



# Use of travel behaviour surveys for the Prague transport model

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# Transport modelling of Prague

## TSK (Technical Administration of Road of the City of Prague)

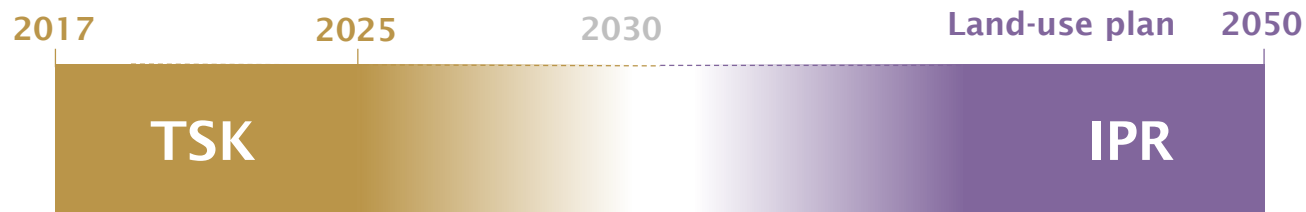
- Short-term to medium-term forecasting
- Periodic calibration and validation based on up-to-date surveys
- Infrastructure planning, public transport planning,

## IPR (Prague Institute of Planning and Development)

- Long-term to medium-term forecasting
- Land-use planning

## Sustainable mobility plan based on the model of TSK

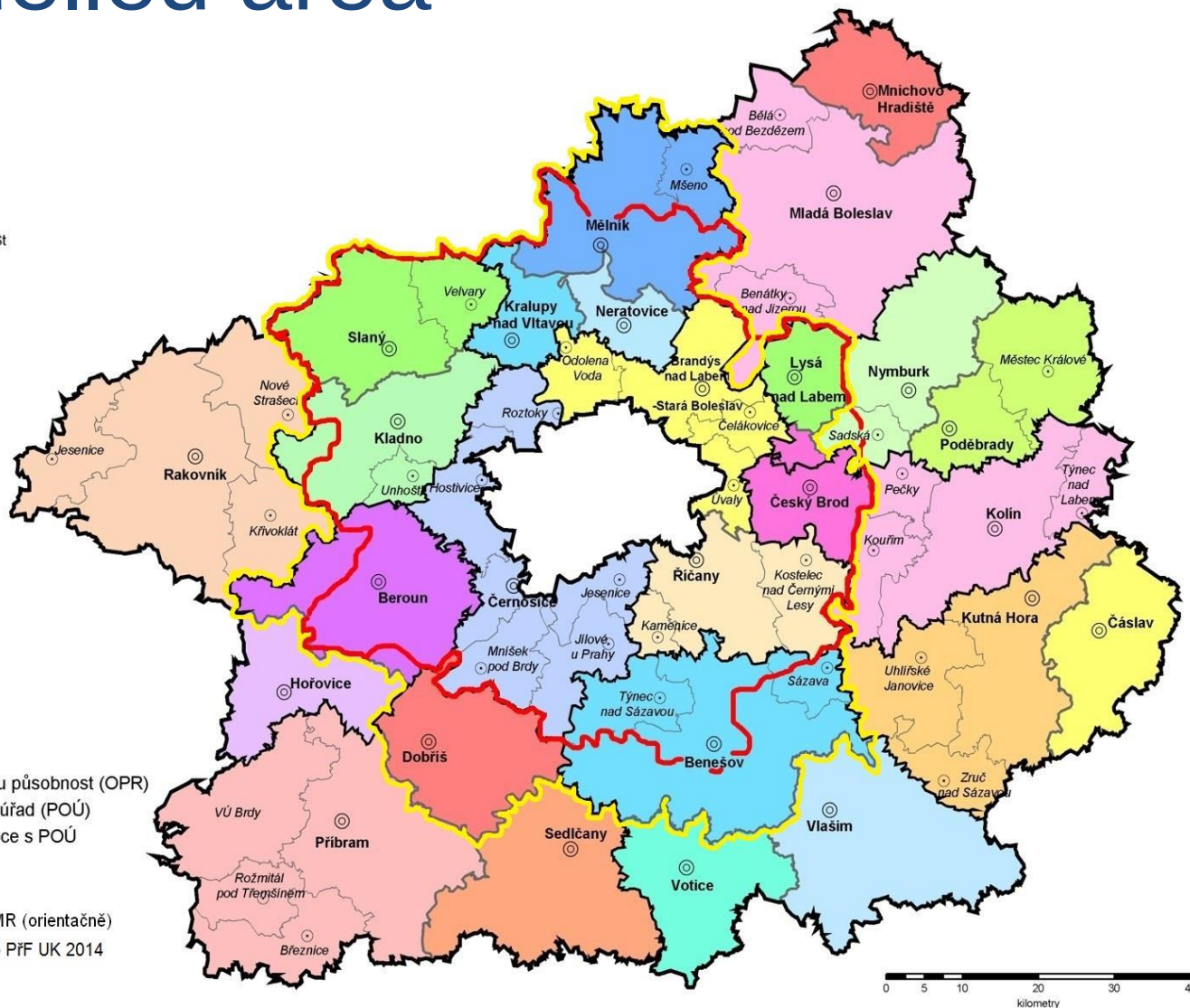
- Similar time horizon
- Widespread consensus of stakeholders



