

**POLIS**

CITIES AND REGIONS FOR TRANSPORT INNOVATION

ANNUAL  
CONFERENCE  
**2022**

30 November  
1 December, 2022  
Brussels, Belgium



**#POLIS2022**

# Opening up our traffic data

## Data visualisation in Budapest

*Patrik Toth, BKK Centre for Budapest Transport*



# The transport system of Budapest in numbers



525 km<sup>2</sup>



1,7 million inhabitants+  
agglomeration



4 metro lines



35 tram lines



200 bus lines



15 trolleybus lines



4 HÉV (suburban railway)  
lines

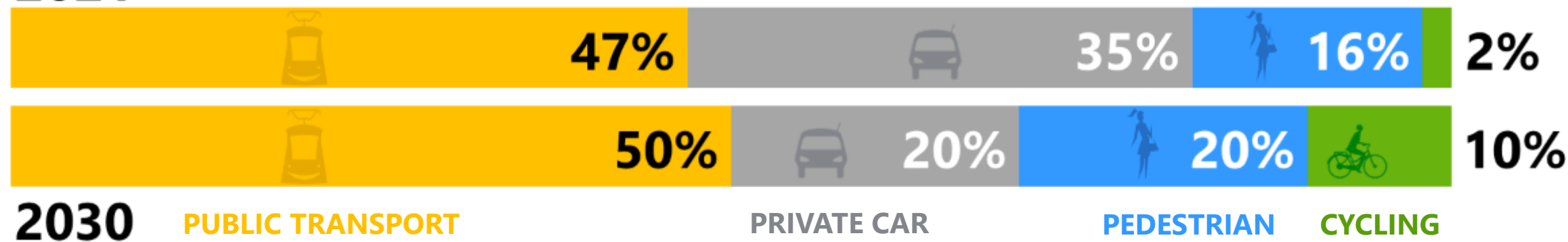


1800 Bubi cycles, 177 Bubi stations



510 Mobi-points

**2021**



**2030**

PUBLIC TRANSPORT

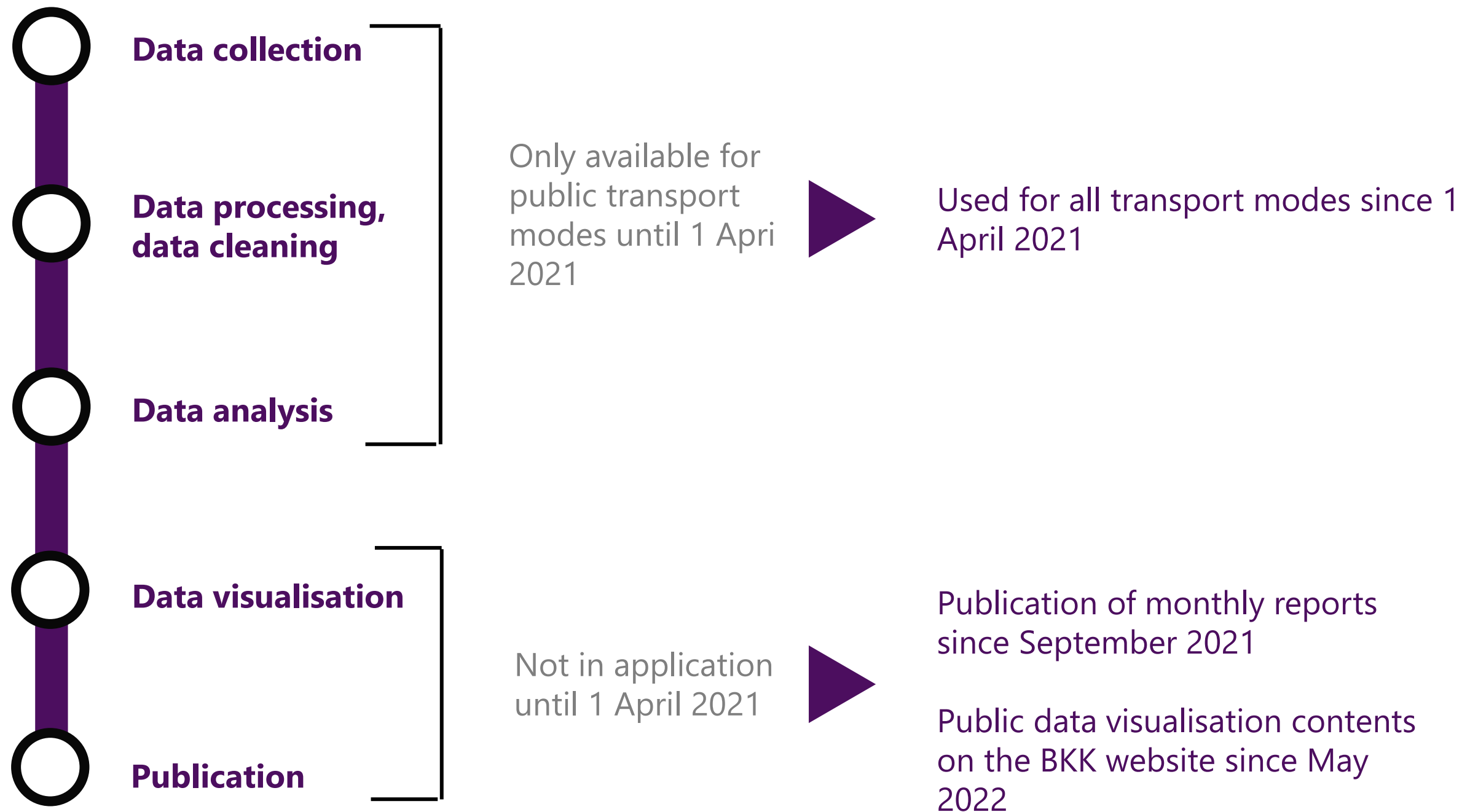
PRIVATE CAR

PEDESTRIAN

CYCLING

We aim to increase the share of active and sustainable transport modes in Budapest!












# Traffic data collection process and its milestones in Budapest



The aim of Budapest is to use data-based decision-making and to make data more transparent.



