primarily focused on rail passenger transport and accessibility for persons with disabilities and reduced mobility. The Privacy Calculator application was also updated, which serves to raise awareness and inform about threats of incautious provision of personal data. FER is a member of the CRO-IGF Organisational Committee.

Faculty of Transport and Traffic Sciences, University of Zagreb – HAKOM participated in the Faculty of Transport and Traffic Sciences Open Days and presented HAKOM's scope of work to students, with emphasis on the rail services market and the protection of passenger rights. For several years, HAKOM, as a partner company, has also participated in the scientific project “Transportikum”. The project links the needs of the economy for labour force and directs students to specific industrial sectors.

Faculty of Law in Zagreb – The Faculty of Law is a member of the CRO-IGF Organisational Committee.

Pro-Rail Alliance – Together with the Pro-Rail Alliance, HAKOM organised a conference with the objective to foster open dialogue among the stakeholders of the rail transport market, as well as with the academia, public authorities and local self-government units.

Consumer protection associations – For years, HAKOM has cooperated with consumer protection associations and shared knowledge and experiences with all interested parties, which, in addition to regular dialogues with the associations also includes lectures/consultations for consumers. In 2024, noteworthy was the cooperation with the following associations: Potrošačica – the Association for the Protection of the Consumers of Croatia, Međimurje Consumer, the Consumer Centre Association Rijeka, the Consumer Protection Centre of the Vukovar-Srijem County – Voice of Consumers, the Association for Consumer Education, Protection and Information e-ZIP and Zagreb's Association of Disabled Workers.

RIA

In November 2023, HAKOM introduced the Regulatory Impact Assessment (RIA) into its regular operation for all decisions that may have a significant impact on the market, i.e. a practical methodology and a toolbox for the systematic assessment of regulatory activity in the markets of electronic communications, postal services and rail transport and ensure a systematic approach to the assessment of potential impacts of the proposed regulation or policy prior to its implementation. The project of the implementation of RIA was fully financed by EU funds and was initiated in 2022. In 2024, 8 RIA assessments were implemented in accordance with the adopted methodology, which during the introduction of this type of assessment was developed for HAKOM as the regulator of 3 different markets as well as the authority regulating the radiofrequency spectrum in the Republic of Croatia.

The activities in 2024, which included the impact assessment in accordance with the RIA methodology: M2/2020 and exM14/2003 market analysis, harmonising the margin squeeze test with the market analysis, the EoI model, the methodology for setting price accessibility of universal services, the methodology of the designation of universal service operators – geographic segmentation, conditions and the price list for the access to the postal network and the organisation of the postal network.

JAVNOST RADA I PRISTUP INFORMACIJAMA

HAKOM is transparent in its work by ensuring the availability of information in accordance with the regulations in effect in the HR. Public access is only restricted in the cases of the protection of privacy and official or business secrets. All relevant information, including HAKOM's decisions and rulings, was regularly published on the website. Information on administrative acts and co-

urt decisions are also updated regularly. Consultation with the public is always conducted for the decisions that might have a significant impact on the market, and, in all, there were eighteen of them in 2024. News and press releases on important events and regulations were published on ninety occasions. Cooperation with the media was regular, in particular through participation in shows that inform the public on the topics of user protection. During the year, there were 88 queries submitted by the media, of which 25 were requests for appearances in shows or making statements and the rest were answered in writing. Direct contact for citizens is enabled by phone, the internet application and e-mail. However, HAKOM also uses social media, such as Facebook, LinkedIn and YouTube for communication and provision of useful information. In 2024, ten requests for access to information were received and resolved and the implementation report was submitted to the Information Officer.

INSPECTION SUPERVISION ACTIVITIES

Inspection supervisions and controls were carried out in accordance with the inspection's Annual Work Programme. In addition to the planned supervisions, inspectors also responded to reports or petitions indicating a breach of law. Also, inspectors acted according to their own knowledge on the circumstances that pointed to a possible breach of sectoral regulations. All inspection decisions are published on [HAKOM's](#) website. Inspection supervisions carried out in 2024 show that supervised entities in most cases adhered to law and, in the case that infringements were identified, they actively worked on their elimination. However, several areas were identified in which, in the forthcoming period, special attention should be paid to compliance with legal provisions, as explained in the text below.

In **the electronic communications market**, the following was systematically checked: compliance with regulatory obligations by SMP operators, the respect of end-user rights, compliance with the obligations of network and services security and the protection and maintenance of the communications infrastructure, compliance with obligations related to the construction of the communications infrastructure and obligations related to the common use of the communications infrastructure. Also, based on a special power, complaints were addressed related to number portability and the switching of operators. A total of 48 inspection supervisions were conducted and 23 decisions were issued.

As regards regulatory obligations, one infringement was established in relation to wholesale central access provided at a fixed location for mass-market products. In the decision, the operator was ordered to undertake necessary actions to inform beneficiary operators 30 days in advance about the construction of the new optical fibre installation up to the entrance to the flat in the HT network.

With regard to the treatment of end-users, irregularities were recorded when concluding distance contracts, in relation to the lack of information provided to users when such contracts are concluded. An increase in the use of automated caller and communication system for automated scam calls made to end users was observed. Inspectors reacted by prohibiting the numberings from which the calls were made and issued decisions on the prohibition of use of the automated call system.

Operators complied with the obligations in the area of network and services security and no irregularities were established in that segment.

With regard to obligations concerning communications infrastructure: the construction of infrastructure, protection of infrastructure during the works, joint use of infrastructure, payment of fees for the right of way on infrastructure, individual infringements were established that did not indicate any systemic problems. However, with regard to the maintenance of access networks, in 3 cases, which referred to the same operator, defective maintenance and worn-out networks were established.

In conclusion, in the forthcoming period control of regulatory obligations should continue in electronic communications in order to ensure that the provision of wholesale services by the SMP operator complies with the regulatory obligations of transparency and non-discrimination, ensuring competition to the benefit of end-users. In control of the rights of users in electronic communications, it is necessary to continue the control of transparency in the activities of operators, in particular when concluding distance contracts, and control of the accuracy of information provided to users when such contracts are concluded. In addition, attention should be paid to the occurrences of the use of automated caller and communication system for automated scam calls made to end-users, where the identification of responsible persons behind such calls is a particular problem. With regard to electronic communications infrastructure, it is necessary to continue the control of the maintenance of access networks in order to ensure the integrity and security of the provision of services.

In the area of **control and supervision of the radiofrequency spectrum**, there was an increase in the number of locations at which measurements established excess electromagnetic field radiation levels caused by the operation of operators' base stations. After the inspector's order, such occurrences were eliminated. Besides this, operators mostly complied with the conditions stated in the issued licences. With respect to product safety in general, no significant infringements were established and a total of 59 supervisions were conducted and 10 decisions were issued. Spectrum control will continue to pay special attention to locations with more transmitter units that operate on different radio frequencies.

In the **postal services market**, most postal service providers fulfil their legal obligations. As regards HP, the universal service provider, conducted inspection supervisions indicated problems with the due delivery of postal items within universal service. Inspection supervisions remain key for the timely detection and sanctioning of irregularities and the protection of user rights, particularly regarding universal service. A total of 67 supervisions were conducted and 2 decisions were issued.

In 2024, supervisions in the area of postal services indicated the necessity to continue the control of the due delivery of postal items within the universal service.

In the **rail services market** and in the area of the **rights of passengers in rail transport**, in the conducted supervisions infringements were established that indicated the presence of problems with regard to the rights of passengers in train delays or cancellations, with regard to informing passengers about the delay or cancellation, as well as with regard to informing passengers about their rights in such cases. As regards other obligations, infringements of a smaller extent were observed that were eliminated after the conducted supervisions. A total of eight inspection supervisions were conducted and eleven decisions were issued.

As regards the protection of the rights of passengers in rail transport, inspection supervisions indicate that control of the implementation of the rights of passengers should be continued in connection with train delays or cancellations, with regard to informing passengers about a delay or cancellation as well as about their rights in such cases.

COURT PROCEEDINGS

Court proceedings include administrative disputes initiated against HAKOM's decisions, misdemeanour proceedings initiated by HAKOM against natural and legal persons due to the violations of legislative provisions within HAKOM's competence, enforcement proceedings against legal and natural persons for the non-payment of fees for the right of use of addresses, numbers and the RF spectrum (state budget) and for HAKOM's work as well as procedures where HAKOM applied for its claims against a debtor upon whom pre-bankruptcy or bankruptcy proceedings have been initiated.