# Modelled area

## Správní obvod ORP

- Benešov
  - Beroun
  - Brandýs nad Labem-St
  - Dobříš
  - Hořovice
  - Kladno
  - Kolín
  - Kralupy nad Vltavou
  - Kutná Hora
  - Lysá nad Labem
  - Mladá Boleslav
  - Mnichovo Hradiště
  - Mělník
  - Neratovice
  - Nymburk
  - Poděbrady
  - Příbram
  - Rakovník
  - Sedlčany
  - Slaný
  - Vlašim
  - Votice
  - Černošice
  - Český Brod
  - Čáslav
  - Říčany
- Obec s rozšířenou působností (OPR)  
 Pověřený obecní úřad (POÚ)  
 Správní obvod obce s POÚ  
 Okres
- hranice pásma PMR (orientačně)  
 hranice PMO (ITI) PŘF UK 2014



# Description of model

## Complete transport demand (four-step) and supply model in PTV Visum

- 1500 Zones (950 in Prague), 2 million inhabitants
- Mode choice (binomial logit): private motor vehicle transport (3.0 million trips), public transport (2.7 million trips)

### Data sources:

- Statistical data (land-use, demography, ...)
- Traffic surveys, passenger count data
- Travel behaviour surveys

# Zone data

## Production

- Person types: all, economically active, pupil, student, visitor
- Mostly Census data (permanent residence and habitual residence – problem of weekly commuters) and central registers
- Students – Germany (compulsory registration of temporarily residence) vs. Czech Republic (without obligation)

# Zone data

## Attraction

- Types: employees, school capacity, university capacity, gross floor area
- Number of Employees (derived from various sources - census data, from tax rules etc.)
- School/university capacities
- Gross floor area – land use planning

# Travel behaviour surveys

## General surveys

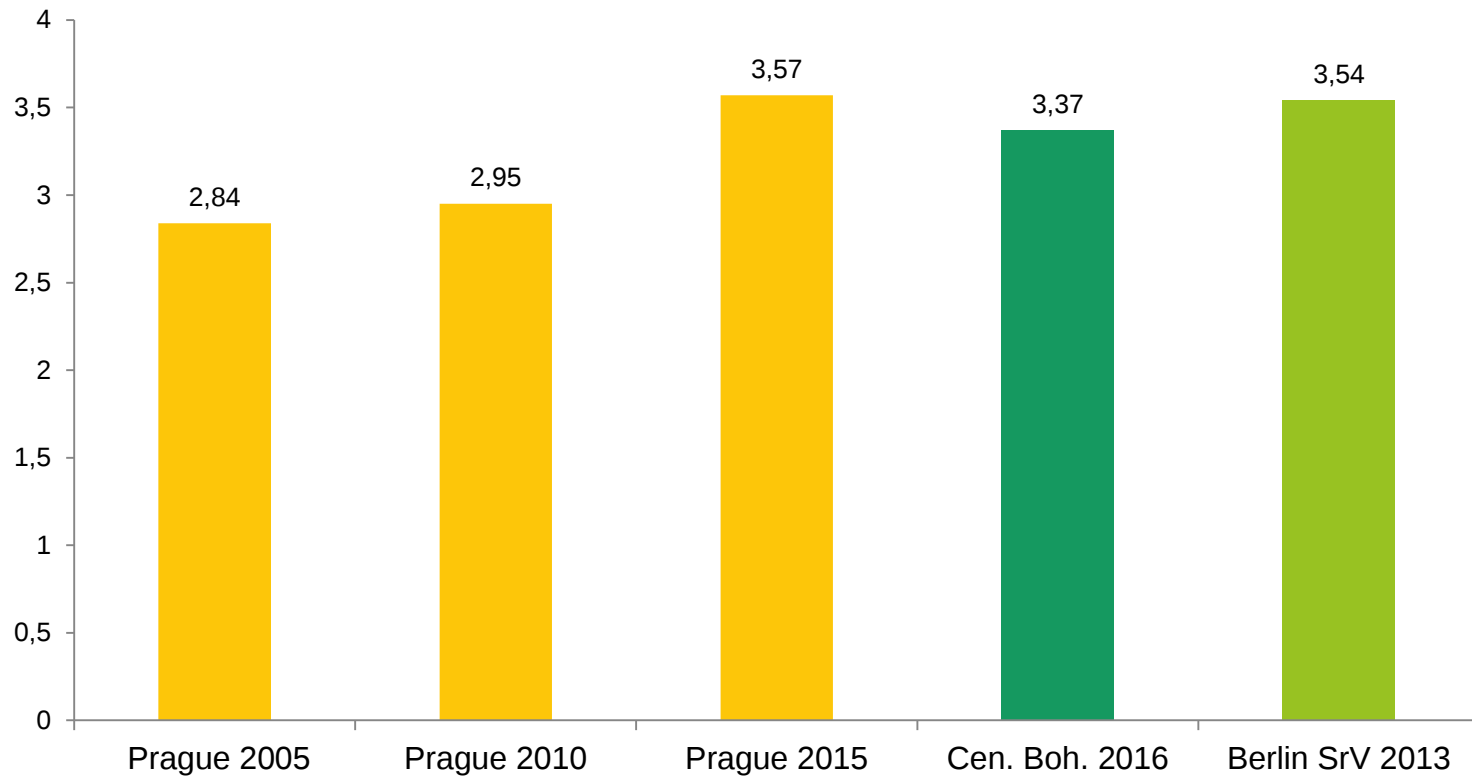
- Focused on typical working day
- Prague (periodically updated)
  - Combination of CAWI and CATI (2015)
  - Face to face (2005, 2010)
- Central Bohemia (2016)
- Sample of 5000 individuals (in both cases)