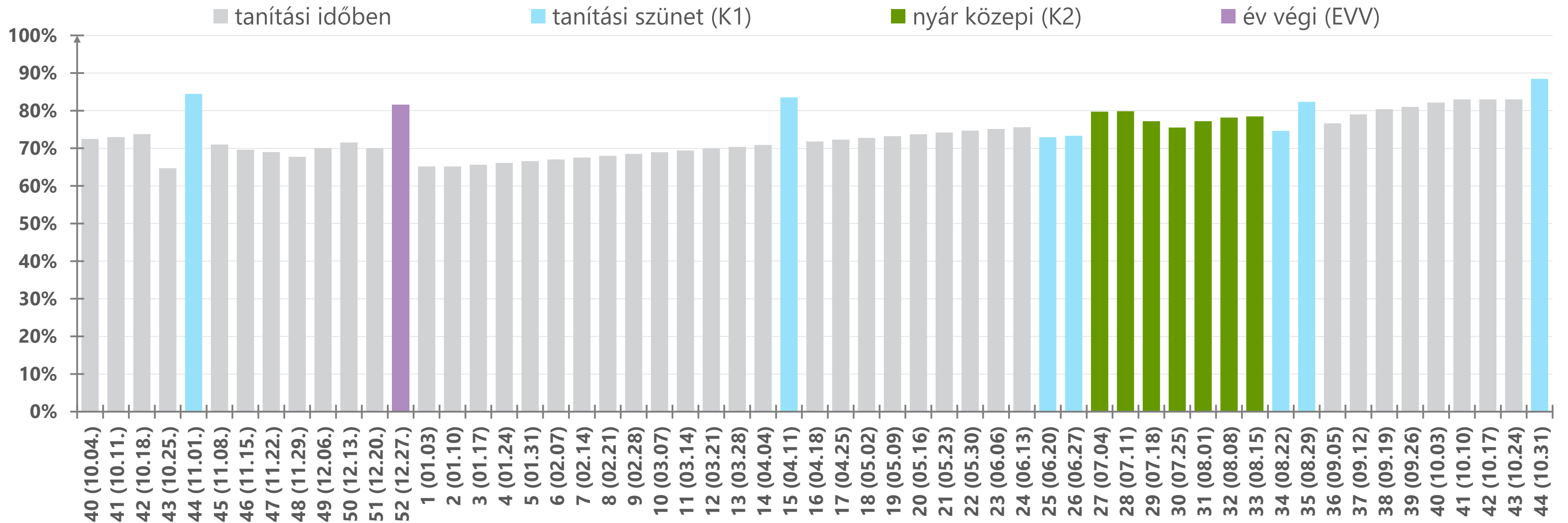
# Evaluation of the current situation by modes

	bus	37% are equipped with measuring instruments
	trolleybus	Enough measuring instruments
	tram	10% are equipped with instruments
	metro	No available instrumental data
	HÉV	No available instrumental data
	boat services	No available instrumental data
	MOL Bubi	100% - Sufficient instrumental data
	cycling	Constant, instrumental data from 18 locations
	micromobility	No available instrumental data
	walking	No available instrumental data
	cars	Direct access to sufficient instrumental data



# The average change of passenger numbers in public transport in Budapest

Changes in the average daily number of trips on the main bus lines from October 2021 to October 2022  
(100% = the average passenger number on the main bus lines in October 2019)







The number of trips in the public transport network is growing slowly, but continuously.



