

Vienna's experiences with new data sources for travel demand analysis

City of
Vienna



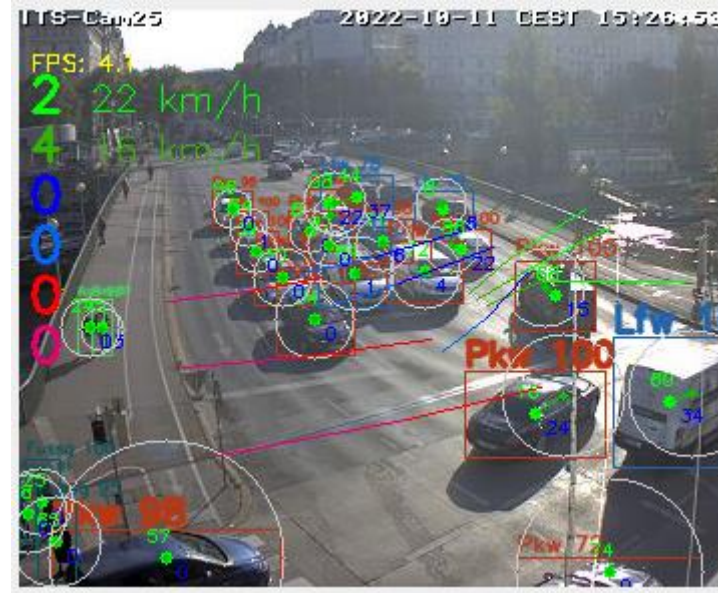
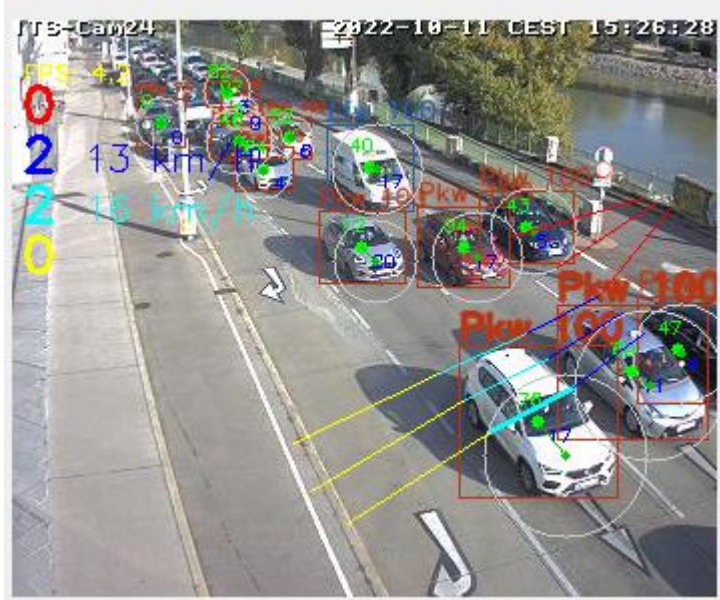
what we used to have

data sources - cross section

- classic automated counting data
(side-mounted radar counter,
induction loops)