## Mode choice survey

- 2012/2013
- Revealed preferences
- Results used for calibration of the logit model

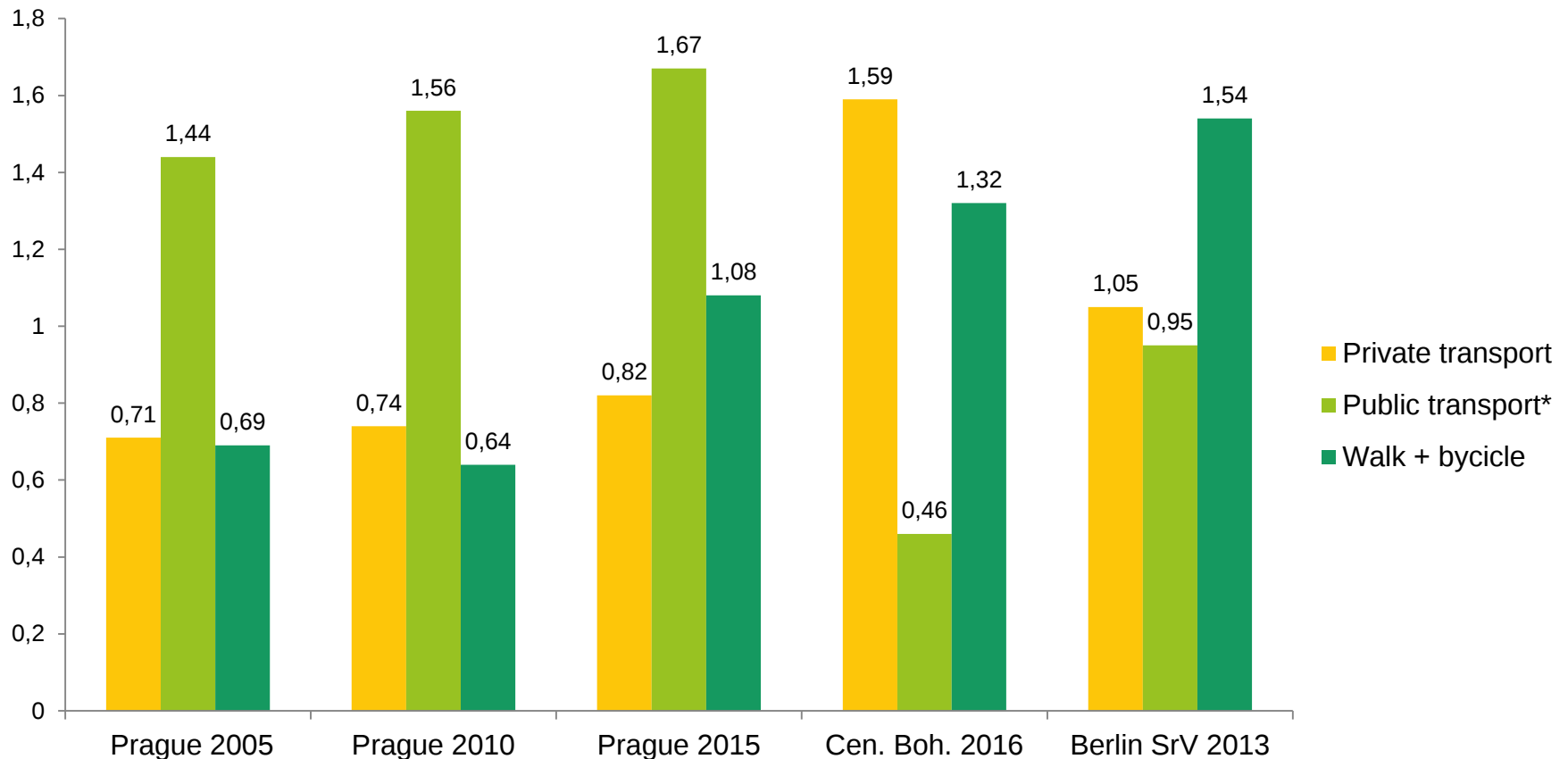
# Trip rate

## General (all trips, for all persons)



# Trip rate

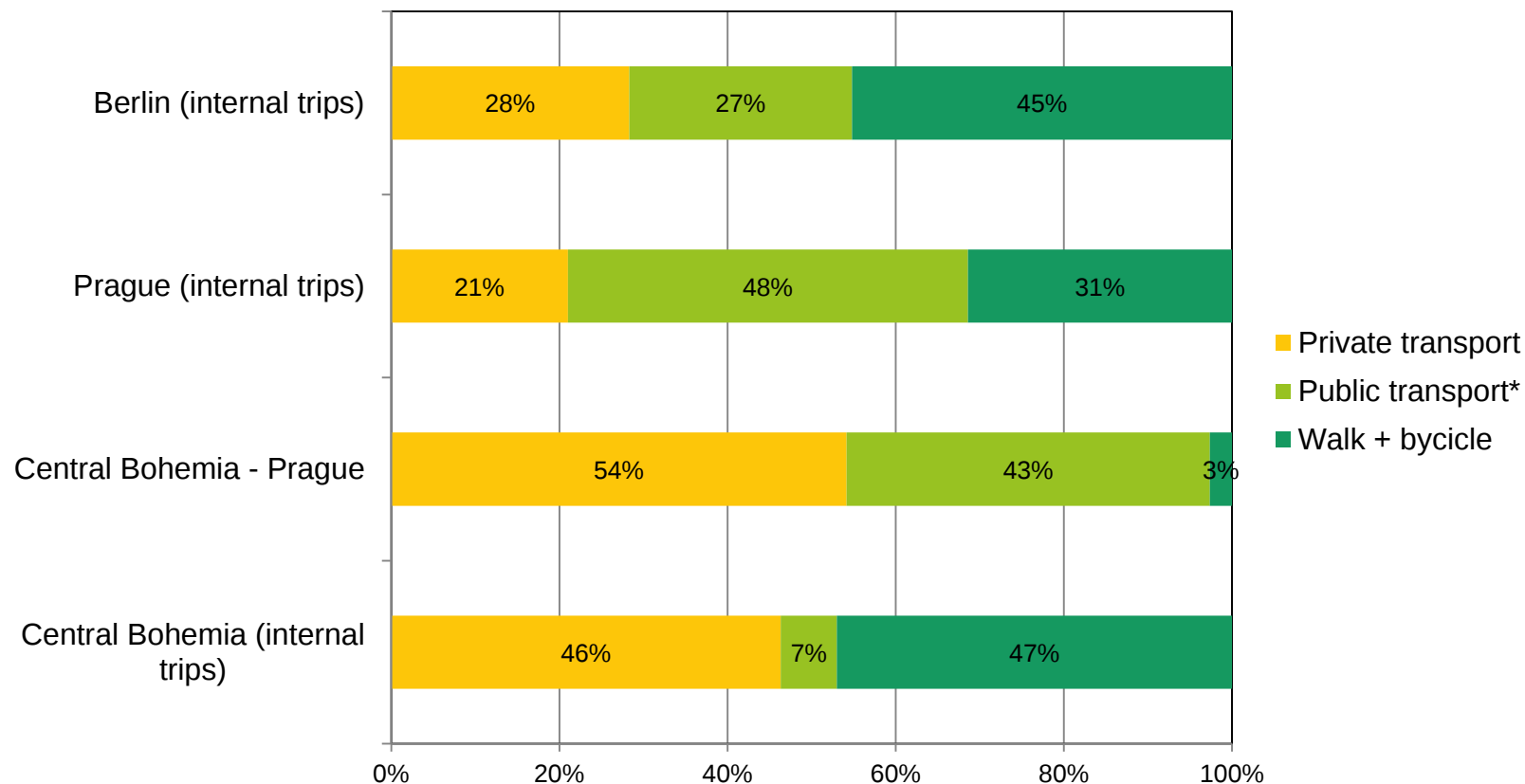
## Modal split (all trips, for all persons)