# The average change of passenger numbers in public transport in Budapest

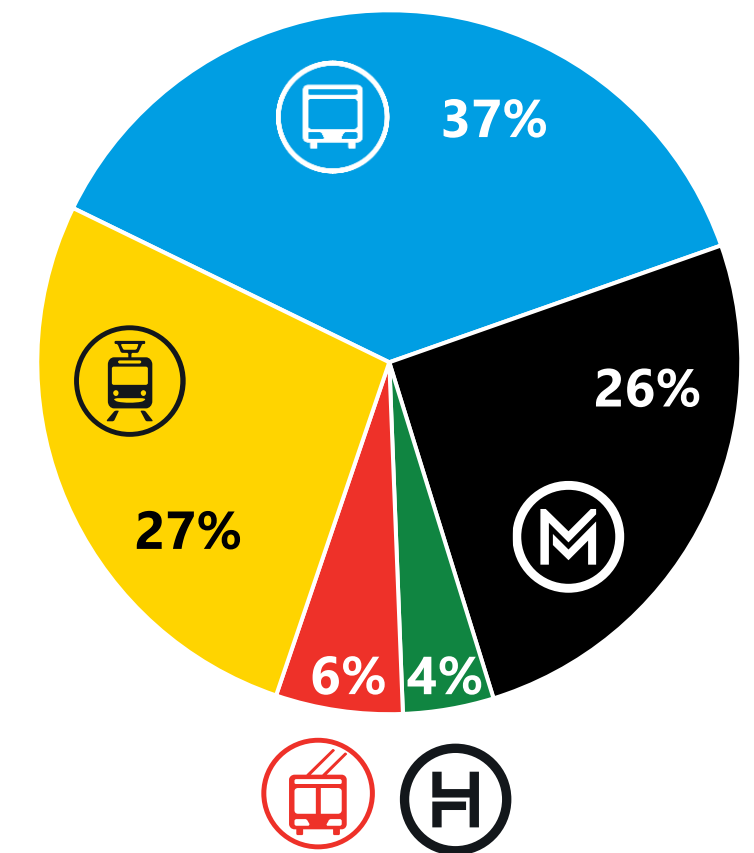
**October 2022**

(100% = Data of October 2021)

By public transport mode			
			
<b>114%</b>	<b>110%</b>	<b>To be examined from 2023</b>	
<b>The traffic of public transport</b>			
<b>▲ 112%</b>			



**The number of boardings**  
by each public transport mode in 2021



The traffic of both transport modes increased during the last month. 12% more people travelled by public transport during this October than at this time last year, which means tens of thousands of extra trips.



# The renovation of Blaha Lujza Square with a main focus on pedestrians



**Ibolya Jenei**  
 Ez kellett is nagyon. Főleg a babakocsival közlekedő kisgyerekesek, meg a kerekesszékkal járó betegek könnyítetten tudnak így közlekedni.  
 Tetszik Válasz 1 hete 16

**Csécsei Ica**  
 Én örülök hogy le-fel lépcsőket nem kell megmásznom csúcsáradásként fájó derékkel és térdekkel  
 Tetszik Válasz 1 hete 24

**Richard Boros-Veszeli**  
 Érthetetlen, hogy a korábbi, évtizedekig tökéletesen működő rendszert elbarmon miért volt jó ötlet, hogy áthajtsák az embereket ezáltal minden irányba dugót generáljanak....előremutató ötlet ez biztos nem volt... gyalogosként, bicajosként, de autósként is mondom ezt... borzalom lett...  
 Tetszik Válasz 1 hete Módosítva 81

**A large amount of positive feedbacks was received from residents with strollers or people with reduced mobility.**

**Several misconceptions have turned up, the aim is to dispel them (e.g. zebras cause traffic jams).**

**Moni Tuskánné**  
 Szuper 🙌❤️ (babakocsis anyuka)  
 Tetszik Válasz 1 hete 33

**Lakner Melinda**  
 Ritkán járok arra, de amióta van zebra, nem megyek le az aluljáróba.  
 Tetszik Válasz 1 hete

- ➔ Senior Data Analyst at BKK
- ➔ Mayor of Budapest
- ➔ Citizen of Budapest



**With the help of these data, we are able to present topics that are particularly important to the city in an understandable way.**



# The comparison of road traffic distribution measured on the bridges of Budapest in Autumn 2019 vs. Autumn 2021

Autumn 2019

24%

14%

6%

14%

4%

16%

22%



Autumn 2021

28% — Árpád híd

14% — Margit híd

— Lánchíd

12% — Erzsébet híd

3% — Szabadság híd

18% — Petőfi híd

25% — Rákóczi híd



Analysing these data helps to understand the current situations and define the future roles of the Danube bridges of Budapest.