what we are piloting

computer vision based counting and classification

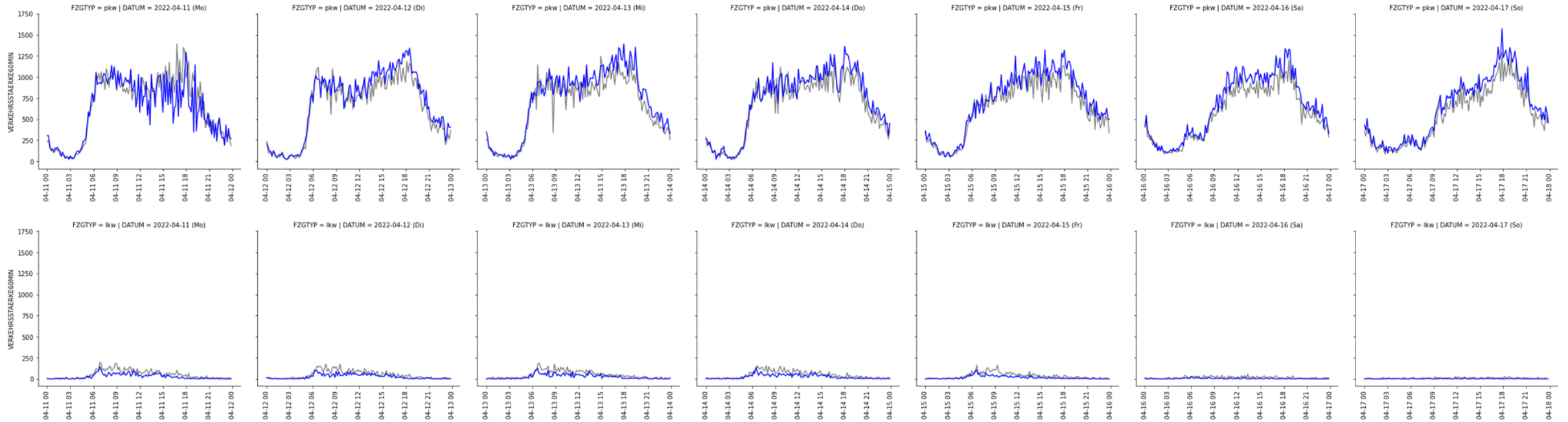


Untere Donaustraße/
Aspernbrückengasse

- 73 traffic webcams
- AI algorithm: classification and counting
- inhouse developed by ITS-Vienna Region, a subsidiary of our regional PTA

computer vision based counting and classification issues?

accurate data



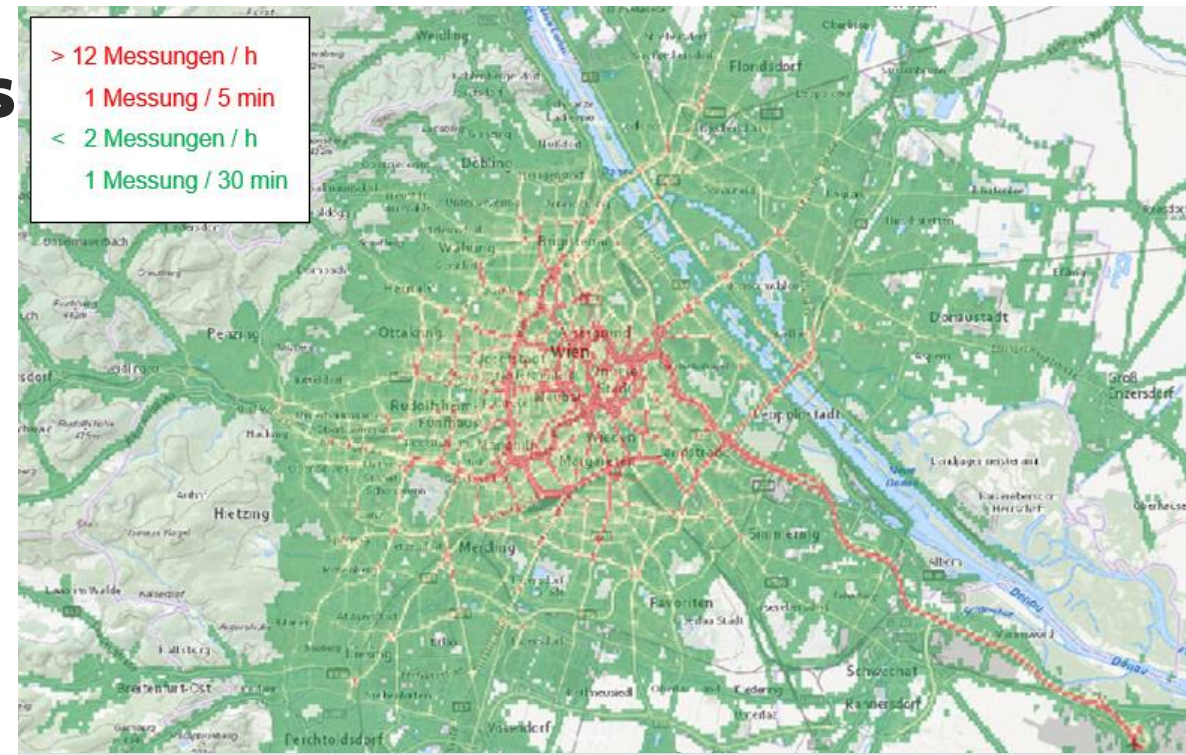
GDPR ?!