\*combination PrT + PuT included in public transport

# Modal split

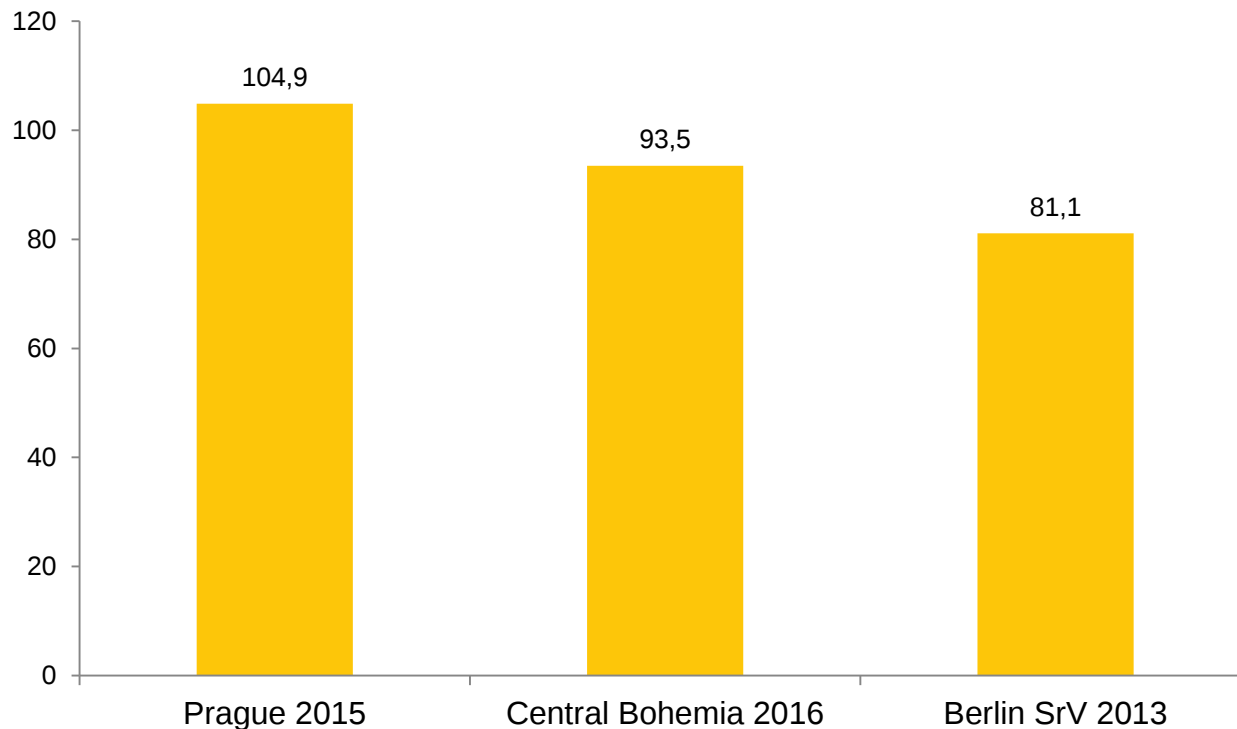
## Prague 2015 + Central Bohemia 2016 + Berlin 2013