# The present and future roles of Liberty bridge (Szabadság híd)

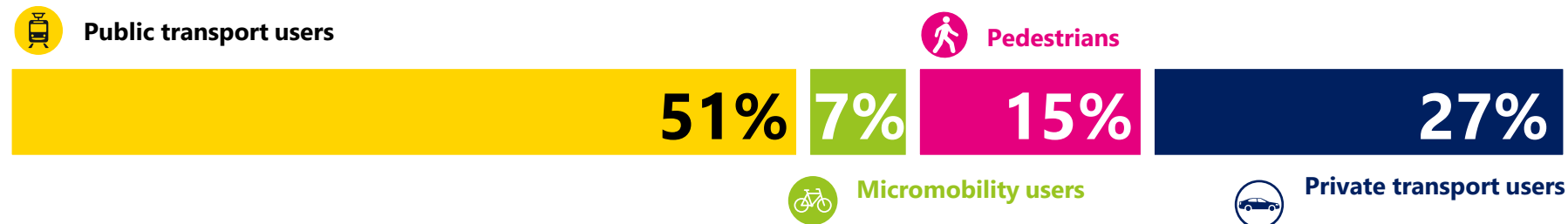
12.11.2022. 12 am, Saturday, 10°C



01.09.2021. 8 am, Wednesday,



## An alternative future for Liberty bridge

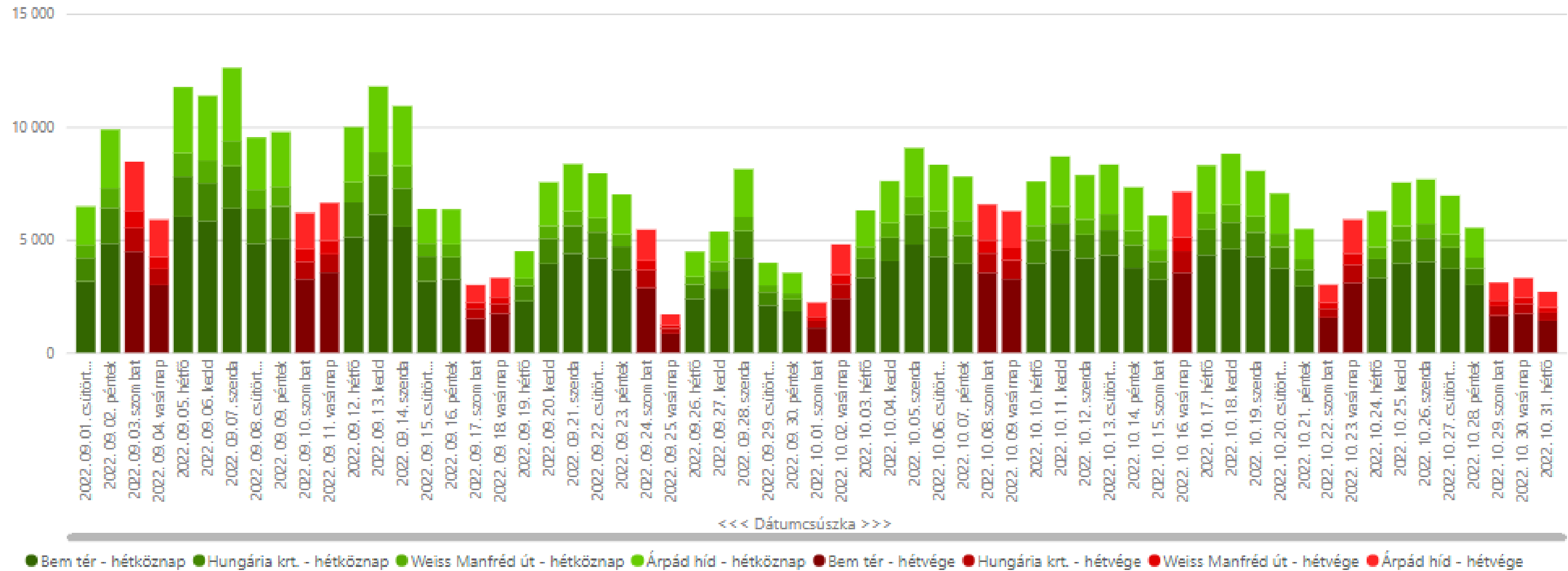


No designated cycling infrastructure can be found on the Liberty bridge causing constant conflicts and leading to dangerous situations. The amount of road traffic during the school period and on working days is also low, while the number of pedestrians and cyclists is remarkable during winter and summer periods as well.



