

2018 Spring TSINGHUA & NUS Joint Studio

Do Big Data and GIS in PS & GeoHey

The introduction to the spatial layers of 751

Homepage of our studio using DAD: <https://www.beijingcitylab.com/epma-dad/>

GeoHey online visualizations:

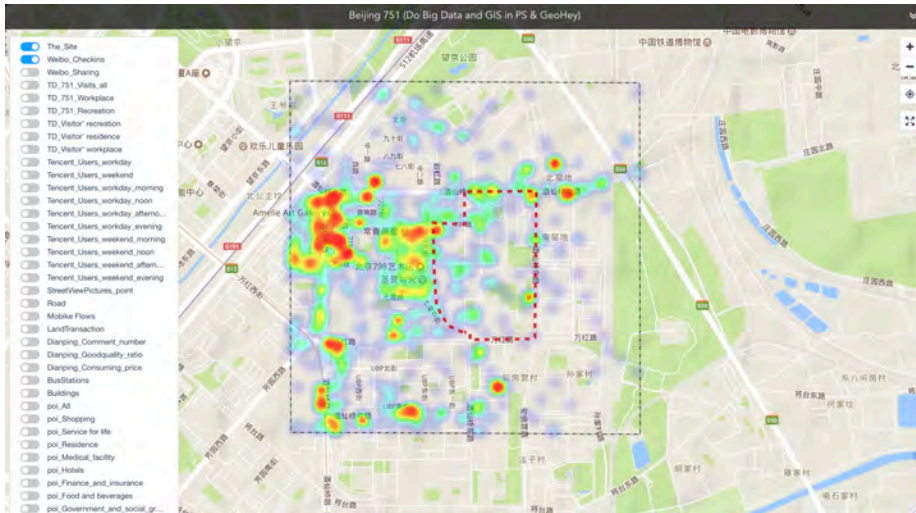
<https://geohey.com/apps/dataviz/972929206bcf43dba7b971c251a1252d/share?ak=NzliN2MxZDM1YmQzNDA3NzhiNTI3YTFjNzYxNzYxYjc>

Tools : PhotoShop & GeoHey

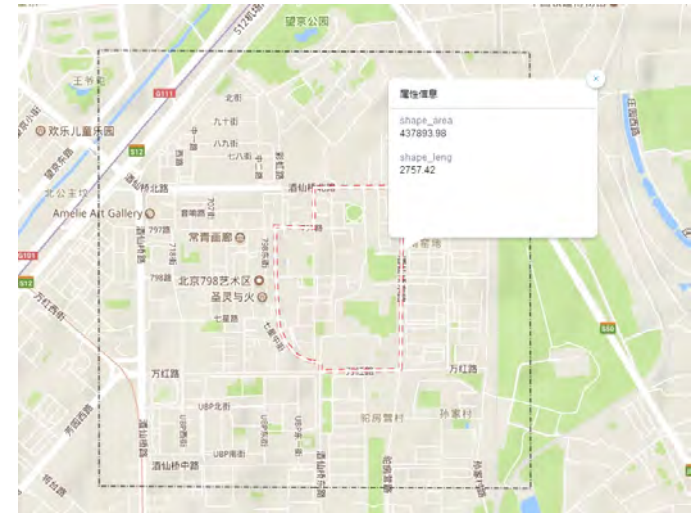
Tools

GeoHey www.geohey.com

A tool for online data visualization, providing various services including geographic data service, visualization service, model service, data discovery service, as well as some basic services like map service, address encoding service and path analysis service.