what we use in operational business system-wide

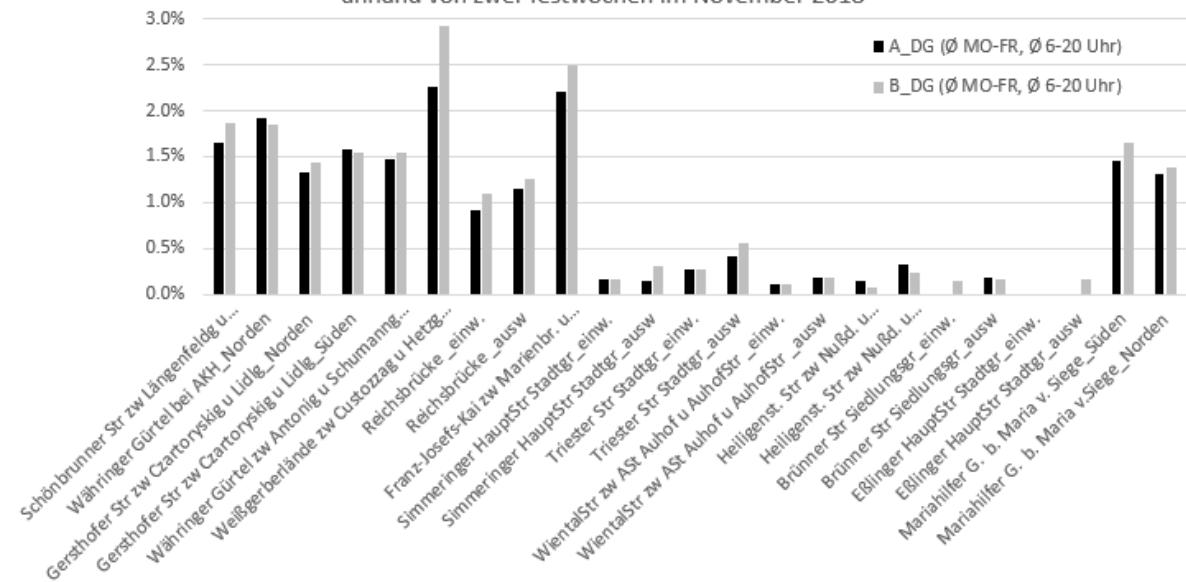
FCD - vehicle as a sensor

- for LOS only

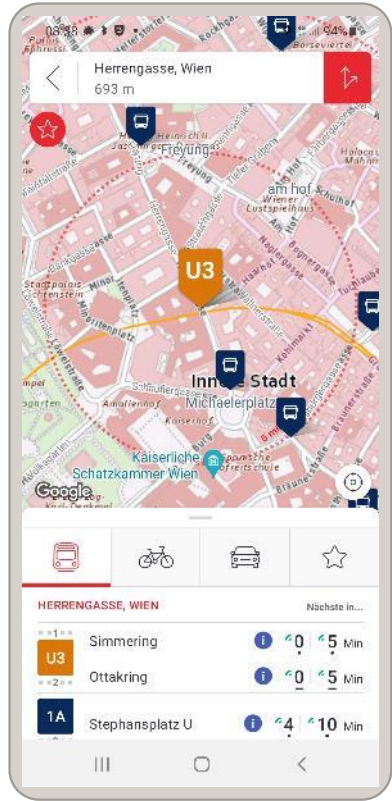
- especially on arterial roads



Durchdringungsgrad (DG) der Taxi-FCD anhand von zwei Testwochen im November 2018



Mobile Phone Data system-wide



active

e.g.
GoogleMaps,
TomTom,
WienMobil

Wien Mobil: 35.000 trips/workday
(raw data; before COVID)