Administrative disputes

No appeal is allowed against HAKOM's decisions adopted in administrative proceedings, but

Figure 7.2 Statistics on administrative complaints

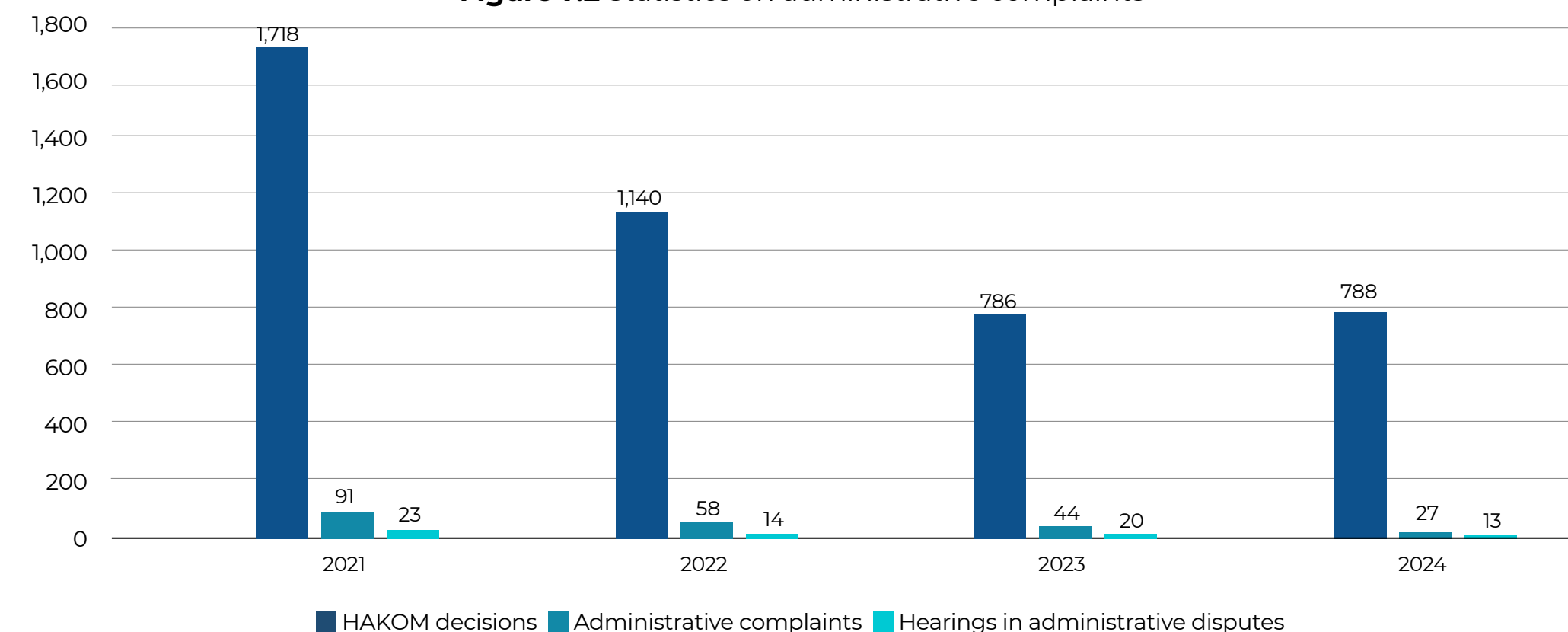
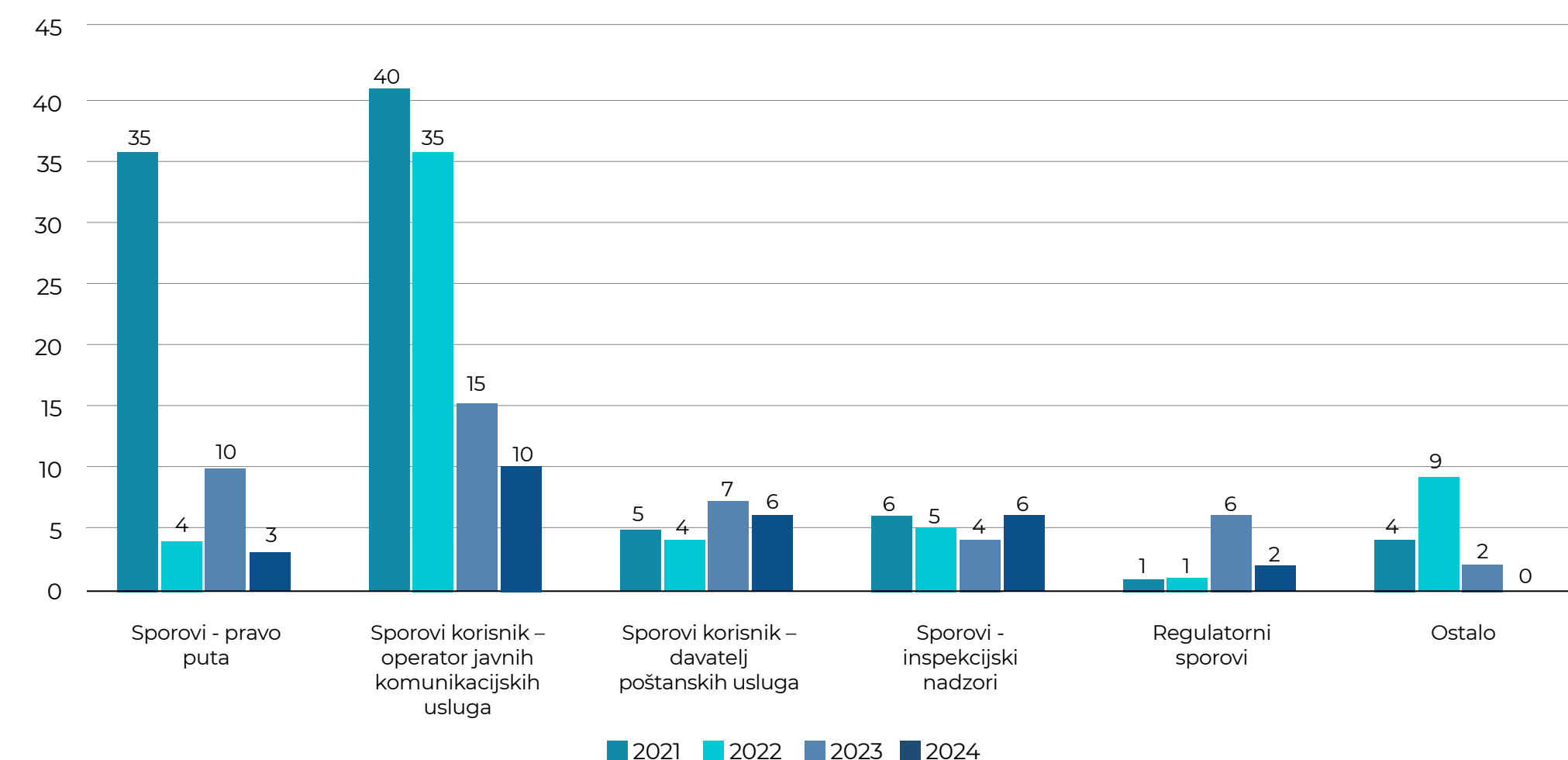