\*combination PrT + PuT included in public transport

# Daily time spent travelling

Spent time in minutes

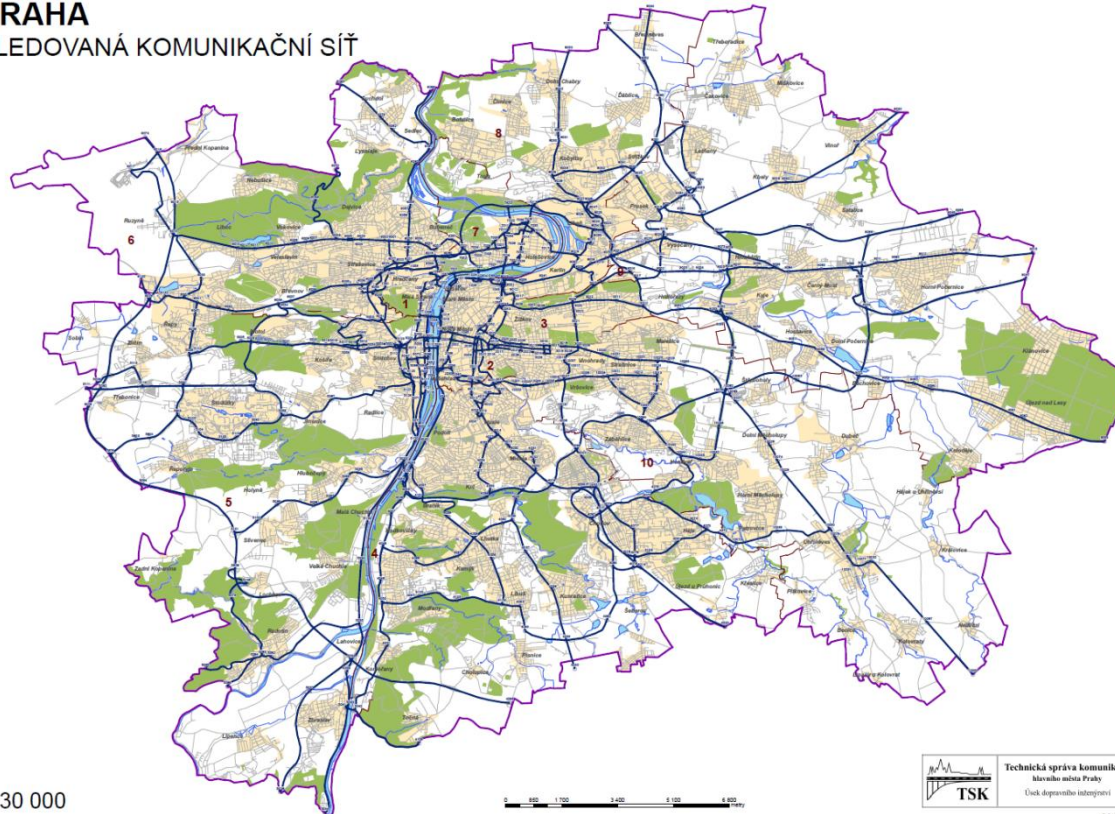


# Traffic surveys

## Private transport

- Periodical surveys (partly automatic detectorcs)
- Observed network (inferences for the whole network)