passive



passive mobile phone
raw data:
2-3 Mio trips

reality



>7 Mio trips/workday
with destinations in
Vienna (Oct 2021),
incl. local traffic

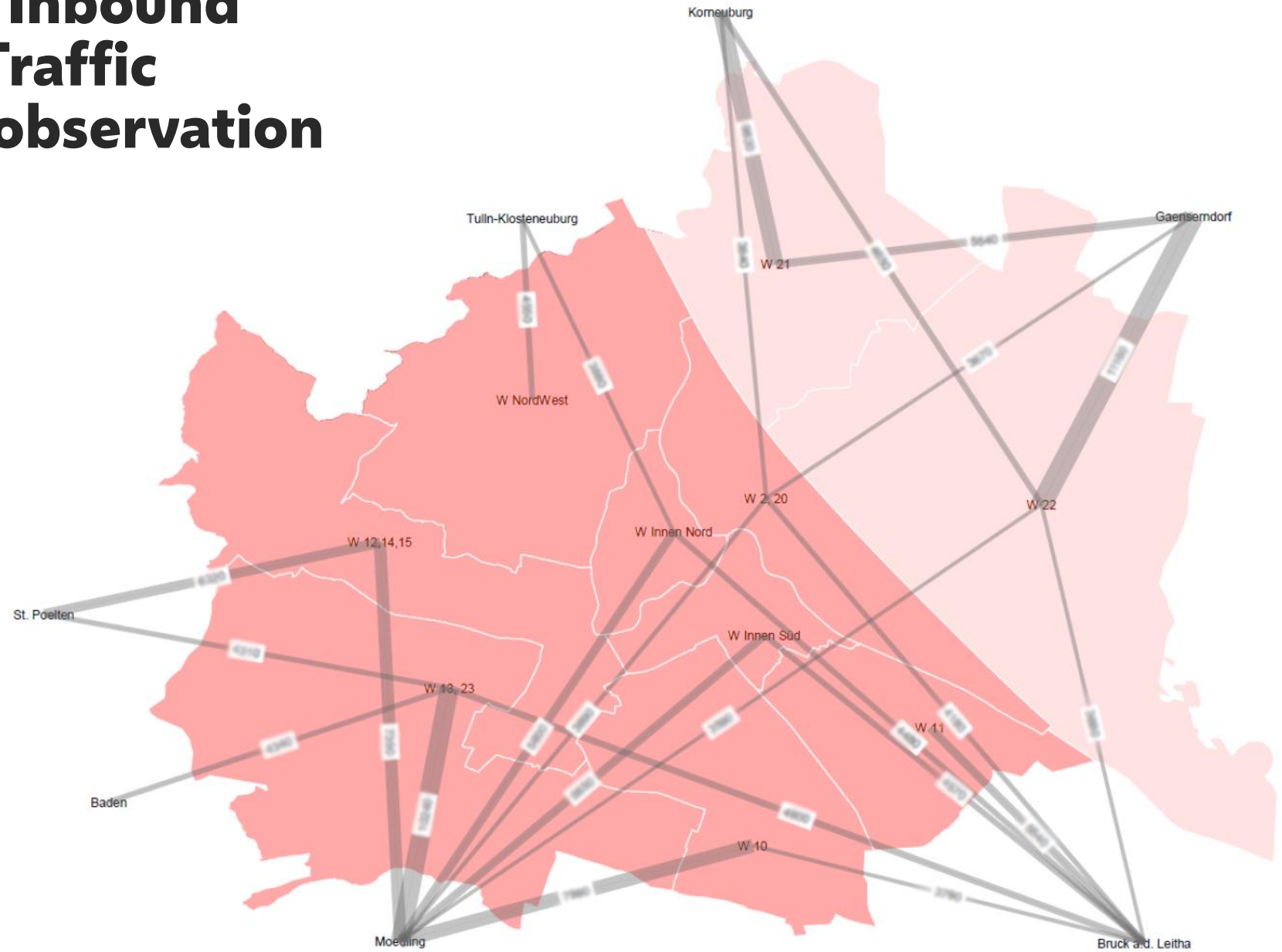
good practice for system-wide data

Mobile Phone Data (+ extrapolation)
incl. mode detection of railway
→ OD-Matrices; amount of people