# Data from the 4 cycling measurement points from September to October 2022

**A 4 kerékpáros mérőpont napi áthaladásának változása 2017. januártól [db] napi bontásban**



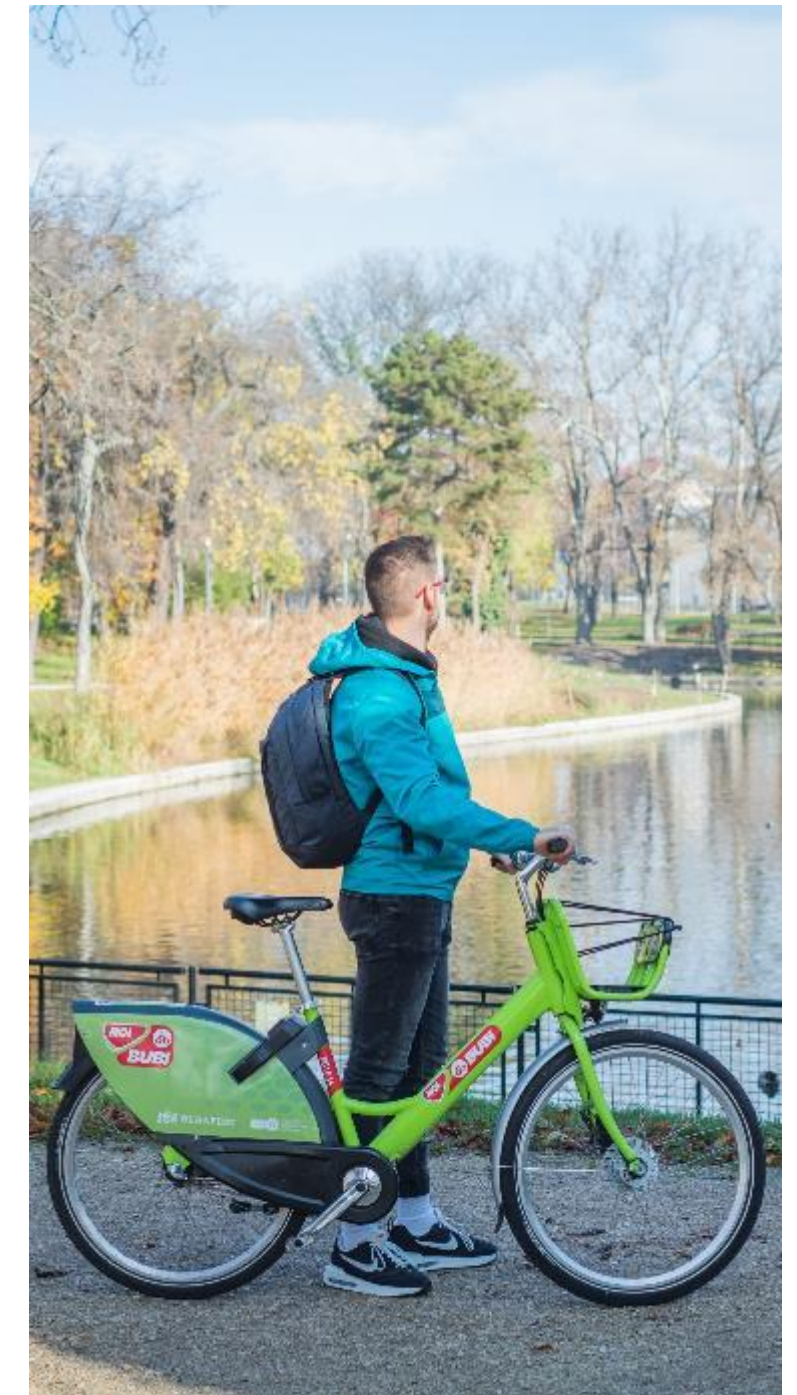