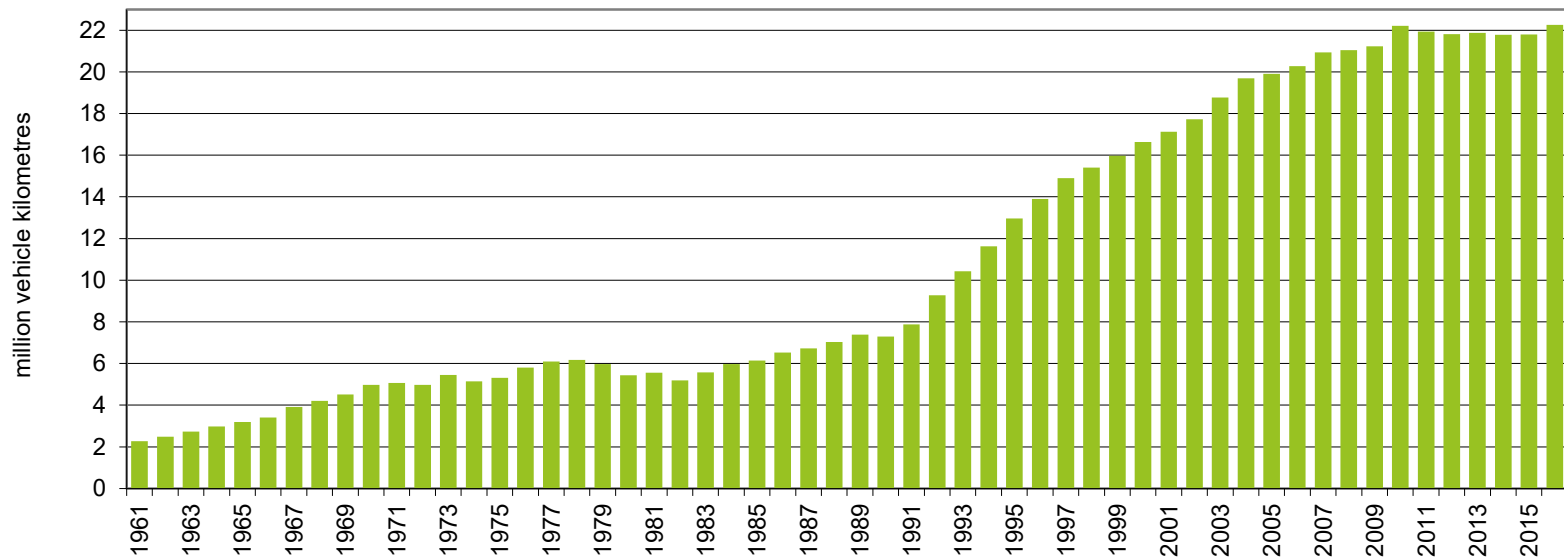
PRAHA  
SLEDOVANÁ KOMUNIKAČNÍ SÍŤ



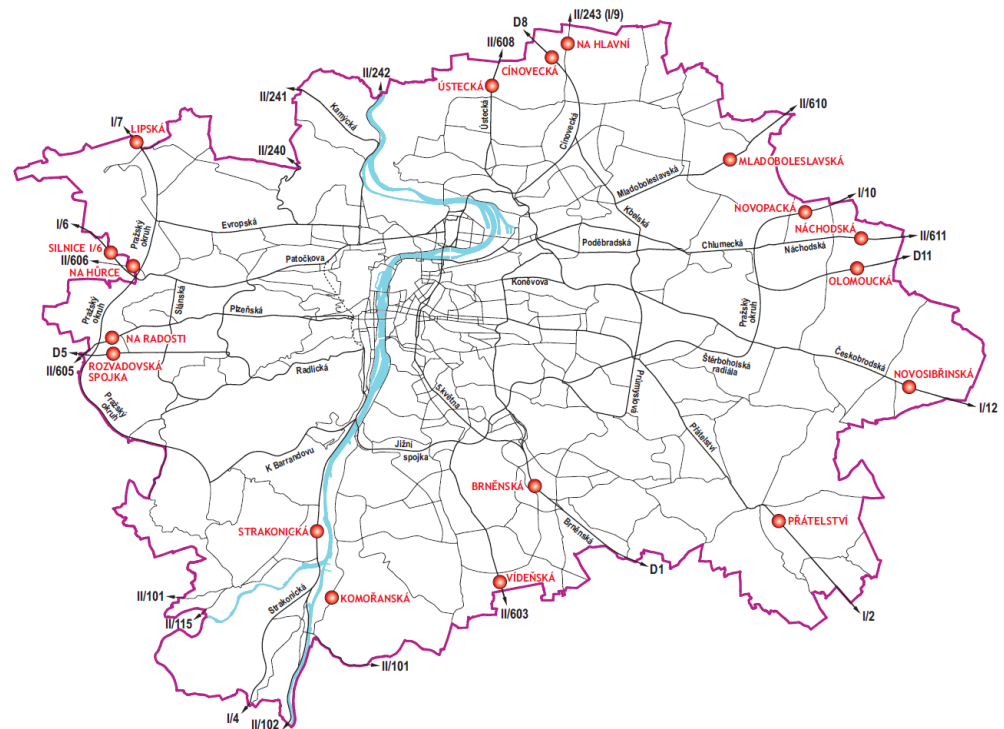
# Traffic surveys

## Private transport

- Vehicle-kilometres (whole network, mean working day 0 – 24 h)