Figure 7.3 Number of administrative complaints by type of decision

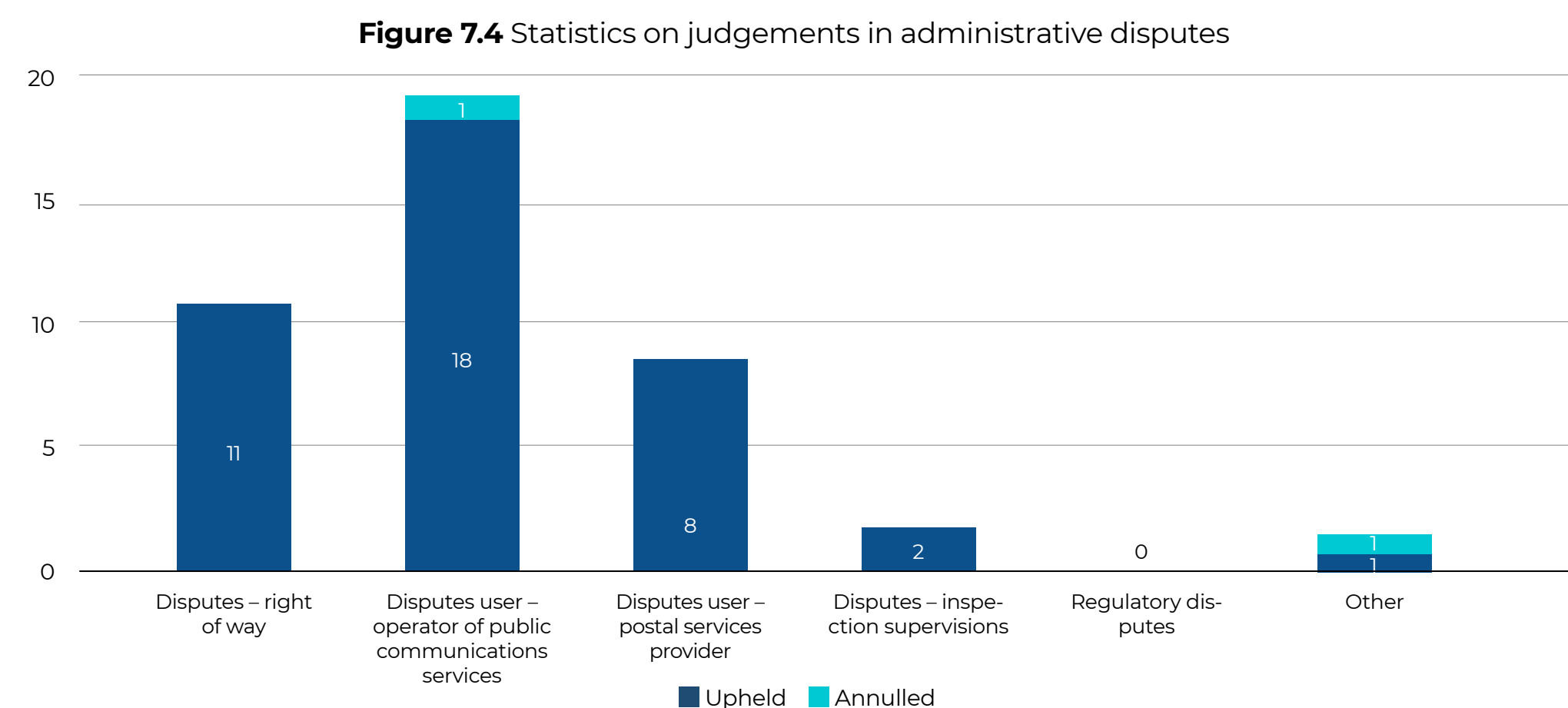


judicial protection is provided as part of an administrative dispute. An administrative dispute is initiated by filing a lawsuit with the competent administrative court.

The High Administrative Court of the Republic of Croatia is competent for administrative disputes initiated against decisions adopted by the Council of HAKOM in the field of electronic communications, postal and rail services, and against decisions adopted by HAKOM's inspectors in

the cases of very serious and serious violations of the ECA and serious violations of the PSA. First instance administrative courts (Zagreb, Osijek, Rijeka and Split) are competent for administrative disputes initiated against decisions adopted in disputes between the users of electronic communications services and postal services and operators (service providers) and regarding the protection of passengers' rights, as well as against the decisions of HAKOM's inspectors regarding other violations of the ECA and the PSA as well as the violations of the ARSM.

The largest number of administrative complaints, 10 (37 percent), was filed in the cases of resolving disputes between users and operators of public communications services. In 2024, HAKOM resolved 715 disputes between users and operators of public communications services, so that



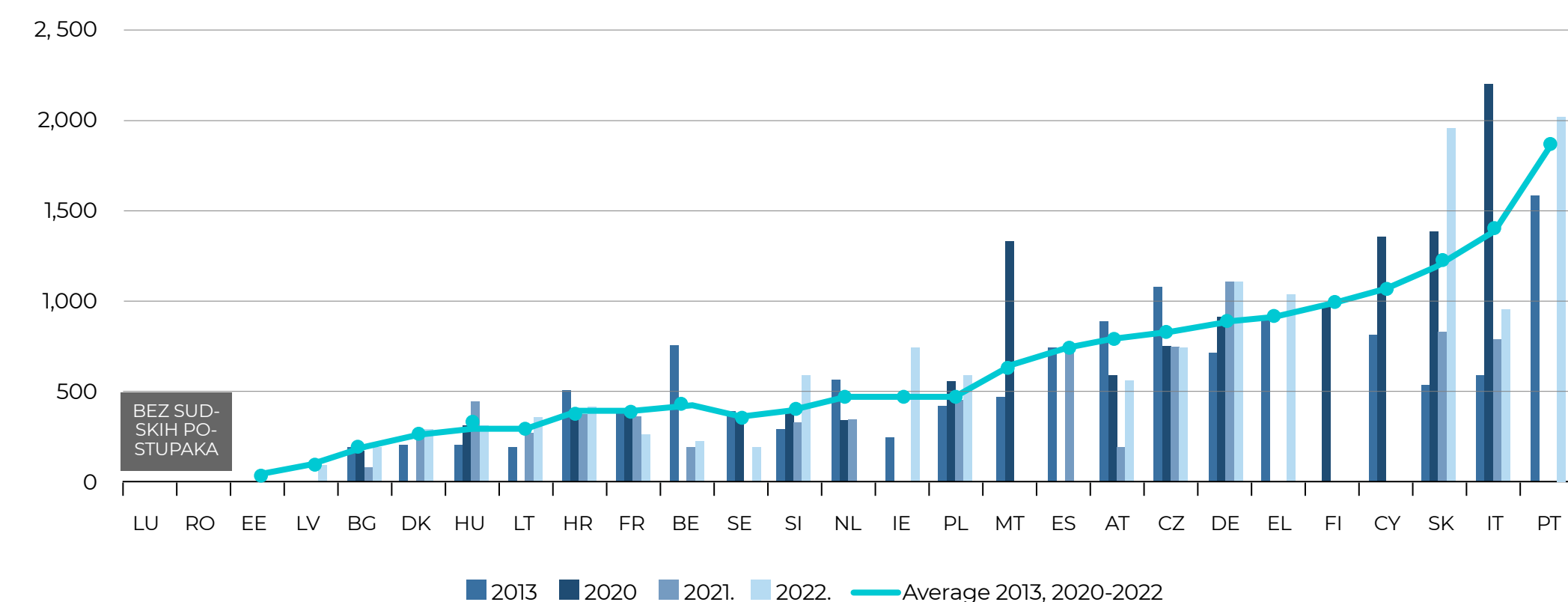
the ratio of filed complaints relative to the number of resolved disputes was merely 1 percent. In the cases of determining the infrastructure operator and the right of way fee there were 3 complaints (11 percent) filed, 7 complaints fewer than in the previous year. The remaining 14 complaints (52 percent) were filed in the cases of inspection supervision (6), in the disputes between users and postal service providers (6) and in regulatory disputes (2).

In total, 41 (95 percent) HAKOM's decisions were upheld, while 2 (5 percent) HAKOM's decisions were annulled. The majority of upheld (18) decisions refer to the cases of resolving disputes between users and operators of public communications services.

It is important to mention that the HR, with the average duration of court proceedings conducted pursuant to the ECA of around 300 days, is ranked the ninth in the 2024 EU Justice Scoreboard statistics according to the efficiency of proceedings.

A comparative detailed overview of the duration of court proceedings conducted by the national courts of EU Member States is shown in the figure below.

Figure 7.5 Duration of court proceedings in electronic communications



(Source: The 2023 EU Justice Scoreboard)

Misdemeanour proceedings

In 2024, 5 judgements were adopted, 3 of which were final. Two procedures are still ongoing before the High Misdemeanour Court of the Republic of Croatia. Of all the adopted judgements, noteworthy is the final judgement of the Municipal Misdemeanour Court in Zagreb, reference number: Pp-19302/2022, upheld by judgement Ppž-3864/2024, by which HT was found guilty and fined with the amount of EUR 5,862,922.98 for the violation of regulatory obligations. In addition, noteworthy is the final judgement of the Municipal Misdemeanour Court in Zagreb, reference number: Pp-10533/2022, adopted on the basis of the agreement between the parties, by which HT was found guilty and fined with the amount of EUR 3,383,147.00 for the violation of regulatory obligations.

