BUDAPESTREND Mobility report 2024







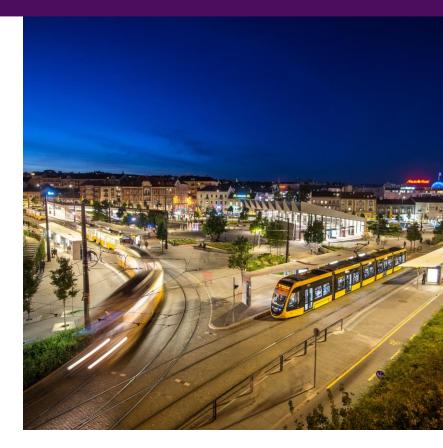




Contents of traffic-related summary for 2024

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Along with BKK's data analysts, we collect and analyse the data of different transport modes concerning Budapest's traffic throughout the whole year, out of which, we make even monthly traffic-related summaries. We have made the annual summary the fourth time, in which we conclude consequences and analyse trends for the whole year. There have been many transport-related developments in 2024 as well, on which you will have the chance to get information in this BudapesTrend summary.

Data-driven operation in figures for 2024 BKK collects and analyses data throughout the year

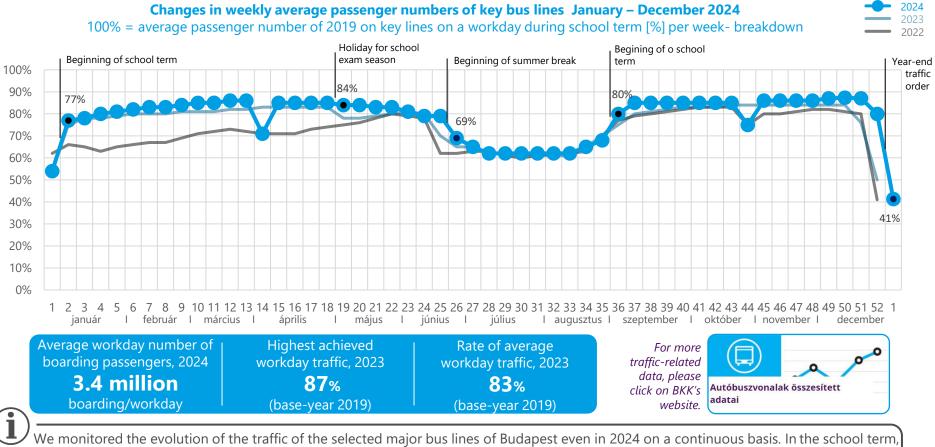
Data collection in figures for the year [2024]

360 days 953 counting process vehicles equipped with in public transport the automatic passenger counter system 755 1 500 hr data analysis with traffic counter road camera image analysis cameras 906 inductive loop detectors inductive cycling calculating traffic loop detectors **7,5** milion continuously-running data science predictive model development process



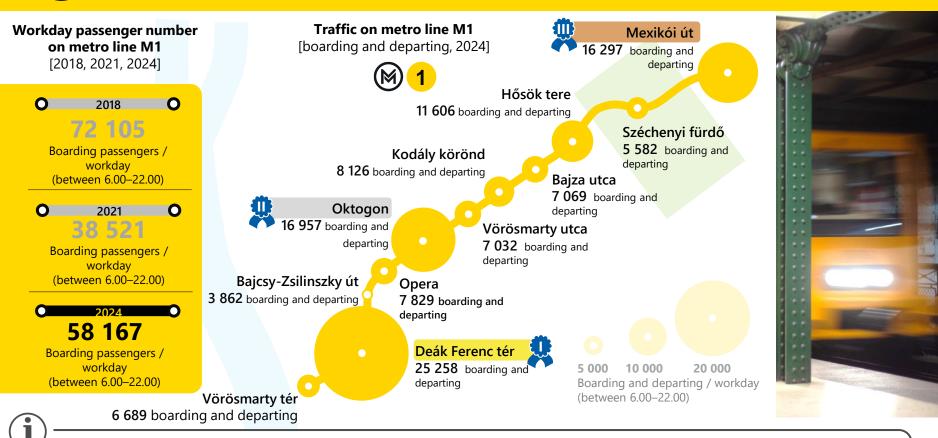
We collect the different mobility – and traffic-related data with different methods and devices at BKK. We measure traffic with infrasensors currently on approximately 1,000 vehicles. We monitor the evolution of road traffic with inductive loop detectors, and also with traffic counting and surveillance cameras. With camera image analysis, we make complex traffic-related examinations on different parts of the city and with the analysis of camera images we carry out complex traffic examinations at several locations in the city, where we are able to measure the movement of pedestrians and users of micromobility vehicles. We analyse big quantity data with data science methods and we also make different forecasts.

