

## **BUD\_02: To promote more sustainable choice of transport for students based on their modal split patterns**

### **Description of the measure and main outcomes expected**

In Budapest, there are 400 elementary schools with 100 thousand+ students and 200 high schools with 50 thousand+ students (from grades 1 to 12). While the modal split of the city of Budapest has a 47% of PT share, the modal split of students getting to school shows significantly less PT share: only 28%. With BUD\_02 measure PT operator BKK aims to understand the patterns in the mode choices of students: based on specific parameters of the schools (e.g. geographical, demographical differences, coverage of PT in the area), and investigating other special aspects that may influence them. Based on the results and learnings from the ongoing school-zone programme<sup>1</sup> in Budapest, BKK will set up a methodology to collect data from schools (different locations and different age groups) to establish a modal split study, in order to see what are the specific age groups (the ones that seem to be critical when young people are shaping their own opinion about transportation). Results of the measure will be used to upscale the methodology of school modal split data collection, and to provide valuable new inputs to the school-zone programme that is to help schools to plan specific physical changes (e.g. increasing safety, walkability, cyclability with self-explanatory streetscape) to promote liveable and healthy movement near the schools.

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### **Preparation of the measure**

#### Case description

The school-zone programme in Budapest was launched in 2023 by BKK together with the district municipalities and MOME's Innovation Centre with the aim of creating a safer environment for the most vulnerable road users, improving the safety and sense of security of children who are already travelling independently, and reducing traffic accidents around schools. The first step is to minimize the morning and afternoon congestion around the schools and the conflicts arising from parking for longer or shorter periods of time, as well as to reduce the speed of the vehicles passing by the school entrances for the sake of the children's safety. The goal of a school-zone is to create a self-explanatory streetscape that makes it clear to everyone driving around the school that they have arrived in an area where they must behave with special attention. In the longer term, the aim is that by reducing the dangers of traffic in the vicinity of schools, to make as many children happy as possible to go to school on foot or by bicycle, either alone or with their parents - and that no one comes by car just because they do not consider other modes of transportation to be safe enough.

While the modal split of the city of Budapest has a 47% of PT share, the modal split of students getting to school shows significantly less PT share: only 25%, based on a recent study<sup>2</sup> involving 36 schools and 14072 students. Even if there is an affordable and accessible PT option nearby, parents still predominantly bring their children to school by private car, causing traffic jams and pollution in the early morning hours near the school. However, it is also known from this study that the students would have

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<sup>1</sup> <https://bkk.hu/fejlesztések/kiemelt-fejlesztések/sulizona/>

<sup>2</sup> [https://www.instagram.com/uton\\_az\\_iskolaba/](https://www.instagram.com/uton_az_iskolaba/)

their own *preferred* mode of transport, which significantly differs from the *actual* mode of transport they use. 30% of them would prefer active modes (walking and cycling) instead of motorized modes.

In the schools participating already in the school-zone programme, preliminary and follow-up surveys have been conducted involving the parents. The results for one of the schools are shown on below, in [Figure 1](#).

From these numbers it can be also observed that there is a significant change between the lower grades compared to the upper grades' choice of mode, as children become more independent.

A lot of very useful information was revealed already from the school-zone programme. Since the programme primarily focuses on achieving better safety for movements, BKK would like to get to know and understand the habits of going to school even more thoroughly, which helps to take these aspects into account when developing the city's transport and the public transport network.