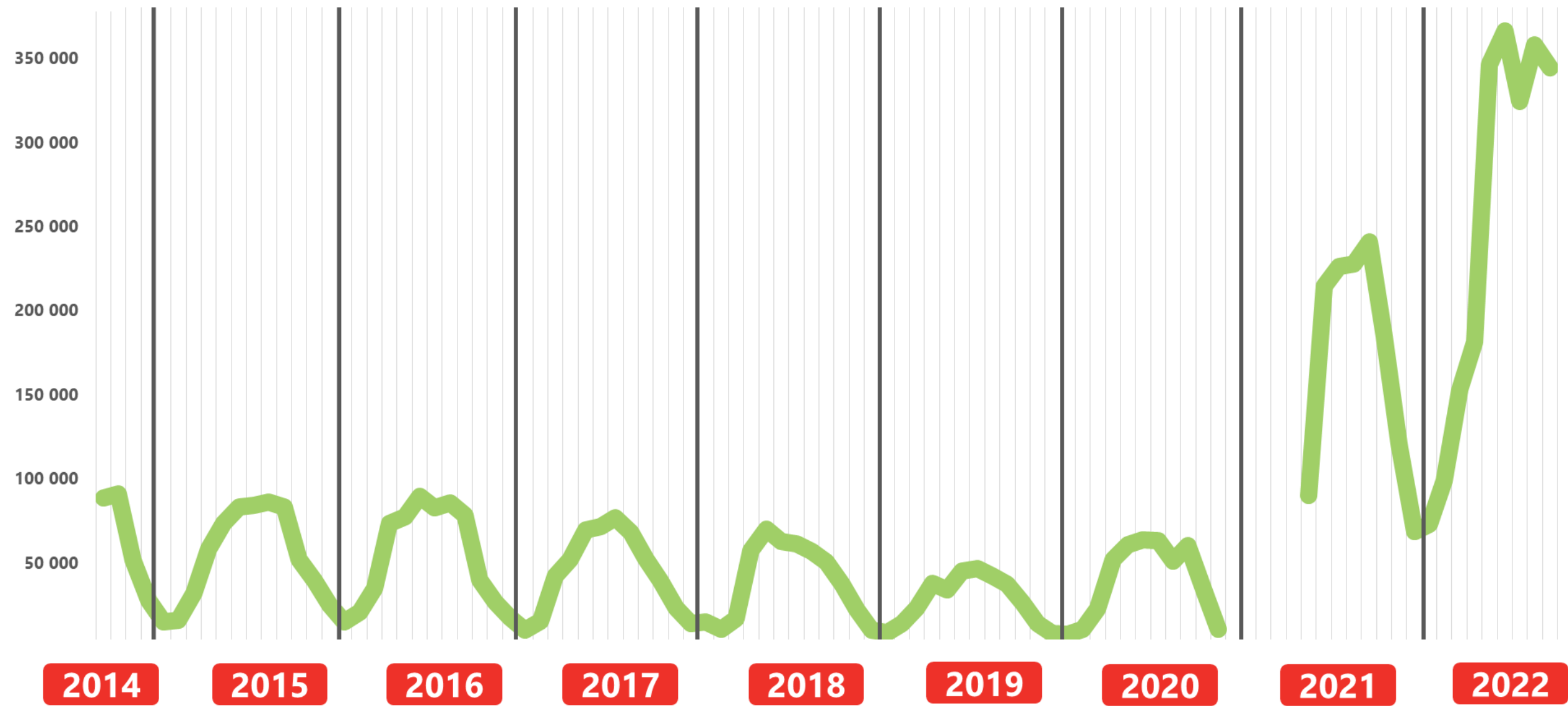
The data of the 4 cycling measurement points have been increasing continuously for years, however the weather has a dramatic effect on their patterns.



