Review and rationalisation of mobility related surveying and data collection activities in Budapest

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BUDAPEST

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1. Challenges in mobility research

- Horizontal problems
- Household survey issues
- Customer satisfaction challenges
- Traffic measurement issues

Horizontal problems with mobility research

- **Fragmented research**, eventual information sharing.

- **Parallel** internal research processes.

- **Inefficient** data use, **slow** feedback process**.**

Former research did not reach it's full potential in term of **policy making**.

Household survey issues

Sample size

- Territorial representativity

- Confidence intervals (in 2018 17,1%, in 2019 10%)

Weather conditions

|		Mean	Variance	SD
May	Temperature (C)	17,2	35,3	5,94
	Rainfall (mm)	3,6	-	-
October	Temperature (C)	13,1	26,51	5,15
	Rainfall (mm)	1,8	-	-

Customer satisfaction research challenges

- Scaling distortions, asymmetric distribution.

- Scheduling of the surveys.

- Sampling issues (range of participants).

Traffic measurement issues

- Several digital and analogue sources

- Passenger measuring devices on 31% of the vehicle fleet.

- Missing data: core network (metro), pedestrians, bicycle
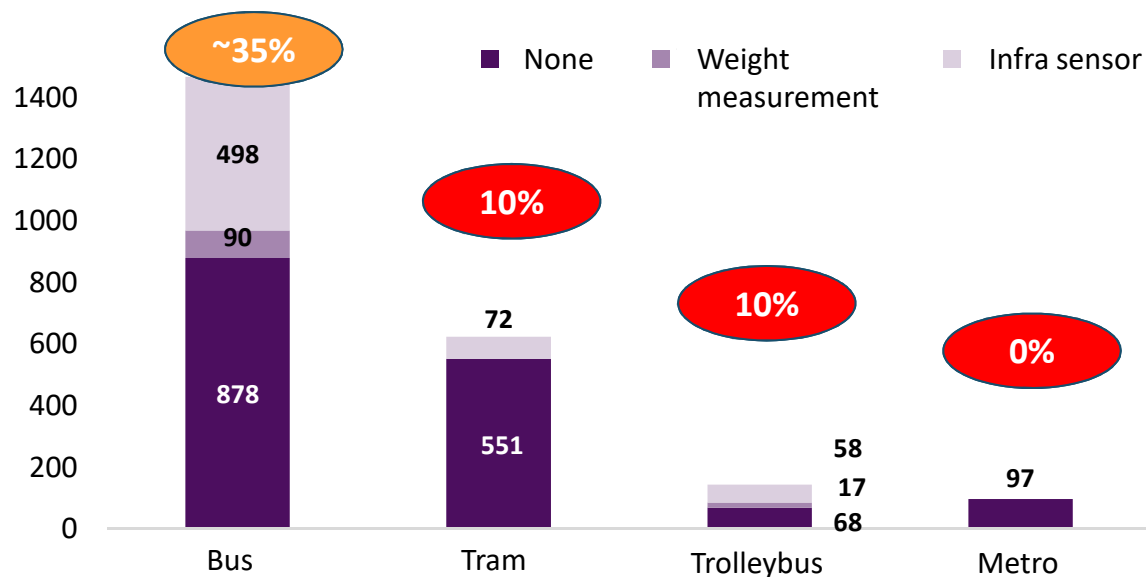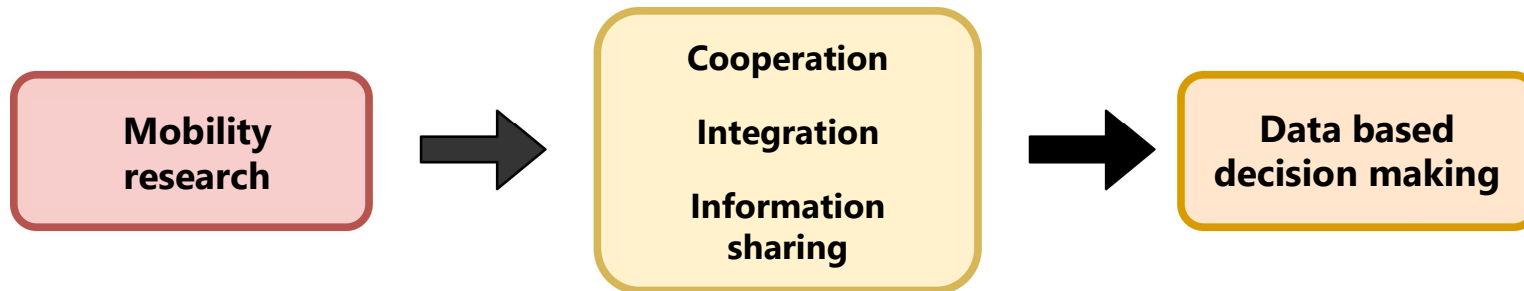
2. Review of BKK internal practice

- **Mobility researches**
- **Transport development**
- **Mobility service development**

Mobility Researches at BKK

- Mobility related surveying and data collection activities = mobility **research**

- Mobility research is an integral part of the data based decision making **process**, as we create objective, statistically sound analysis for measures with research

- Monitoring of SUMP **indicators**

Mobility research → Cooperation, Integration, Information sharing → Data based decision making