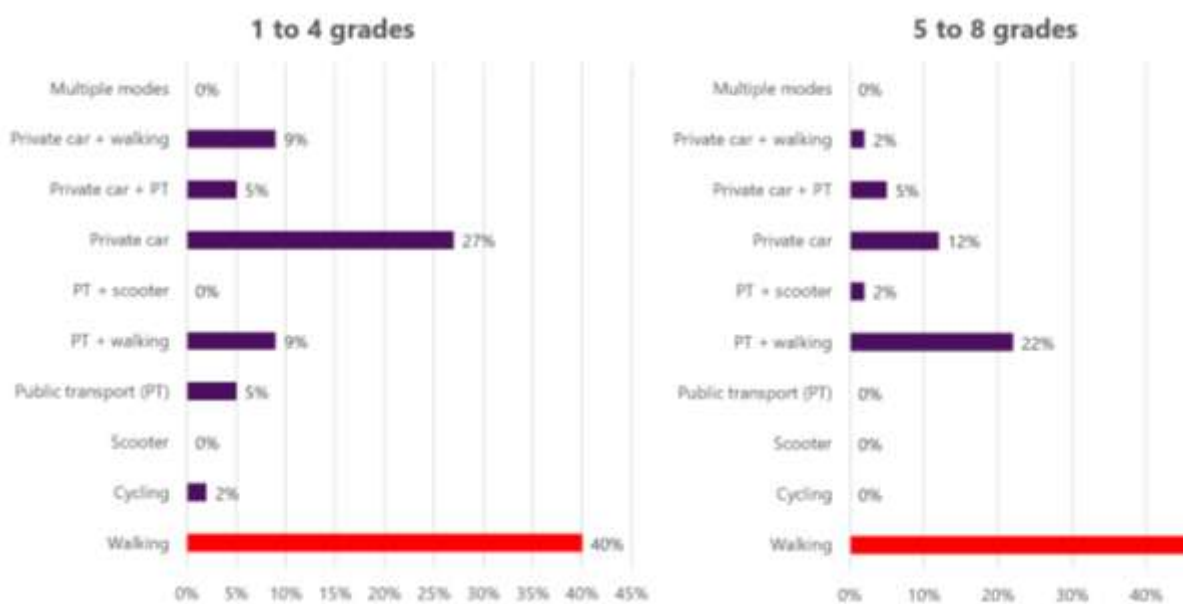


Figure 1: Answers of the parents on the question: 'What modes of transport does your child most often use to get to school (in good weather)?'

In addition, as BKK is engaged in behaviour shaping for a more liveable city, promoting the use of sustainable modes of transport, including public transport and also active modes, BKK already occasionally visits schools and gives lectures for lower and upper grade students as well, and welcomes high school students to learn more about the work of the transport manager of the city. These school visits were originally started by volunteers from BKK, and recognizing the possible impact that systematic approach could give to these initiatives indicated that more data and deeper assessment of the travel habits of students is needed in order to pass on the most useful knowledge and perspective with the best timing for different age groups.

### Choosing the target schools

Based on these previous learnings and data, within the scope of BUD\_02 measure BKK will build a pilot for an in-depth modal split study targeting schools, selected by different aspects.

By narrowing down the list of schools to be targeted the main goal is to make the selected couple of schools as diverse as possible ([Figure 2](#)), but regarding their type of characteristics, these few schools should be representative enough for the majority of schools in the capital. BKK will select 7 schools and also 7 backup schools (in case contacting or cooperation with school management would run into challenges).

Main aspects to select schools:

from a zone (defined in the macroscopic transport model for Budapest) where PT ratio modal split is low, and from a zone where PT ratio is high. (May happen, that a given area has a good PT ratio, and despite that, the modal split of students does not correlate with it.)

from different districts of Budapest (not necessarily when different districts have similar characteristics)

from areas with different urbanization structure

from downtown and also from suburb areas

with different type and size of catchment area

with shorter and longer walking distance from nearest PT stops (also taking into consideration the 'competitiveness' of stops (how quickly the city centre can be reached from there, and what is the frequency of the vehicle departures from the stop, etc.)

with different reputation categories (also to include at least one from the city's TOP 10 elite school list)