Other procedures are conducted for the following misdemeanours: failure to provide postal services in the prescribed manner, the violation of regulations on the minimum agreed speed of broadband internet and the use of the ECI without a contract.

Enforcement proceedings

In 2024, based on enforcement proceedings initiated in the total amount of EUR 11,825.57, the amount of EUR 3,129.93 was collected, while for the remaining amount the enforcement collection is still pending.

In 2024, the amount of EUR 1,245.11 was also collected based on enforcement proceedings initiated in previous years.

Based on applications for claims in a bankruptcy procedure, the application for two claims in the amount of EUR 356.80 was executed, and the amount of EUR 910.39 was yielded by bankruptcy distribution based on completed bankruptcy procedures from previous years.

HAKOM also applied for two claims in a pre-bankruptcy procedure in the amount of EUR 505.86.

COMPETENCE DEVELOPMENT AND BUSINESS PROCESSES IMPROVEMENT

HAKOM has 186 employees. A large majority has academic degrees in the fields of electrical engineering, transport engineering, economy and law.

Table 7.3 Structure of HAKOM employees

Organisational unit (level 1 and 2)	Number of employees on 31 Dec.	Qualification structure (%)					Gender (%)		Age structure (%)				
		POSTGRADUATE (VIII and VII-2)	GRADUATE	UNDERGRADUATE	SECONDARY EDUCATION	SKILLED, SEMI-SKILLED AND NO QUALIFICATION	M	F	18-30	31-40	41-50	51-60	60+
	186	11.83	62.36	13.98	11.83	0.00	46.24	53.76	3.22	9.14	55.38	30.11	2.15

HAKOM continually invests in the **development of competences, knowledge and skills** of its employees through various educational and training programmes. In 2024, the average amount invested in education and professional development stood at EUR 453 per employee. These investments include participation in specialised seminars, workshops, courses and conferences with the aim of improving professional competences, following regulatory changes and ensuring high professional standards in the operation of the Agency. HAKOM will also continue with the policy of encouraging life-long learning of its employees in the future in order to ensure good quality and efficient implementation of its competences. In-house training of employees on information security was held as part of the operation in the digital and e-Agency environment. The aim of the training was to raise awareness of information security, strengthen the knowledge and perception of the importance of ensuring the security of data and information and other information assets, with special emphasis on the new working environment (remote working, etc.). With the aim of strengthening professional competences, professional development activities were implemented in the area of quality management, which included participation in the workshop Quality Management in Public Administration – Leadership Role, organised by the State School of Public Administration, and at the expert conference “Quality – Yesterday, Today, Tomorrow”.

The project of the development of organisational culture at HAKOM was successfully completed. Strategic activities implemented from 2022 to 2023, including a survey on the current and ideal organisational culture through questionnaires, the analysis of the impact of the management and a series of workshops with employees and consultations with the aim to guide organisational changes, created conditions for the improvement and development of a stimulating organisational culture and a positive organisational environment. This project fulfilled one of the key priorities of HAKOM's Strategy for the period from 2022 – 2025, laying solid foundations for further organisational growth and development.

In order to ensure a higher quality and more efficient control of the implementation and **management of projects**, in 2024, HAKOM reviewed the existing project management methodology. The new model is designed with the objective of a better adjustment to the real needs of the organisation and following the trends in the public sector.

The main objectives of the new methodology include:

- increasing internal efficiency and improving cooperation with external partners;
- developing knowledge and skills of employees through active inclusion in project work;
- enhancing the institutional reputation of HAKOM as a professional and reliable organisation.

One of the key changes is the introduction of the categorisation of projects, by which department heads determine the importance and priority of individual projects based on strategic objectives. This ensures the focusing of resources on projects that have the biggest impact on

the realisation of strategic objectives. An important novelty, compared to the previous project management system, is the Catalogue of Projects in which projects are categorised.

In addition, all projects are led and archived through HAKOM's SharePoint portal, which ensures a better accessibility of information, transparency and an efficient oversight of the realisation of activities.

HAKOM continued with the development of the **quality management system** based on the Common Assessment Framework (CAF), the European methodology dedicated to improving the work of the public administration. The key objective of the CAF application of is the implementation of a comprehensive self-assessment of the organisation and fostering constant improvements in all segments of operation.

In 2024, emphasis was placed on the realisation of the improvement of operation based on the results of the initial assessment. A total of 12 specific initiatives were implemented, directed at the improvement of internal processes and increasing organisational efficiency.

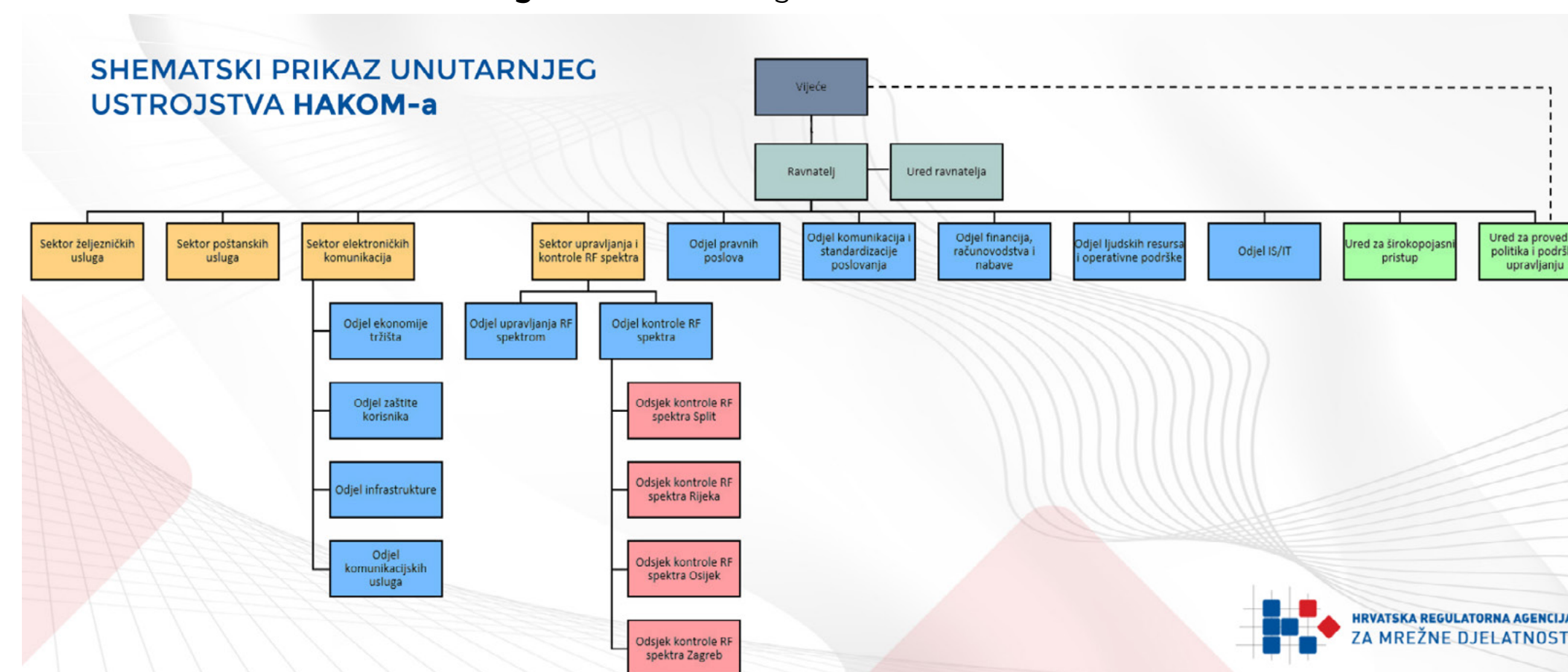
Due to the scope of operational activities and the completion of several important projects, the planned internal quality assessment was postponed for the first quarter of 2025. Despite this, all preparatory activities were carried out on time. Realisations of the previously identified areas were verified, a meeting with the top management was held at which the results of the implemented activities were presented and the next steps in the quality system development were defined. In addition, the internal assessment programme was developed and the entire administrative service was informed about its implementation in order to provide support to the assessment team. In parallel, the optimisation of the existing processes was continued and new ones were developed, while ensuring a complete documentation and transparency.