Problems of data collection & research

Problems

- **Horizontal**

  - Management of research and **data** collection procedures
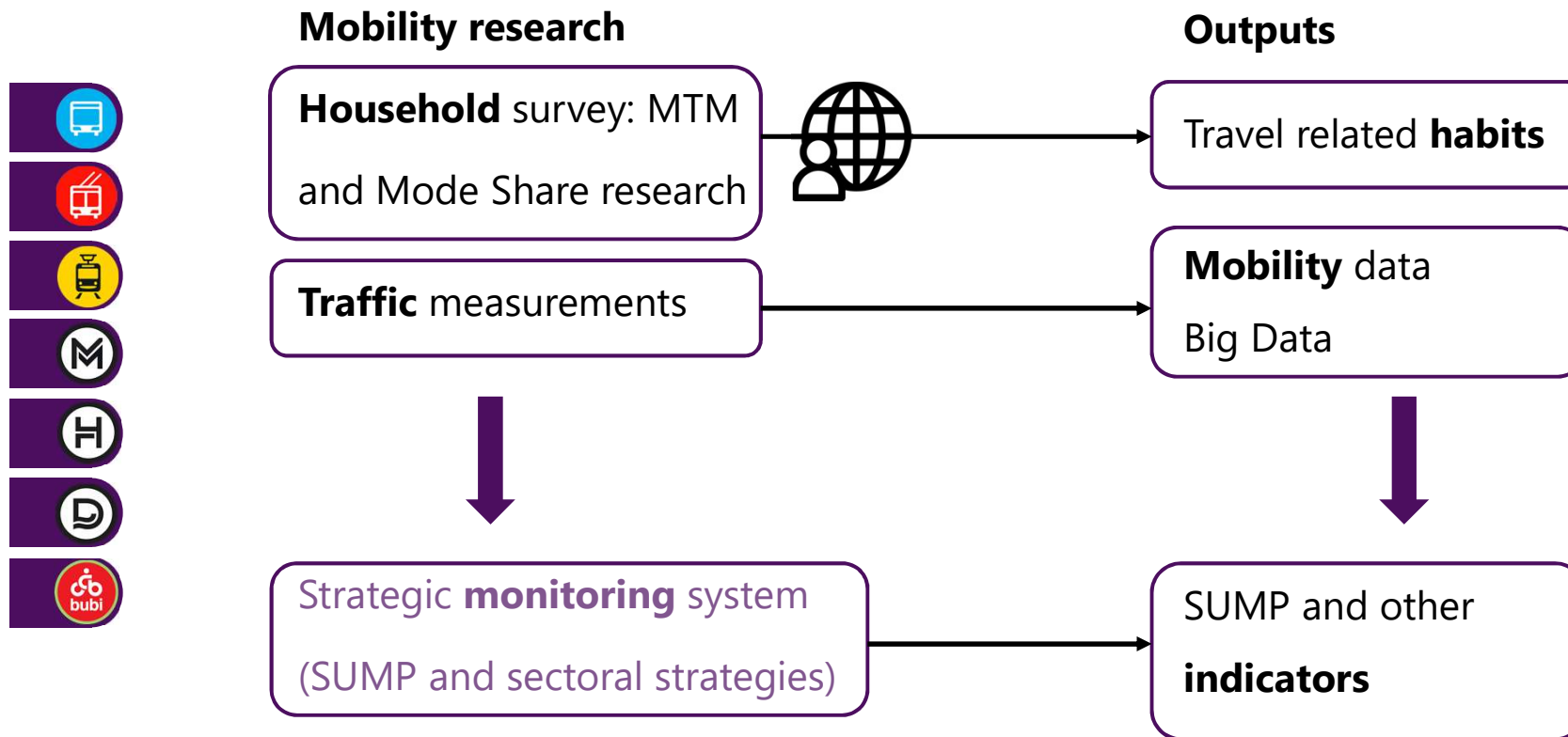
- **Specific**

  - Small **sample** size and scheduling of surveys

  - Outdated **methodology** of customer satisfaction surveys

Goals

- **Organisation** and classification of mobility research

- Methodological improvement of **surveying** and customer satisfaction research

- Formation of SUMP and sectoral **indicators**

Transport development

Mobility research

Outputs

Household survey: MTM and Mode Share research

Travel related **habits**

Traffic measurements

Mobility data
Big Data

Strategic **monitoring** system (SUMP and sectoral strategies)

SUMP and other **indicators**

Mobility service development

Customer satisfaction research

	I.	II.	III.
	Qualitative research	**Quantitative research**	**Online research**
Types of data collection	**Focus group** interviews, user testing	**On site** survey	**Online** survey
Outputs	Segmented user **needs**	Customer satisfaction **indicator** (based on SUMI)	Fast user **feedback**

3. Rationalized processes at BKK

- **Data management**
- **New approach for transport development**
- **New approach for mobility service development**

Better data management at BKK

- Weekly meeting of a mobility research internal **working group.**
- **Information sharing** through a common platform called Knowledge Centre'

Common research framework:

	Regular	Occasional
Quantitative	**Time series analysis.** Monitoring of trends and maintenance of models.	**Specific research and analysis** assigned to projects, interventions and measures.
Qualitative	Research analysing **qualitative elements or opinions, subjective factors** influencing mobility habits. Qualitative analysis uses a methodology **based on interviews and focus groups**.	

New approach for transport development

Research	Issue (prior to 2020)	Approach (from 2021)
Mode Share	Rainy weather in **May**	Data collection in **October**
	Small sample size (**2000** person) and issues with the confidence intervals	Increased sample size (**5000** person)
	Parallel **yearly** data collection for mode share and MTM	Mode share results in **every 2 years**, separate research every 4 years + results based on the UTM every other 4 years
Macroscopic Transport Model (household surveys)	Smaller sample than recommended (**6000** household)	Increased sample size (~**20.000** household)

New approach for mobility service development

Research	Issue (prior to 2020)	Approach (from 2021)
Customer satisfaction	Survey covering **existing** public transport users	Expanding scope of the data collection for all **potential** customers – citizens of Budapest
	Missing qualitative surveys to segment users	Introduction of **qualitative research** for user segmentation

Thank you!

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