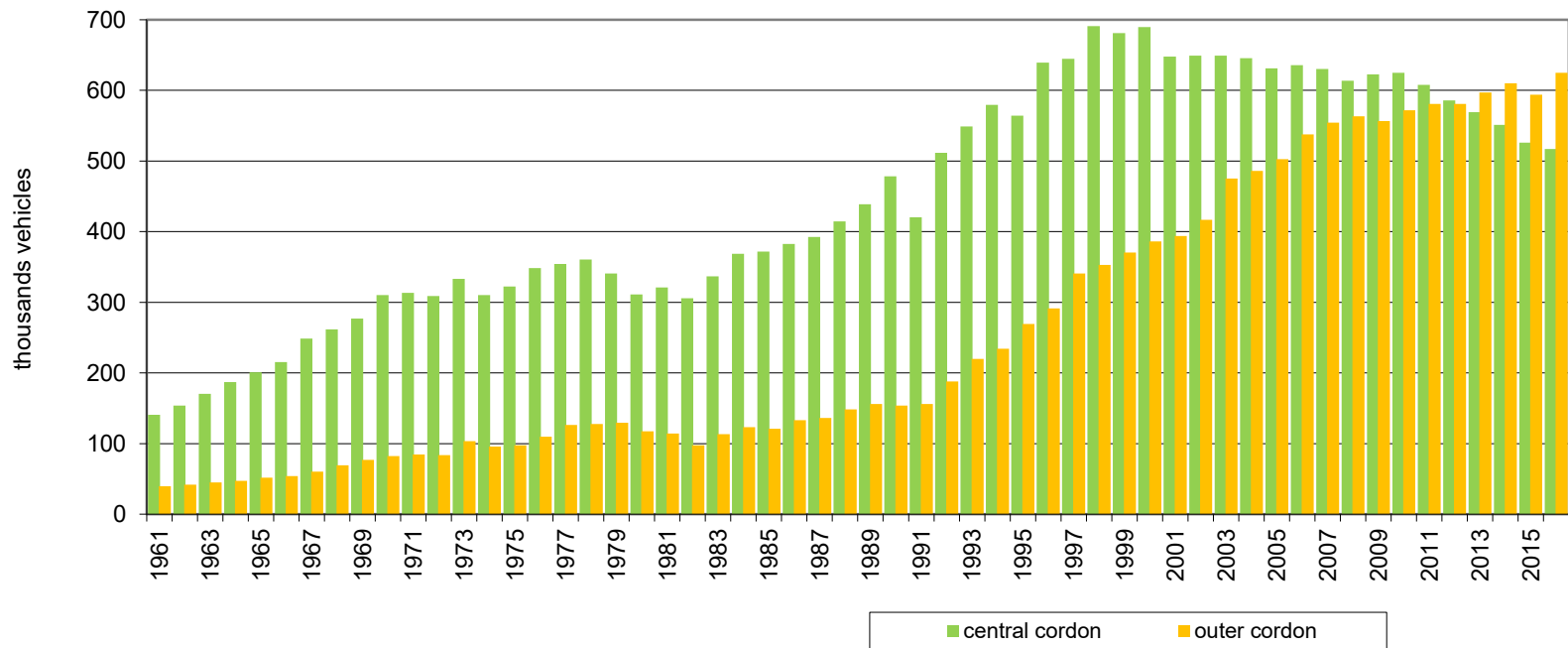
- Central and outer cordon



# Traffic surveys

## Private transport

- Traffic flows (central and outer cordon, cross-section, mean working day, 0 – 24 h)