The implementation of **the HAKOM Strategy** is ongoing until the end of 2025, and the new one will have to take into consideration new circumstances, primarily the addition of the role of the Digital Services Coordinator. In 2024, an internal analysis of the implementation of the HAKOM Strategy for the period from 2022 to 2025 was published **and the internal report was prepared.**

The new organisational structure of HAKOM, presented as an organisational scheme, shows the division of responsibilities and the functional organisation within the Agency. The structure is divided in four sectors and eight independent departments and offices, with the aim of an efficient regulation of network industries. The new organisational structure represents a modernised and functionally clear system that enables:

- specialisation by regulatory areas (railway, post, telecommunications, RF spectrum)
- decentralisation of control through regional divisions
- strengthening of support, multidisciplinary approach and coordination in addressing tasks.

Figure 7.6 HAKOM organisational structure



e-AGENCY

The **e-Agency** programme is based on the digitalisation of operation, which requires numerous application systems. Application systems are designed for external and internal users and are particularly important for HAKOM's operations. HAKOM is constantly working on improving and modernising the existing application systems, and introducing new ones. Continuous investments are also made in the maintenance and upgrading of the IS/IT infrastructure to enable the operation and development of all application systems.

In 2024, the Centrix office management system was upgraded and harmonised with the Office Management Regulation and the accompanying legislative regulations. By its upgrading, the system was integrated with the ZUP IT system. New modules were added to the system in order to further digitalise HAKOM's operation.

In developing the e-Agency, HAKOM carried out a number of activities and measures in 2024 with the aim of increasing cybersecurity and reliability of its external and internal services, striving to respond well to the growing security threats in the cyberspace. Actions were frequently implemented with the aim of raising awareness among employees of the importance of cybersecurity and checking the current situation of the cybersecurity of HAKOM's information system. HAKOM's IS/IT participated in amending and adjusting Annex II of the Cybersecurity Act: Measures for Managing Cybersecurity Risks in terms of a clearer and more precise definition of measures that, at the national level, should ensure the integrity, confidentiality and accessibility of information and information systems.

PLANNING AND REALISATION OF ACTIVITIES

HAKOM'S other activities						
No.	Activity	Result	Planned completion	Strategic objective	Realisation	Implementation assessment
1.	Prepare a report on the implementation of the Annual Inspection Plan for 2023	Report on the implementation of the Annual Inspection Plan for 2023	I	4.2	Report prepared	Achieved
2.	Coordinate the implementation of the Annual Inspection Plan for 2024	Implementation according to the Annual Plan and identified current needs	Ongoing	4.2	Total number of inspection supervisions	Achieved
3.	Draft the Annual Inspection Plan for 2025	Annual Inspection Plan for 2025	IV	2.1	Inspection plan	Achieved
4.	Prepare the annual report and the financial statements for 2023 and submit them to the Croatian Parliament	Annual report and financial statements for 2023	II	5.1	Reports prepared and adopted by the Croatian Parliament	Achieved
5.	Prepare the annual work programme and the financial plan for 2025	Annual work programme and the financial plan for 2025	IV	5.1	2025 AWP and 2025 FP adopted	Achieved
6.	Analyse and harmonise business processes	All processes that were subject to change analysed and harmonised	Ongoing	5.1	10 new processes analysed and modelled and 26 processes improved	Achieved

7.	Manage projects	Projects comply with established project methodology	Ongoing	5.1	Project management methodology updated as well as forms;	Achieved
8.	Update web and intranet sites and other digital communication platforms	Relevant and timely information for the public	Ongoing	5.1	Website and intranet pages updated regularly New functionalities for persons with disabilities implemented The network upgrading project completed.	Achieved
9.	Develop and maintain e-Agency services	New e-Agency services added and existing ones upgraded	Ongoing	5.1, 5.2	8 e-Agency services improved. Accessibility > 99% of the time	Achieved
10.	Analyse and monitor the implementation of HAKOM's Strategy for the period from 2022 to 2025	Report on the implementation of the Strategy and guidelines for the preparation of the strategy for the next period	Ongoing	5.1, 5.2	HAKOM Strategy	Achieved
11.	Develop organisational culture	Stimulating organisational culture	IV	5.2	Project for the development of organisational structure	Achieved
12.	Develop competences	New competences	Ongoing	5.3	Competence development	Achieved
13.	Implement the internal quality system assessment	Areas for improvement identified	IV	5.1, 5.2	Quality management system	Proceeding as planned
14.	Monitor the regulatory framework	Framework analysis Proposals of positions	Ongoing	4.1	13 regulations	Achieved

08

FINANCIAL STATEMENTS

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INTRODUCTION

The Croatian Regulatory Authority for Network Industries (hereinafter: HAKOM) pursuant to Article 20, paragraph (1), item (6) of the Electronic Communications Act (Official Gazette 76/2022 and 14/2024; hereinafter: ECA) and Article 10 of the Statute of HAKOM (Official Gazette 40/2024), submits to the Croatian Parliament and the Government of the Republic of Croatia the Financial Report for the year 2024. This Financial Report constitutes an integral part of the HAKOM 2024 Annual Activity Report.

HAKOM is an independent and autonomous legal entity with public authority within the scope and competences prescribed by the ECA, the Postal Services Act (Official Gazette 144/2012, 153/2013, 78/2015 and 110/2019; hereinafter: PSA) and the Railways Act (Official Gazette 32/2019, 20/2021 and 114/2022; hereinafter: RA).

The founder of HAKOM is the Republic of Croatia, and the founding rights are exercised by the Croatian Parliament and the Government of the Republic of Croatia. HAKOM is responsible for its work to the Croatian Parliament.

In accordance with the ECA, HAKOM is governed by a five-member Council, appointed and dismissed by the Croatian Parliament on the proposal of the Government of the Republic of Croatia. Members of the Council are appointed for a period of five years with the possibility of reappointment. HAKOM's administrative and technical affairs are performed by the Administrative Service headed by the Executive Director of HAKOM.

HAKOM is a budget user of the state budget, representing the third organisational level and belongs to only one division. HAKOM is within the scope of work of the Ministry of the Sea, Transport and Infrastructure, as the line ministry, that is, the central body of state administration.

In accordance with the Act on the Execution of the State Budget of the Republic of Croatia for 2024 (Official Gazette 149/2023 and 125/2024), HAKOM plans the assigned revenues in the state budget, while the obligation to pay these revenues into the state budget does not apply to HAKOM. The generation and expenditure of the assigned revenues, as well as EU aid, revenues from the sale of non-financial assets and insurance compensation are reported on a monthly basis in the State Treasury system.

HAKOM's Financial Plan for 2024 was adopted in accordance with budget regulations as part of the budget of the Ministry of the Sea, Transport and Infrastructure.

Register of budget users: 45902

Level: 11 – State budget user and division within the line ministry

Chapter: 06565

Activity: 8413 Regulation of and contribution to more efficient operation of businesses

In 2024, HAKOM generated assigned revenues, EU aid, revenues from the sale of non-financial assets and other revenues in the total amount of EUR 15,920,763.49, which were sufficient to cover all expenditures of HAKOM in the amount of EUR 13,867,823.96. The total surplus revenue in 2024 was recorded in the amount of EUR 2,052,939.53, which had an effect on the increase in the surplus revenue carried forward from previous years. The surplus revenue available in the coming period is planned to be used for the financing of part of the expenditures for the purchase of non-financial assets.

HAKOM'S ANNUAL FINANCIAL STATEMENTS FOR 2024

Entities subject to budget accounting and preparing financial statements within the budget system prepare and submit their annual financial statements for 2024 in accordance with the provisions of the Ordinance on financial reporting in budget accounting (Official Gazette 37/2022).

HAKOM's Annual Financial Statements for 2024 were submitted on 30 January 2025 through the web application of the Ministry of Finance (Financial reporting within the budget system and the Register of budgetary and extra-budgetary users – RKPFI) and the line ministry.

Electronically signed [HAKOM's Annual Financial Statements for 2024](#) were published on 31 January 2025 on HAKOM's website:

1. Budget statements, budget and extra-budgetary user statements for the period: 1 January 2024 – 31 December 2024 – Reference page
2. Statement of revenue and expenditure, receipts and expenses for the period: 1 January 2024 – 31 December 2024 – Form: PR-RAS
3. Balance Sheet as of 31 December 2024 – Form: BALANCE SHEET

4. Statement of expenditure by functional classification for the period: 1 January 2024 – 31 December 2024 – Form: RAS-functional

5. Statement of changes in the value and volume of assets and liabilities for the period: 1 January 2024 – 31 December 2024 – Form: P-VRIO

6. Statement of liabilities for the period: 1 January 2024 – 31 December 2024 – Form: LIABILITIES

7. Notes to HAKOM's Financial Statements for the period 1 January 2024 – 31 December 2024

In the Notes to the Financial Statements, the largest items are described and the more important changes that occurred relative to the previous period are explained.