# The revamped MOL Bubi breaks usage records

MOL Bubi trips  
08. September 2014 – 29. November 2020

MOL Bubi trips  
since 10. May 2021



The renewed MOL Bubi shared bike system became more user-friendly, which resulted in a huge success.



# Road traffic has been slightly calmed compared to 2019

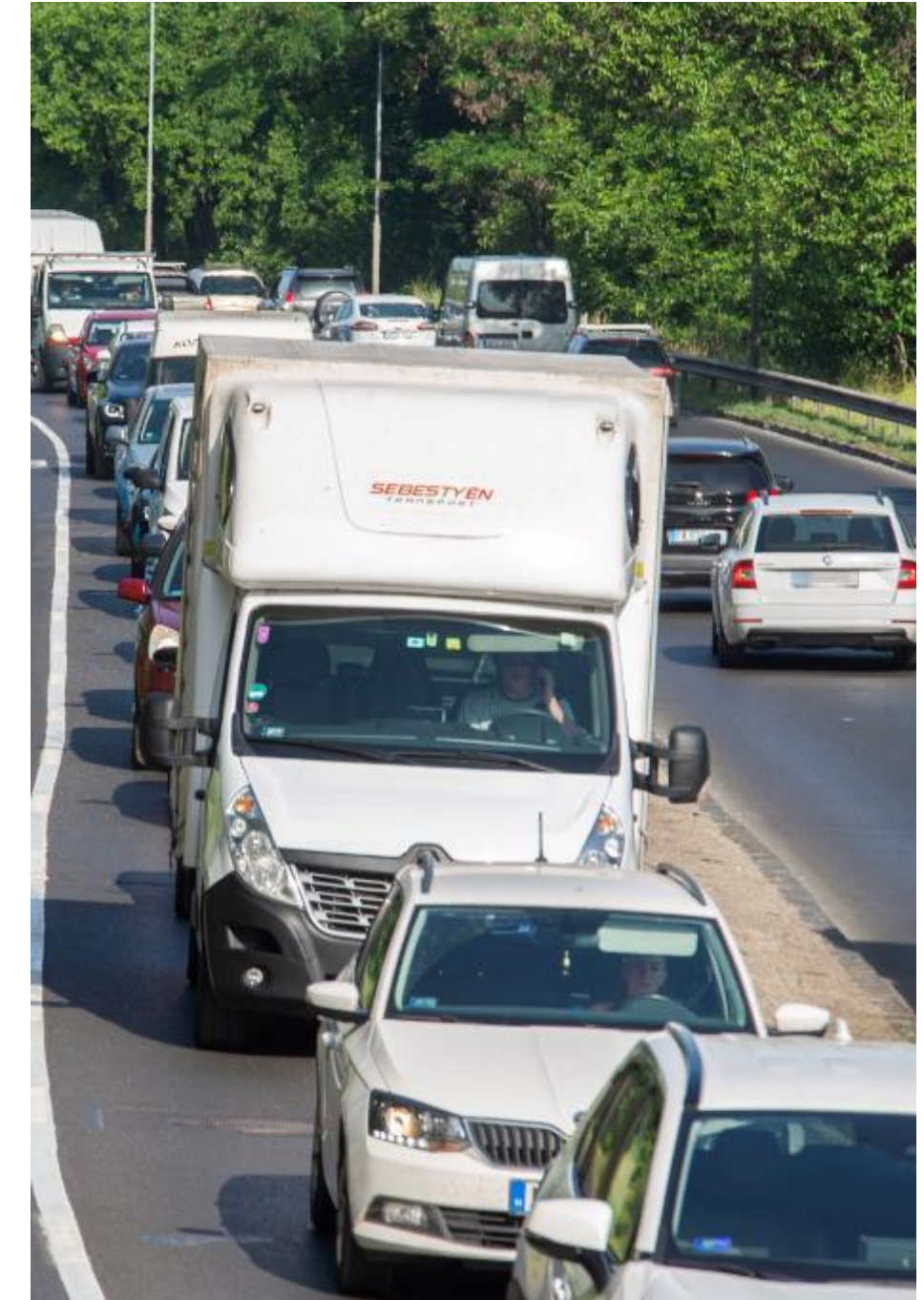
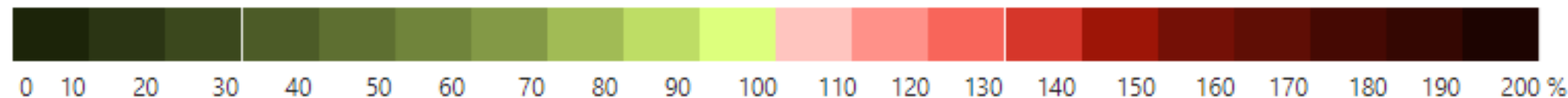


Az egyes napok közötti forgalmának aránya a 2019. év átlagos napi értékéhez (munkanap, szombat, vasárnap ünnepnap stb.) viszonyítva [%] napi bontásban

Év: 2022  
Hónap: október

## 2022. OKTÓBER

Hét	hétfő	kedd	szerda	csütörtök	péntek	szombat	vasárnap
2022.10 40. hét						1 87%	2 91%
2022.10 41. hét	3 94%	4 94%	5 97%	6 99%	7 99%	8 91%	9 92%
2022.10 42. hét	10 93%	11 96%	12 97%	13 89%	14 100%	15 85%	16 88%
2022.10 43. hét	17 91%	18 88%	19 97%	20 100%	21 103%	22 95%	23 105%
2022.10 44. hét	24 96%	25 98%	26 102%	27 105%	28 106%	29 92%	30 85%
2022.10 45. hét	31 78%						



The change of road traffic is continuously monitored by BKK.