Changes in weekly average passenger numbers of key bus lines in 2024 The volume of pedestrian traffic has not returned to the previous level



We monitored the evolution of the traffic of the selected major bus lines of Budapest even in 2024 on a continuous basis. In the school term, passenger traffic was above 80 compared to the average value indicated in the pre-pandemic period in 2019, however traffic volume has its largest ever value (87%) in the winter of 2024. Nowadays, not the pandemic, but its social consequences, e.g. the adoption of remote work policies and the preference for alternative modes of transportation—that impact public transportation traffic.

Survey on workday passenger traffic on metro line M1 in 2024 Daily 60 thousand passengers travelling on M1



In the autumn of 2024, we conducted a survey on the weekday passenger volume on the M1 metro line. Following a period of reduced traffic during the pandemic years, we observed a return to higher passenger numbers, with approximately 60 000 passengers utilizing the Millennium Underground Railway, a line that remains particularly popular among tourists. The Deák Ferenc tér station stands out as the most frequented, accounting for over a quarter of the total traffic. Similarly, the Oktogon and Mexikói út stations also experience significant traffic, each serving approximately 16 000 passengers.



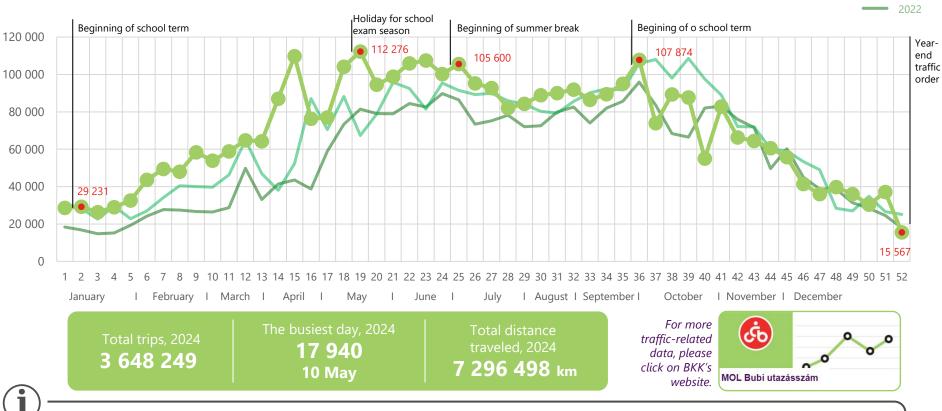
Significant developments of BKK Centre for Budapest Transport in 2024 10 developments in public transport and micromobility





MOL Bubi's passenger number in 2024 Over 3 and 1/2 million trips in 2024

Number of MOL Bubi trips in January – December 2024 [pc] in weekly breakdown



The success of the MOL Bubi bike-sharing service continued in 2024. On average, nearly 10,000 trips were made daily throughout the year, with the busiest day being May 10th, recording 17,940 trips. The number of MOL Bubi trips was highest during the spring and autumn school periods. Even with the arrival of cooler autumn and winter days, the service remained successful, with an average of around 4,000 trips per day in December.

The distribution of the annual traffic at MOL Bubi docking stations in 2024 This year, Jászai Mari Square became the busiest docking station once again

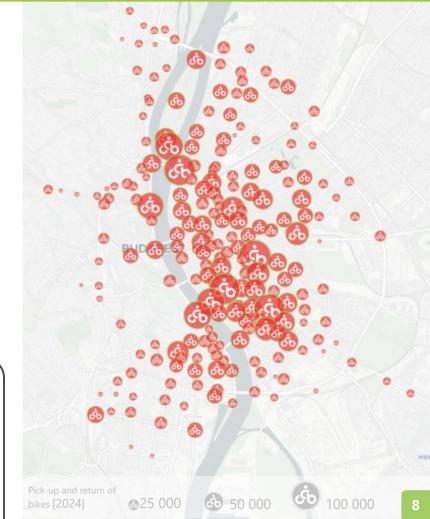
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The most-used, top 10 MOL docking stations [2024]