counting data on cross-sections
counting data of bus usage

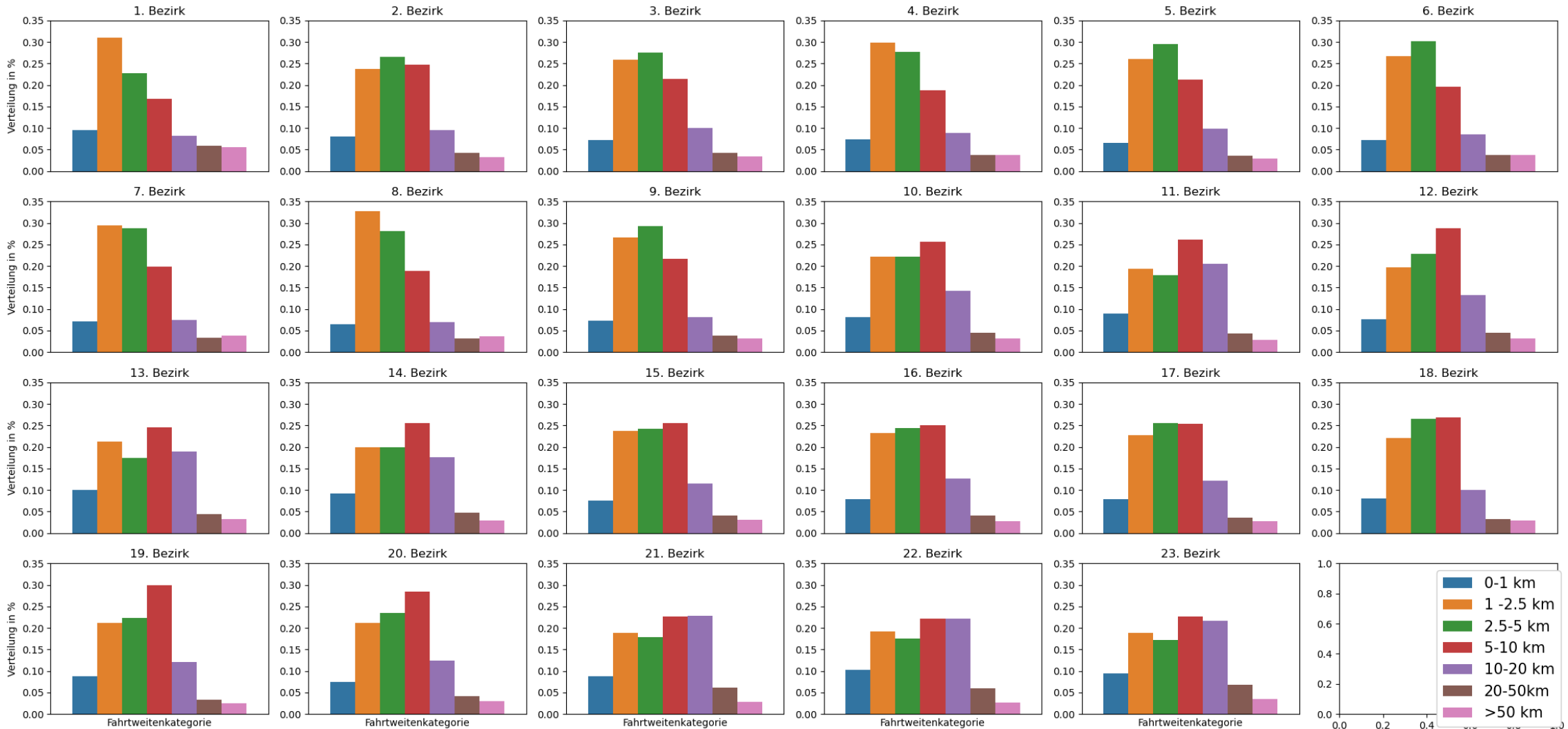
data synthesis

Destinations of Inbound Passenger Car Traffic from empirical observation



Distribution of Trip Distances in Vienna's Districts

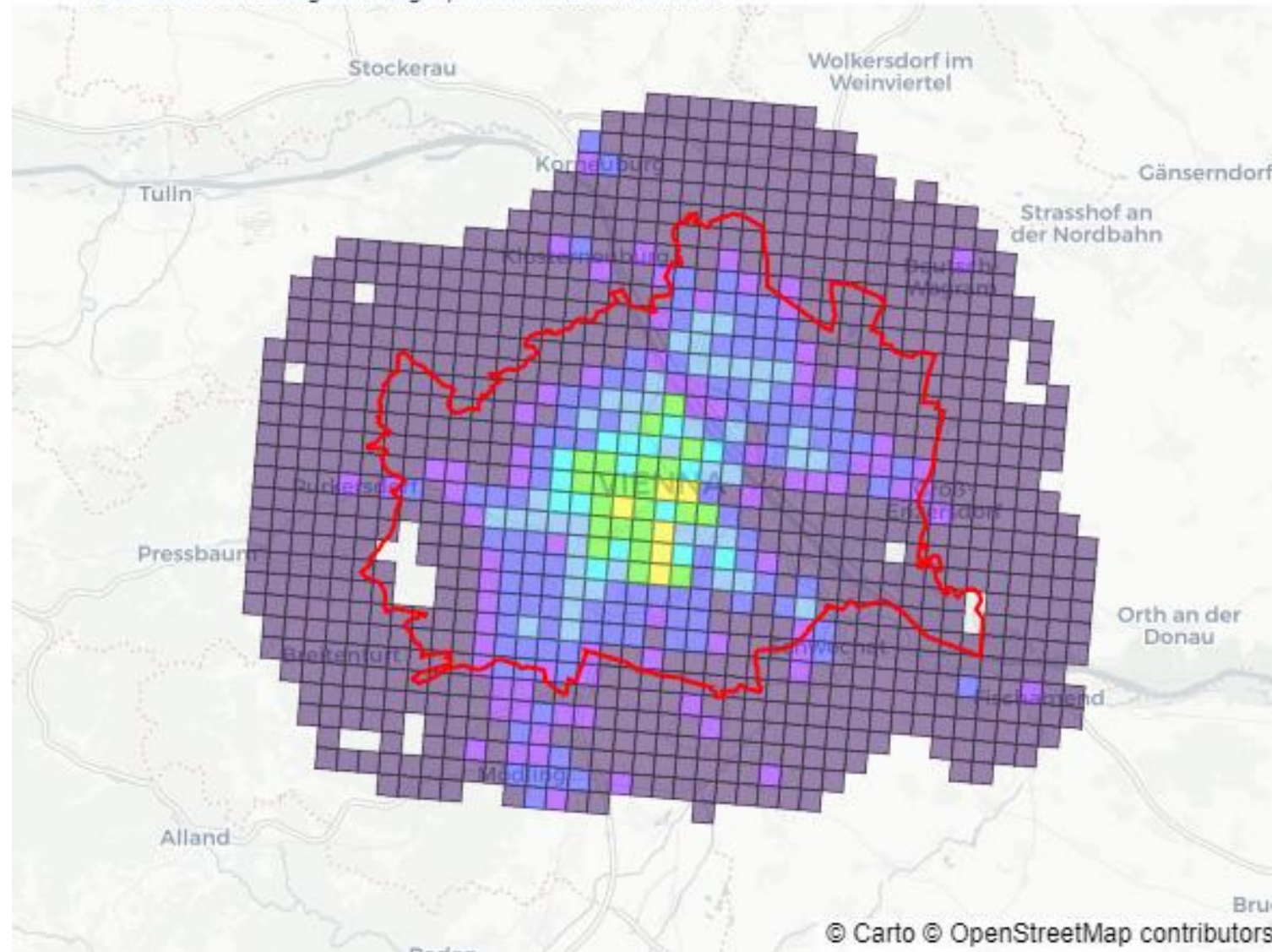
Fahrtweitenverteilung der Wiener Gemeindebezirke
aus Mobilfunkdaten (durchschnittliche Werktag Oktober 2021)



Changes in Population Density through the day

Dienstag bis Donnerstag: 18:00 (Oktober 2021)

Personen mit längerfristiger, stationärer Aktivität



data governance

- data sovereignty
- open standards
- stable and unified/aligned data models
- exact definitions / metadata
- quality (reliability, validity, fit for purpose)
- providing services
- data generation workflows vs. data generation projects

Thank you for your attention!

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**City of
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