REVENUES

Table 1. Revenue overview (in EUR)

Account from Acc. Plan	HAKOM revenues	Realised in 2024
63	Aid from abroad and from entities within the general budget	59,253.48
632	Aid from international organisations and EU institutions and bodies	59,253.48
64	Revenues from assets	3,071.65
641	Revenues from financial assets	3,071.65
65	Revenues from oper. and admin. fees, fees pursuant to special legislation and fees	15,737,769.61
652	Revenues under special regulations	15,737,769.61
68	Penalties, administrative measures and other revenues	8,455.63
683	Other revenues	8,455.63

6	Operating revenues	15,808,550.37
72	Revenues from the sale of produced long-term assets	112,213.12
	723 Revenues from the sale of transport equipment	112,213.12
7	Revenues from the sale of non-financial assets	112,213.12
	HAKOM TOTAL REVENUES	15,920,763.49

HAKOM's revenues are ensured based on HAKOM's annual financial plan, in compliance with the ECA, the PSA and the RA, from the following sources:

1. from the fee for the radiofrequency spectrum management;
2. from the fee for the addressing and numbering space management;
3. from the fee for the performance of other activities of HAKOM in the percentage of the total annual gross revenues generated by operators in the previous calendar year in the activities of electronic communications networks and services on the market, except broadcasters broadcasting their radio or television programmes through their own electronic communications networks, which they use solely for this purpose;
4. from postal services fees, as a percentage of total annual gross revenues generated by postal service providers in the previous calendar year;
5. from the fee for performing activities in the field of rail market regulation, as a percentage of the total annual gross revenues generated by infrastructure managers in the previous calendar year.

In addition to the assigned revenues, HAKOM may also generate revenues from other sources in accordance with special laws, and these revenues may be used in accordance with the act governing the planning, preparation, adoption and execution of the budget.

The calculation and amount of fees and the manner of payment of fees for the financing of HAKOM's activities are laid down in the Ordinance on the payment of fees for the performance of HAKOM's activities, adopted by the Council of HAKOM. The fees are established pursuant to the principles of objectivity, transparency, proportionality and non-discrimination. Before adopting the Ordinance, a public consultation procedure is carried out.

Revenues pursuant to special legislation constitute the most significant revenues for the performance and development of HAKOM's activities. Revenues pursuant to special legislation in 2024 amounted to EUR 15,737,769.61, which is an increase of 14.2% from the performance in 2023. The increase in revenues was mostly accounted for by the higher collection of fees for the use of the radiofrequency spectrum for the public electronic communications network, for which invoices, pursuant to Article 28 of the Ordinance on payment of fees for carrying out of tasks of HAKOM (Official Gazette 154/2022 – applied as of 1 January 2023), were issued in the second half of 2023, with maturity and collection realised in 2024.

The most significant part of revenues pursuant to special legislation include revenues from the fees for the radiofrequency spectrum management and revenues from the fees for the performance of other activities of HAKOM in the percentage of the total annual gross revenues generated by operators in the previous calendar year in the activities of electronic communications networks and services on the market, except broadcasters broadcasting their radio or television programmes through their own electronic communications networks, which they use solely for this purpose.

Table 2. Revenues from operating and admin. fees, fees pursuant to special legislation and fees

Revenues from operating and admin. fees, fees pursuant to special legislation and fees	Realised in 2024
1. Revenues from the fees for the radiofrequency spectrum management	7,158,846.28
2. Revenues from the fees for the addressing and numbering space management	895,403.63
3. Revenues from the fees for the performance of other activities of HAKOM in the percentage of the total annual gross revenues of the operators in the previous calendar year in the activities of electronic communications networks and services on the market, except broadcasters broadcasting their radio or television programmes through their own electronic communications networks, which they use solely for this purpose	6,377,602.83
4. Revenues from the fees for the performance of HAKOM's activities in the field of postal services as a percentage of total annual gross revenues generated by postal service providers in the previous calendar year	827,443.98
5. Revenues from the fees for performing HAKOM's activities in the field of rail market regulation, as a percentage of the total annual gross revenues generated by infrastructure managers in the previous year	440,000.83
6. Other revenues from operating and administrative fees	38,472.06
TOTAL	15,737,769.61

Aid from abroad and from entities within the general budget consists of current aid from EU institutions and bodies in the form of refunds for official travel expenses, which amounted to EUR 59,253.48 in 2024. Of the total amount of EU aid, EUR 38,221.73 related to refunds for official travel expenses from BEREC and EUR 21,031.75 from other EU institutions and bodies. The increase in revenues from current aid from EU institutions and bodies, relative to the previous year, is the result of increased foreign official travel for the purpose of participation in the meetings of EU institutions and bodies. In October 2022, President of the Council of HAKOM, Mr Tonko Obuljen, was elected BEREC Chair for 2024, which, in the observed period, required a significant contribution of HAKOM's experts through participation in a large number of BEREC meetings. HAKOM was also appointed as the Digital Services Coordinator, in accordance with the Digital Services Act (DSA), which additionally increased the number of foreign official travels for which refunds of costs were realised. HAKOM's experts participated in 81 meetings in the area of electronic communications and postal and railway services. The costs of official travel were refunded from EU aid.

Revenues from financial assets relate to interest income on demand deposits and income from default interest totalling EUR 3,071.65. Default interest was regularly calculated and collected from business entities that failed to settle their liabilities towards HAKOM until the maturity date. Interest on demand deposits was not materially significant due to low interest rates of the commercial bank.

Other revenues, in the amount of EUR 8,455.63, were largely accounted for by the reimbursement of funds for the financing of studies from employees who had not met their obligations under the tuition contract, as well as the funds paid by the French electronic communications regulator that remitted funds to HAKOM for the purpose of the participation of HAKOM's experts in education related to the radiofrequency spectrum control during the Olympic Games in Paris.

In 2024, revenues from the sale of produced long-term assets were recorded in the amount of EUR 112,213.12 and were generated from the sale of 8 over nine years' old official vehicles after new vehicles had been bought. The sale of the official vehicles was conducted based on the public tender by collecting sealed written offers. The criterion for the selection of the offer was the highest offered selling price for the individual vehicle.

EXPENDITURES

HAKOM's expenditures in 2024 amounted to EUR 13,867,823.96.

Table 3 shows HAKOM's expenditures by area. HAKOM's expenditures consists of the expenditure for the electronic communications sector, expenditure for the postal services sector and expenditure for the regulation of rail services market.

HAKOM in its accounts registers operating expenditure (class 3) and expenditure for the acquisition of non-financial assets (class 4).

In 2024, financial resources were spent on the following:

1. operating expenditure (class 3)

a) *employee expenditure* (group 31) in the amount of EUR 8,502,839.23, which relate to the payment of salaries and other employee expenses. The increase in employee expenditure of 15.6 % from the previous year is the result of the increase in the total amount of the length-of-service allowance cost, the adjustment of salaries to inflation, organisational structure, systematisation of jobs and employee salaries. In 2024, HAKOM started applying the base for the calculation of salaries in accordance with the Law on Salaries in the Civil Service and Public Services (Official Gazette 155/2023);

b) *material expenditure* (group 32) in the amount of EUR 4,198,132.32.

I. Compensation of expenses to employees (sub-group 321) were mostly accounted for by official travel expenses, employee transport costs, separation allowance and professional development of employees.

Foreign travel costs were realised at the level of the previous year. Foreign official travel was mostly related to the participation in the meetings of the working groups of BEREC, ERGP, RSC, PDC, DSA, ENRRB, RSPG, HLIIG and other EU bodies.

The expense for the professional development of employees in 2024 stood at EUR 83,007.61 and referred to foreign language courses, participation in conferences, professional development of management staff and specific competences of employees, education on information security and expert seminars and consultations. The realisation in 2024 was reduced relative to the ob-

served period of the previous year because the training of the employees of the RF Spectrum Control Department for the work on the Rohde & Schwarz ARGUS system was conducted in 2023.