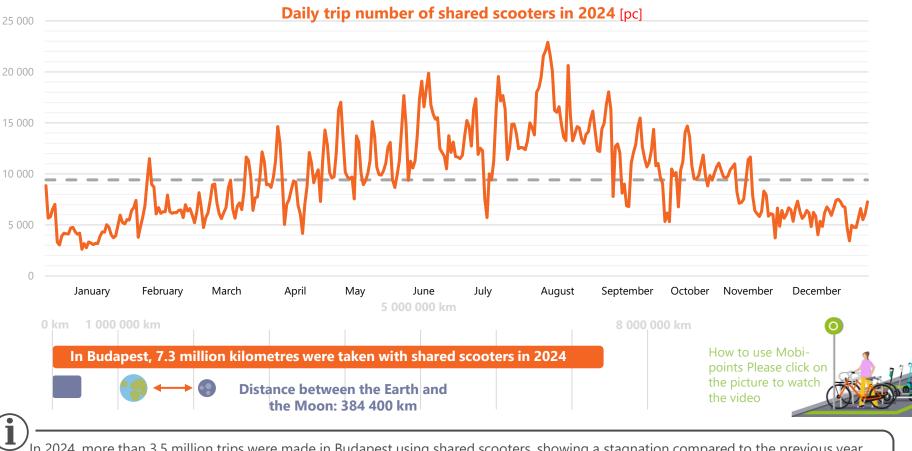
Changes compared to the list of docking stations as of 2023

| alla . | 5 1 | 3 | |
|-------------|-------------------|--|---|
| | Jászai Mari tér | 117 864 Pick-up and return of bikes | 0 |
| | Margitsziget | 110 404 Pick-up and return of bikes | 0 |
| <u> III</u> | Blaha Lujza tér | 103 606 Pick-up and return of bikes | |
| | Corvin sétány | 97 268 Pick-up and return of bikes | |
| | Kálvin tér | 94 480 Pick-up and return of bikes | 0 |
| | Fővám tér | 89 997 Pick-up and return of bikes | 0 |
| | Szent Gellért tér | 86 910 Pick-up and return of bikes | |
| | Batthyány tér | 78 924 Pick-up and return of bikes | |
| | Rákóczi tér | 76 143 Pick-up and return of bikes | |
| | Oktogon | 75 129 Pick-up and return of bikes | |
| | | | |

The popularity of MOL Bubi bikes increased even in 2024. We added 16 docking stations to the service area, hence by the end of the year there were a total of 217 docking stations available. The most popular docking stations were near to the main transport hubs in the city centre and key touristic locations even in 2024. Margaret Island is an attractive destination for leisure time, this is the reason why traffic of Jászai Mari tér and the island is outstanding. Among the outer boundary of the service area, Kelenföld vasútállomás is key, as this is a transport mode hub with high traffic.



Data of shared e-scooters in 2024 Over 7 million kilometre with shared scooters in Budapest

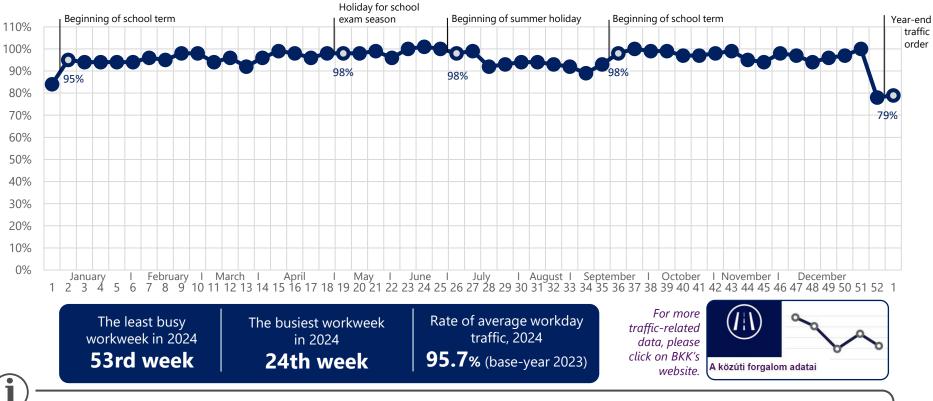


In 2024, more than 3.5 million trips were made in Budapest using shared scooters, showing a stagnation compared to the previous year. The busiest day was August 11th, when approximately 23,000 trips were taken, which nearly matched last year's peak of over 25,000. The busiest day occurred during the Sziget Festival, when the use of active and micromobility devices increases every year, particularly for shared devices.

Vehicle traffic trends in 2024 The vehicle traffic data shows a balanced pattern on weekdays

Road traffic trends from January to December 2024

100% = the percentage of the average daily traffic flow measured at the road monitoring points on school days from the previous year, broken down by week