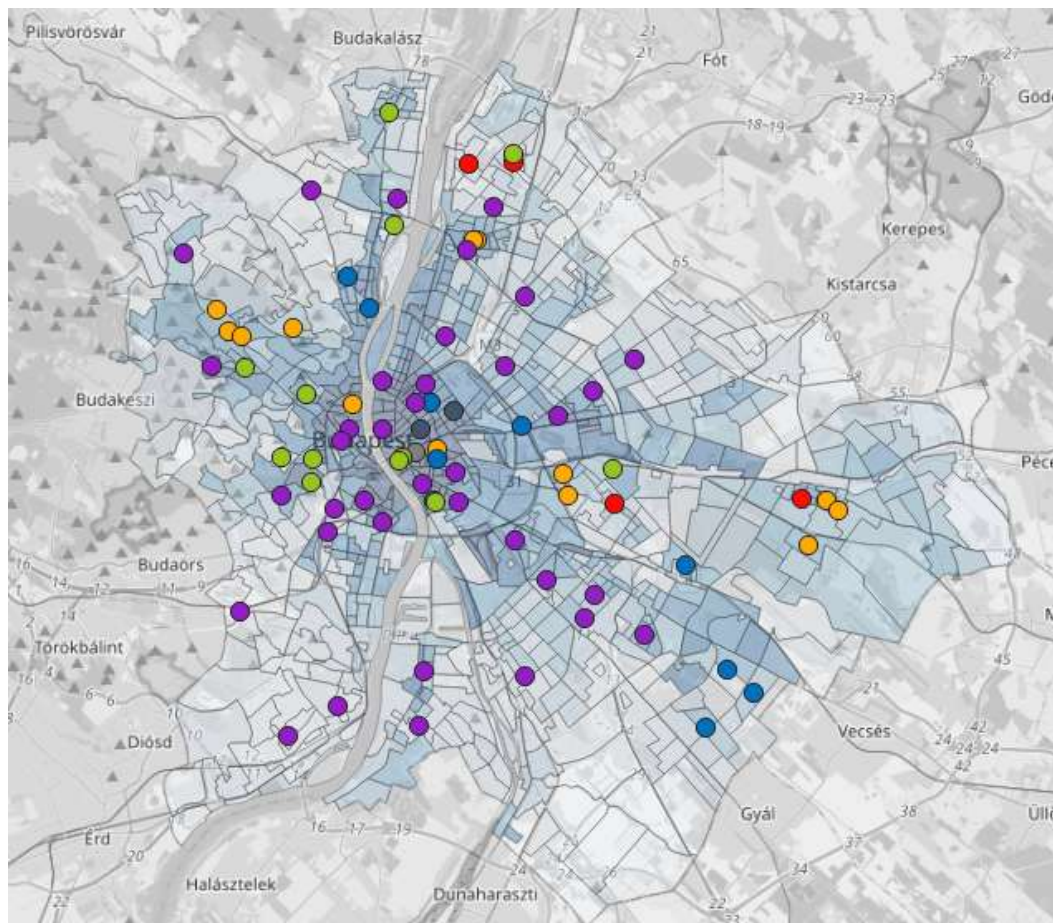


Figure 2: Map of Budapest showing different type of schools (to be filtered) with different colours, and zones layer with different intensity of blue colour – lighter blue means lower PT ratio modal split in the zone while darker blue means higher PT ratio in the zone.

## Challenges & Mitigations



The content of the measure has been changed from the originally planned. The scopes of BUD\_02, 04 and 05 measures were originally based and linked to a planned Budapest MaaS software development, namely the integration of shared mobility services into the BudapestGO application. This software development (including other functional developments) was subject to a public procurement procedure. According to the original schedule (that was set up in the beginning of 2023) the public procurement was planned to conclude, and developments to start in 2023 July. The procedure however was delaying, and additionally prolonged by an unforeseen legal issue (one of the applicants filed an appeal in October 2023 against the decision of the procurement board – and the procedure only reached final conclusion in 2024 January). The delays generated a risk of not being able to implement these three BUD measures before the anticipated deadline set forth by the UPPER consortium. This made the BKK team start considering mitigation actions for not delaying any further these measures – or modify their content to be independent from the shared mobility integration.

However, a consequential update of the timeline of BudapestGO related software development functions was needed, as only part of the planned upgrades could be completed in 2024, and the others had to be moved to 2025. Therefore, additional aspects were investigated to narrow down the priority list for 2024. In 2024 February, a survey was carried out by BKK among BudapestGO app users, and from the results it was clear that the priority of shared mobility integration seems less valuable than it was expected from the aspect of customer satisfaction. Out of the 3417 respondents only 10% of them indicated that the e-scooter integration would be useful to enhance BudapestGO. The BKK management responsible for the strategic development plan of BudapestGO decided to give this function development a lower priority, however, the shared mobility integration will still happen, at a later time. In order to provide more valuable and relatable contents for the BUD measures, that would have a more significant impact on the customer experience, BKK UPPER team had to take the results of this survey also into consideration. Considering these, BUD\_02 changed and moved from WP4-T4.4 to WP5-T5.4.

No major challenges occurred in the beginning of the definition of the new scope of this measure and while selection aspects and selecting the schools to be targeted by the modal split assessment.

### **Next steps towards implementation**

7 target schools and 7 backup schools have been selected (with similar type of characteristics). During July 2024 the definition of the modal split assessment and study will be developed by BKK and the communication of the assessment and the school's management involvement will be planned and timeline of the assessment will be defined. Collection of data should start during the beginning of next school season (September 2024).