II. Expenditures for materials and energy (sub-group 322) refer to electricity and thermal energy, fuel, office material and other material expenses, car tyres, etc.

In 2024, from 2023, smaller costs for office material and other material expenses were recorded (smaller number of toners, copy paper, consumables for telephony and computer network and materials for cleaning and maintenance).

In 2024, the decrease in energy consumption was due to the reduced realisation on the electricity account, while the amounts of thermal energy and fuel did not change significantly. In the observed period of 2023, the amount of electricity was recorded on the basis of the final calculation of costs of joint consumption in the Sky Office business premises for 2022 because it was not received before the submission of the Financial Statements for 2022. The lessor needed more time to prepare the final calculation for 2022 because a new lease agreement was entered into in the course of that year, so that the final calculation consisted of two parts (the first part under the terms from the old agreement and the second part under the terms from the new agreement). The final calculation for 2023 was recorded in the period to which it referred. In addition, in 2024, the costs of electricity were reduced because the Government of the Republic of Croatia reduced the price and granted subsidies.

III. Expenditure for services (sub-group 323) mostly consists of rents and leases, computer services, other services, regular and investment maintenance services, intellectual and personal services and other promotional and information services.

Rents and leases refer to the lease of the business and parking space in Zagreb, the lease of equipment and licences.

Computer services refer to software maintenance – GIS, CHIRplus, HRNet, Business Central, network applications, e-Licences, e-Operator, Do Not Call Register application, Centrix, HAKO-Metar Plus, market analysis system (SAT), etc.

Other services referred to the cleaning service and the costs of common consumption in the leased business premises in Zagreb, the services of archiving, media coverage of releases, etc.

Expenditures for regular and investment maintenance services refer to the services of the regu-

lar and investment maintenance of official vehicles, information system, measuring and control devices for the purposes of supervision and management of the radiofrequency spectrum and control and measuring centres and control and measuring stations, monthly common maintenance costs of the Sky Office building in which HAKOM has rented its business premises. In the observed period in 2023, relative to 2024, more funds were spent on maintenance and the calibration of the measuring equipment and antennas and regular maintenance costs were recorded based on the final calculation of the costs of common consumption for 2022.

In 2024, intellectual and personal services were realised in the amount of EUR 212,801.47 and were considerably smaller than in the observed period of the previous year (EUR 834,415.14). In 2024, intellectual services included the audit of the regulatory report of the universal service provider, the audit of the report on the quality of the performance of universal service, consultation services and the provision of regulatory information, the development of organisational culture, geodetic services for Ozljak CMS, the preparing of the report on the quality of services in public mobile networks, etc.

Promotional and information services include promotional materials on the occasion of marking the Safer Internet Day for children, educational materials for the purpose of raising public awareness about electromagnetic fields, promotional materials designed for the public at joint gatherings concerning the protection of users in electronic communications, materials for the 2024 Day of New Technologies, etc.

IV. Other unmentioned operating expenditure (sub-group 329) mostly refer to premiums for the insurance of vehicles, other property and employees and representation expenses (organisation of the Safer Internet Day for children, the 17th round table of rail services stakeholders, 2024 Day of New Technologies, HAKOM's Day, Electronic Communications Market Day, Postal Services and Railway Services Day, strategic meetings, etc.).

c) *financial expenditure* (group 34) in the amount of EUR 5,345.27, which refer to banking services, payment operations services and negative exchange rate differences.

2. expenditure on the acquisition of non-financial assets (class 4)

a) *expenditure on the acquisition of produced long-term assets (group 42)* in the amount of EUR 822,727.87, which refers to the expenditure for the acquisition of computers and computer equipment (computers, monitors, disk systems, computer network equipment, computer servers, video-conference systems, a photocopier, etc.), communication equipment (fixed-line telephones, mobile phones, microwave antenna connection), equipment for maintenance and

protection (air-conditioning units, cameras and fire extinguishers), two meteorological stations; eight new official vehicles were purchased and investments in the Business Central accounting programme and the Privacy Calculator programme were recorded;

b) *expenses for additional investments on non-financial assets (group 45)* in the amount of EUR 317,379.27 include additional investments on other non-financial assets (upgrading of the working time record application, HAKOM's network portal, Cisco ISE Plus system, network application protection system, data security backup system, HRNet, Centrix, e-Licences, Navision, Business Central, etc.) and additional investment in the equipment (upgrading of the microwave link, video-conferencing system of the uninterrupted power supply system, disaster recovery system, the firewall system and the disk system).

Table 3. Expenditure overview (in EUR)

Account from Acc. Plan	HAKOM expenditure	HAKOM	Electronic communications area	Postal services area	Railway market regulation services area
	Expenditure total	13,867,823.96	12,592,830.26	756,406.53	518,587.17
3	Operating expenditure	12,706,316.82	11,431,323.12	756,406.53	518,587.17
31	Employee expenses	8,502,839.23	7,712,201.54	464,837.92	325,799.77
311	Salaries (gross)	6,378,677.17	5,780,317.25	351,866.23	246,493.69
312	Other employee expenses	1,071,208.35	977,844.43	54,969.45	38,394.47
313	Contributions on salaries	1,052,953.71	954,039.86	58,002.24	40,911.61
32	Material expenditure	4,198,132.32	3,714,410.86	291,199.35	192,522.11
321	Compensations of expenses to employees	586,272.57	510,270.24	40,376.60	35,625.73
322	Expenditures for materials and energy	370,896.77	325,961.06	25,919.55	19,016.16
323	Expenditure for services	3,014,748.50	2,674,016.03	214,370.95	126,361.52
329	Other unmentioned operating expenditure	226,214.48	204,163.53	10,532.25	11,518.70
34	Financial expenditure	5,345.27	4,710.72	369.26	265.29
343	Other financial expenditure	5,345.27	4,710.72	369.26	265.29
4	Expenditure on the acquisition of non-financial assets	1,161,507.14	1,161,507.14	0.00	0.00

41	Expenditure on the acquisition of non-produced long-term assets	21,400.00	21,400.00	0.00	0.00
412	Intangible assets	21,400.00	21,400.00	0.00	0.00
42	Expenditure on the acquisition of produced long-term assets	822,727.87	822,727.87	0.00	0.00
422	Plant and equipment	411,517.07	411,517.07	0.00	0.00
423	Transport vehicles	364,480.32	364,480.32	0.00	0.00
426	Intangible produced assets	46,730.48	46,730.48	0.00	0.00
45	Expenses for additional investments on non-financial assets	317,379.27	317,379.27	0.00	0.00
452	Additional investments in plant and equipment	17,624.19	17,624.19	0.00	0.00
454	Additional investments in other non-financial assets	299,755.08	299,755.08	0.00	0.00

In 2024, the most represented expenditure in HAKOM's total expenditure is employee expenditure, amounting to EUR 8,502,839.23, while material expenditures are the second most represented group of expenditure, amounting to EUR 4,198,132.32. The most significant material expenditure is related to the expenditure for services, of which the expenditure for rents and leases is the most represented expenditure, followed by the expenditure for computer services, other services, regular and investment maintenance services, intellectual and personal services, etc.

Table 4. Representation of individual types of expenditure in total expenditure (in %)

Account from Acc. Plan	HAKOM expenditure	HAKOM	Electronic communications area	Postal services area	Railway market regulation services area
31	Employee expenses	61,3	61,3	61,5	62,8
32	Material expenditure	30,3	29,5	38,5	37,1
34	Financial expenditure	0,0	0,0	0,0	0,1
41	Expenditure on the acquisition of non-produced long-term assets	0,2	0,2	0,0	0,0
42	Expenditure on the acquisition of produced long-term assets	5,9	6,5	0,0	0,0

45	Expenses for additional investments on non-financial assets	2,3	2,5	0,0	0,0
TOTAL		100	100	100	100

SURPLUS REVENUE

On 1 January 2024, HAKOM had surplus operating revenue of EUR 3,625,921.61 and a deficit in revenues from non-financial assets of EUR 1,749,825.47 recorded in the basic account of sub-group 922 in the Balance Sheet. In March 2024, the Decision on the distribution of results was adopted, by which the deficit in revenues from non-financial assets was fully covered by surplus operating revenue. The remaining surplus operating revenue stood at EUR 1,876,096.14.