# Transparency, visualisation, data publication

The traffic of Margaret Island on a weekday afternoon, measured on 14 July 2022 between 5 and 6 pm.

HUN **Monthly and annual transport reports**

<https://bkk.hu/hirek/forgalmi-adatok-diagramok/kozlekedesi-riportok/>

ENG **Annual transport reports**

<https://bkk.hu/en/news/traffic-data-charts/mobility-reports/>

HUN **Monthly cycling reports**

<https://bkk.hu/hirek/forgalmi-adatok-diagramok/kerekparos-meropontok-adatai/>

HUN **Interactive charts**

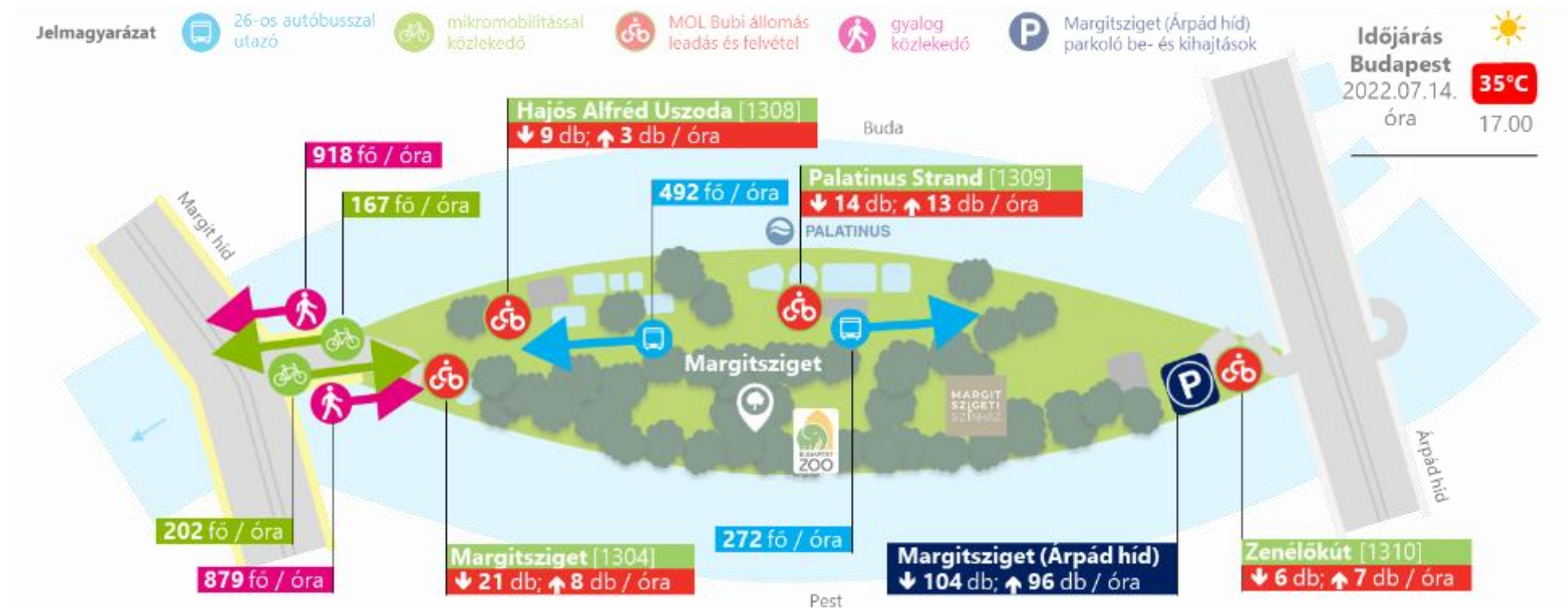
<https://bkk.hu/hirek/forgalmi-adatok-diagramok/>

HUN **BKK Blog – Data-based decisions – the reason why and how does BKK collect traffic-related data**

<https://bkk.hu/blog/hogyan-es-milyen-forgalmi-adatokat-gyujt-a-bkk.7326/>

HUN **BKK Blog – How does BKK organise transport in Budapest during major events?**

<https://bkk.hu/blog/hogyan-es-milyen-forgalmi...>



Further interesting data and analyses are available on the website of BKK.

# Thank you for your attention!

For questions:

Patrik Toth, BKK Centre for Budapest Transport

**[patrik.toth@bkk.hu](mailto:patrik.toth@bkk.hu)**