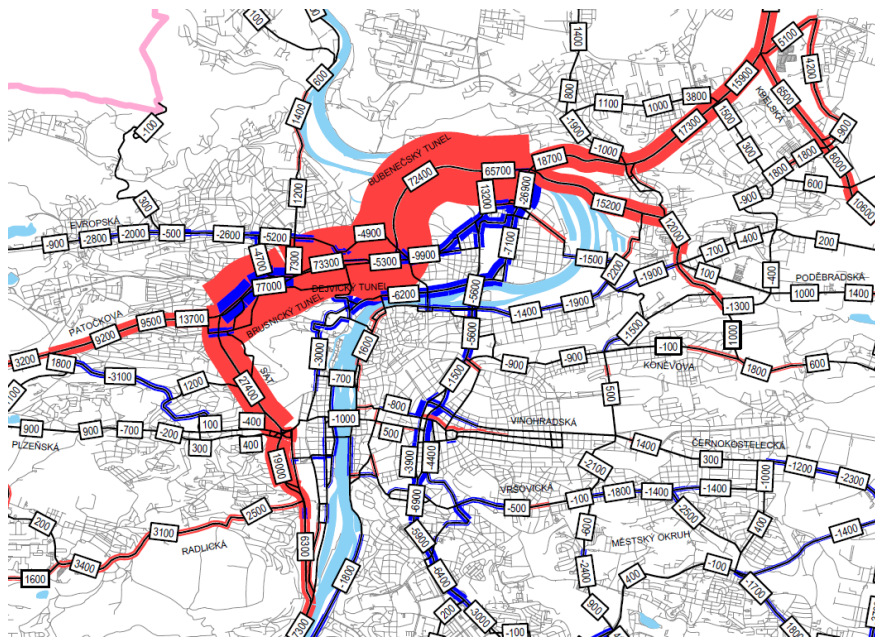


# Tunnel complex Blanka

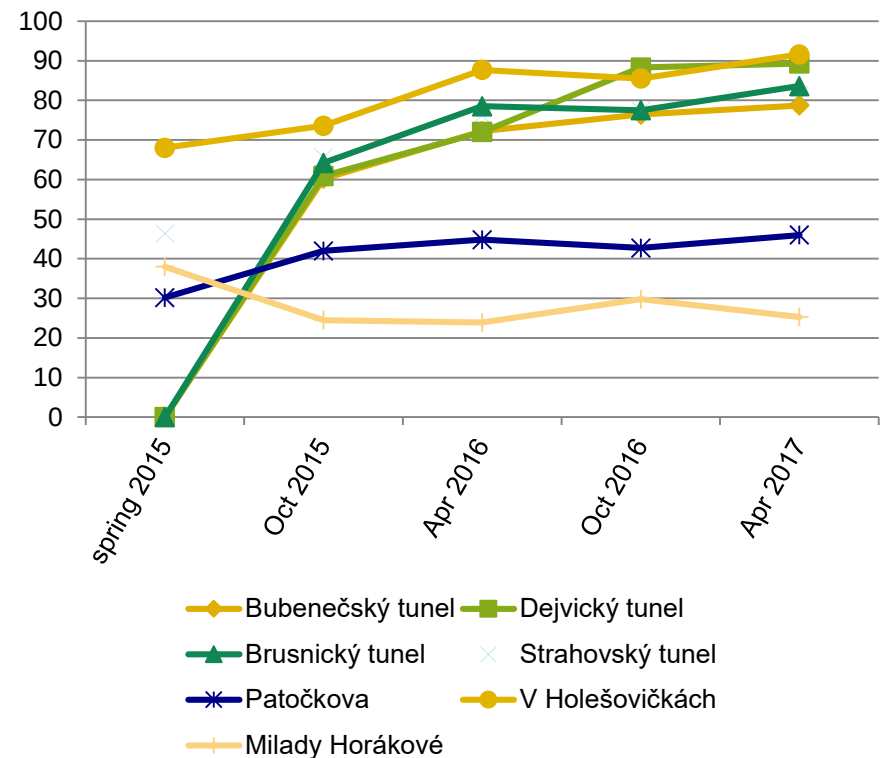
## Complex of three tunnels

- Brusnický, Dejvický, Bubenečský

Opened in September 2015



Traffic flows (cross-section, mean working day, 0 – 24 h)





# InnovaSUMP

Interreg Europe



European Union  
European Regional  
Development Fund

## Thank you!



Questions welcome



*Projects media*