In 2024, surplus operating revenue was recorded in the amount of EUR 3,102,233.55 and the deficit in revenues from non-financial assets amounted to EUR 1,049,294.02. In order for the result at the end of the budget year to reflect a more realistic balance of results by activities, results were adjusted for the situations prescribed by the Ordinance on budget accounting and the accounting plan. After the conducted adjustment in 2024, surplus operating revenue was recorded, amounting to EUR 3,214,446.67 and the deficit in revenues from non-financial assets amounted to EUR 1,161,507.14.

At the end of 2024, total surplus operating revenue amounted to EUR 5,090,542.81 and the deficit in revenues from non-financial assets amounted to EUR 1,161,507.14.

In February 2025, the Decision on the distribution of results was adopted, by which the deficit in revenues from non-financial assets in the amount of EUR 1,161,507.14 was fully covered by surplus operating revenue. Following the implementation of the Decision on the distribution of results, in the basic accounts of the Balance Sheet sub-group 922, surplus operating revenue totalled EUR 3,929,035.67, available in the coming period.

EXECUTION OF HAKOM'S FINANCIAL PLAN FOR 2024

The execution of the budget, i.e. the financial plan, is defined in the Act on Execution of the State Budget of the Republic of Croatia for 2024 and the Ordinance on semi-annual and annual reporting on the execution of the budget and the financial plan (Official Gazette 85/2023). HAKOM's financial resources were spent in accordance with the planned activities and the generation and expenditure of revenues were reported on a monthly basis in the State Treasury system.

The Council of HAKOM adopted the [Annual Report on the Execution of the Financial Plan of HAKOM for 2024](#), which was published on HAKOM's website on 28 March 2025.

Summarised data on the execution of the Financial Plan of HAKOM for 2024 are shown in Tables 5 and 6, while all the prescribed data are contained in the above-mentioned Annual Report on the Execution of the Financial Plan of HAKOM for 2024.

Table 5. Execution of HAKOM's Financial Plan for 2024

	Execution 2023 (EUR)	Plan 2024 (EUR)	Execution 2024 (EUR)	Index execution 2024/plan 2024	Index execution 2024/2023
3107 – Development of the postal services and electronic communications markets	13,762,106.71	17,071,959	13,791,728.85	80.79	100.22

Table 6. Execution of the Financial Plan of HAKOM for 2024 – analytics (in EUR and %)

ITEM	Plan	Realised	%
3 + 4 EXPENDITURE TOTAL	17,071,959	13,791,728.85	80.79
3 Operating expenditure	14,741,275	12,612,609.08	85.56
31 Employee expenses	9,371,158	8,367,476.91	89.29
32 Material expenditure	5,349,417	4,239,855.65	79.26
34 Financial expenditure	12,700	5276.52	41.55
38 Other expenditure	8000	0.00	0.00
4 Expenditure on the acquisition of non-financial assets	2,330,684	1,179,119.77	50.59
41 Expenditure on the acquisition of non-produced long-term assets	124,466	21,400.00	17.19

42	Expenditure on the acquisition of produced long-term assets	1,567,640	832,740.37	53.12
45	Expenses for additional investments on non-financial assets	638,578	324,979.40	50.89
6 + 7	TOTAL INCOME	16,089,500	15,920,763.49	98.95
6	Operating revenues	15,996,200	15,808,550.37	98.83
63	Aid from abroad and from entities within the general budget	50,000	59,253.48	118.51
64	Revenues from assets	14,730	3071.65	20.85
65	Revenues from administrative and operating fees	15,916,870	15,737,769.61	98.87
68	Penalties, administrative measures and other revenues	14,600	8,455.63	57.92
7	Revenues from the sale of non-financial assets	93,300	112,213.12	120.27
72	Revenues from the sale of produced long-term assets	93,300	112,213.12	120.27

In the preparation of financial plans and monitoring budget execution, modified accrual basis is not applied, but revenues and expenditures are reported exclusively on a cash basis. For this reason, the data in Table 6 Execution of the Financial Plan of HAKOM for 2024 – analytics differ from the data in Table 3 Expenditure overview.

The Budget Act gives flexibility in the execution of assigned revenues, so that it prescribes the possibility of their execution in amounts higher than planned, and the limit is set at the level of revenue generation, that is, up to the amount paid.

In order to ensure liquidity for HAKOM's proper operations, it is necessary to generate a certain surplus of revenues carried forward at the end of each business year for the purpose of financing current expenditures in the first four months of the following year as they are higher than current revenues in the relevant period.

ATTACHMENTS

ABBREVIATIONS

AEM — Agency for Electronic Media	FTTB – Fiber To The Building
ARRSM – Act on the Regulation of Rail Services Market	FTTDP – Fiber To The Distribution Point
BCO – Broadband Competence Office	FTTH – Fiber To The Home
BEREC – Body of European Regulators for Electronic Communications	GEO – Geostationary Orbit
BIDP – Broadband Infrastructure Development Plan	GHR – Government of the Republic of Croatia
CADPN – Central Administrative Database of Ported Numbers	GIA – Gigabit Infrastructure Act
CAFP – Competent Authority for the Framework Programme (for the development of broadband internet access)	HaDEA – European Health and Digital Executive Agency
CARNET – Croatian Academic Research Network	HAKOM – Croatian Regulatory Authority for Network Industries
CBS – Croatian Bureau of Statistics	HCM Agreement (Harmonized Calculation Method) – an international agreement for the harmonisation of frequencies for mobile and fixed terrestrial systems
CCA – Croatian Competition Agency	HD – High Definition
CEF – Connecting Europe Facility, EU funding instrument to promote growth	HR – Republic of Croatia
CEPT – European Conference of Postal and Telecommunications Administrations	NS – (Railway) Network Statement
CERP – European Committee for Postal Regulation	IoT – Internet of Things
DAB+ – Digital Audio Broadcasting	IPC – International Post Corporation
DSA – Digital Services Act	IPTV – Internet Protocol Television
DVB-T2 – Digital Video Broadcasting –Terrestrial2	IRG-Rail – Independent Regulators Group – Rail
EC – European Commission	ISP – Internet Service Provider
ECA – Electronic Communications Act	ITU – International Telecommunication Union
ECC – Electronic Communications Committee	ITU BR – International Telecommunication Union – Radiocommunication Bureau
ECI – Electronic Communications Infrastructure	LEO – Low Earth Orbit
EEA – European Economic Area (economic area comprising the EU, Norway, Island and Lichtenstein)	LSU – local self-government unit
EECC – European Electronic Communications Code	M2M – Machine to Machine
EMF – electromagnetic field	MEO – Middle Earth Orbit
ENISA – European Network and Information Security Agency	MJPADT – Ministry of Justice, Public Administration and Digital Transformation
ENRRB – European Network of Rail Regulatory Bodies	MLs – microwave links
ERGP – European Regulators Group for Postal Services	MMS – Multimedia Message Service
ERP – Enterprise Resource Planning	MoD – Ministry of Defence of the Republic of Croatia
EU – European Union	MAP – minimum access package in the rail services market
FER – Faculty of Electrical Engineering and Computing, University of Zagreb	MSTI – Ministry of the Sea, Transport and Infrastructure
FM – Frequency Modulation	MVNO – Mobile Virtual Network Operator
	NATO – North Atlantic Treaty Organization
	NFP – National Framework Programme (for the development of broadband internet access)

NRRP – National Recovery and Resilience Plan
NTN – Non-Terrestrial Networks
OECD – Organisation for Economic Co-operation and Development
OPCC – Operational Programme Competitiveness and Cohesion
OTT – Over-the-top service
PAY TV – Television programmes with payment
PSA – Postal Services Act
PwD – persons with disabilities
PwRM – persons with reduced mobility
QoS – Quality of Service
RA – Railway Act
RF – Radiofrequency
RFS – Regulatory Financial Statement
RIA – Regulatory Impact Assessment
RLAH – Roam Like At Home
RSC – Radio Spectrum Committee
RSPG – Radio Spectrum Policy Group
SEC – State Electoral Commission
SMP – Significant Market Power
SMS – Short Message Service
T-DAB – Terrestrial Digital Audio Broadcasting
TV – Television
UNEX – Mail Quality of Services Monitoring system
UPU – Universal Postal Union
USO – Universal Service Obligation
VHCN – Very High Capacity Network
VHF – Very High Frequency (very high frequency band from 30 to 300 MHz)
VPN – Virtual Private Network
WIFI – Local wireless network within the 2.5/5 GHz frequency band
WLAN – Wireless Local Area Network

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