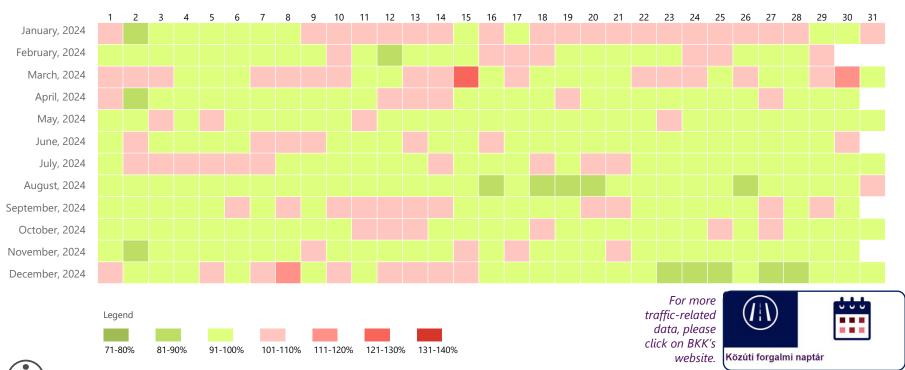


Remained low in 2024. The fluctuation in road traffic remained low in 2024. During exceptional periods and the summer school holidays, the reduction in traffic volume was much smaller compared to what was observed in public transport. Compared to 2023, the highest weekday traffic occurred in June 2024, which significantly dropped below the average in the last week of the year, due to a high number of vacations.

Changes of road traffic on different days in 2024 Daily values show minimal decrease compared to those measured in 2023

Rate of road traffic on different days, 1 January – 31 December 2024

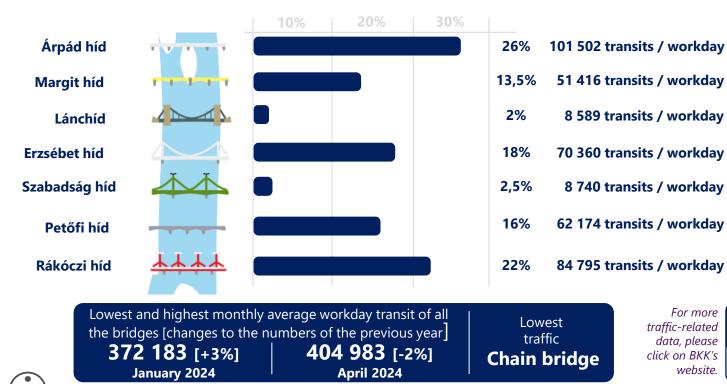
compared to the value of the average day type (workday, Saturday, Sunday, holidays) of the identical month in the previous year (2023) [%]



In 2024, we once again compared the daily traffic volumes with the average traffic volumes by day type of the corresponding month from the previous year. This comparison provides a more accurate picture of traffic congestion on specific days and periods. By averaging the daily values, we observed a 2% decrease compared to the previous year's data. However, when examining the largest decreases and increases, it is evident that different days of the year show significant variance. Overall, with the exception of January and March, the average monthly changes exhibited a decreasing trend in comparison to the previous year's data.

Share of road traffic on Budapest's Danube bridges in 2024 On weekdays, nearly 400 thousand vehicles cross the Danube

Share of road traffic on an average workdays at the Danube bridges 2024 [transit/workday, %]





A főbb budapesti Duna-hidak közúti forgalmának megoszlása

The average workday traffic data of Budapest's bridges compared to each other reflect the role of the connected road network in road traffic, i.e. the bridges connected to the Hungária ring carry almost 50% of the traffic of the city centre bridges. Erzsébet híd is busier than the bridges linked to the Grand Boulevard ring, the explanation for this lies in the changing role of the Chain Bridge and the traffic changes affecting the Vámház Boulevard. There is more than an 8% difference between the lowest and highest traffic months, which is lower than the 15% measured last year.

Used methodology, contacts

sectors using interactive charts.

All traffic data in one place: online charts available on the BKK website

| | / KÖZPONT | Hírek | Fejlesztések | Döntsünk közösen | Rólunk | Üzleti ügyfelek | Karrier | |
|--------------|---|------------------|-------------------|---------------------|-------------------------------|----------------------------|--|--|
|) | Passenger counting de | evices onboard | the vehicles | | | | | |
|) | Numerous public transp | | | | Stratégiánk | | | |
| | passenger counting sen and off the vehicles. | sors above the c | loors counting pa | ssengers getting on | Magunkról | | | |
| | | | | | Fenntarthatóság | , felelősségvállalás | | |
| \mathbf{D} | Loop detectors built-i | n the road surfa | ace | | Forgalmi adatol | k, diagramok | | |
| ソ | Loop detectors are traffic counting devices built in road surfaces, which count Programok a BKK-val passing vehicles, by sensing the metal devices passing above them. | | | | | | | |
| | Analysis of camera | images | | | | For more informat | ion, please c | |
| / | | | | | | | <pre>KK's website: Traffic data, cha</pre> | |
| | Waze user reports | | | | (| If you have a please conta | any feedback act us at the | |
| ノ | Waze collects its users' average passing speed measured during their use of the and stores the data in a public, cloud-based system. We have made an aggregation program linked to this data package, with the help of which, we can analyse and display this array of information in a structured way. | | | | app, following email address: | | | |

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