Data visualization



Click on it to get specific information

Data Contents

Beijing 751 (Do Big Data and GIS in PS & GeoHey)

Analysis_scope / The Site

Buildings

BusStations

Dianping

LandTransaction

Mobike Flows

POI

Road

StreetViewPictures_point

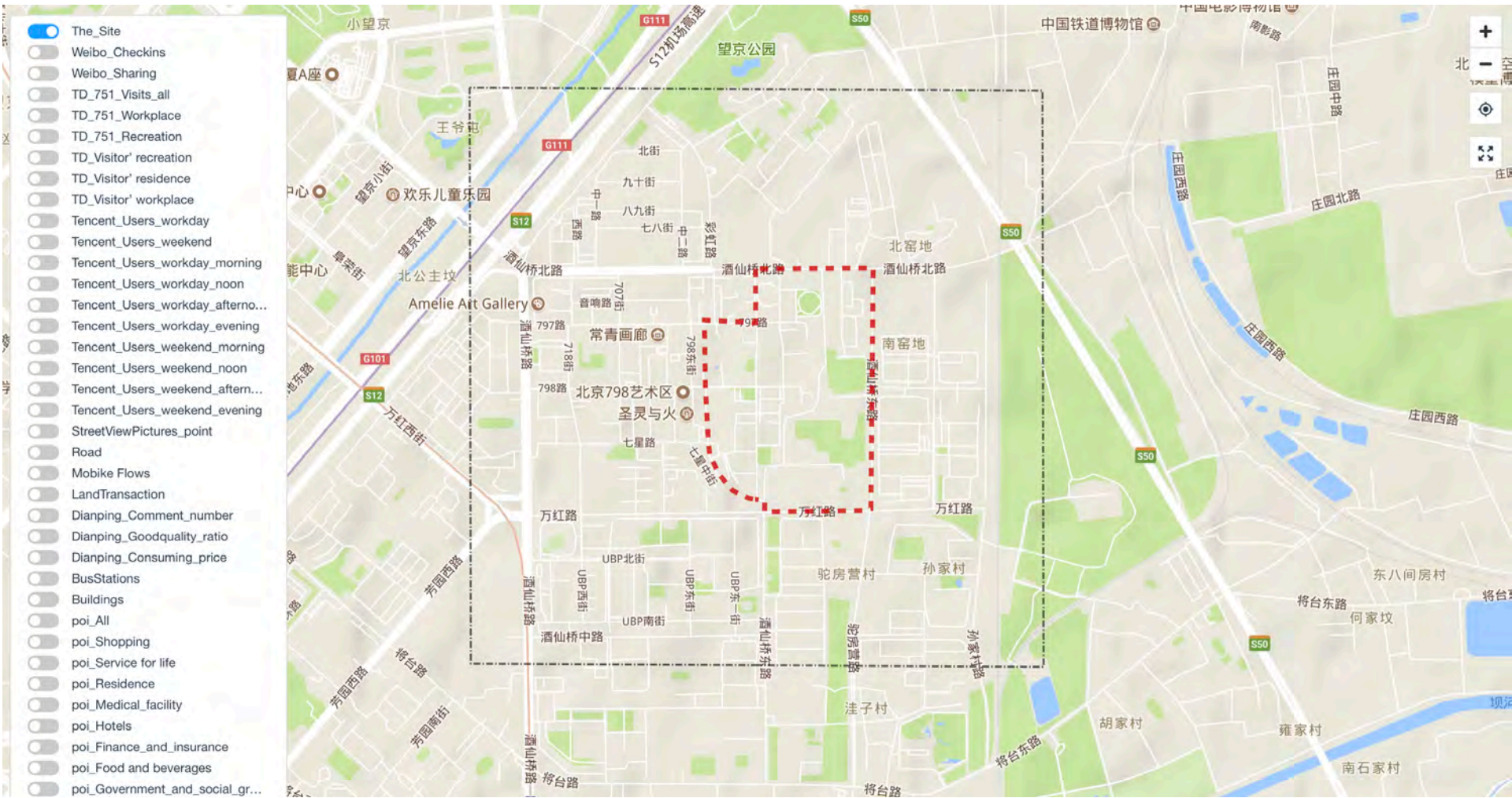
Tencent_User_weekend\workday

Talking data (TD)

Weibo_POI_Checkins

Weibo2014_07_10

1. Analysis_scope / The Site



2. Buildings

Building information

Specific Information: Floor number, area, years

Sharing heritage



Floor number

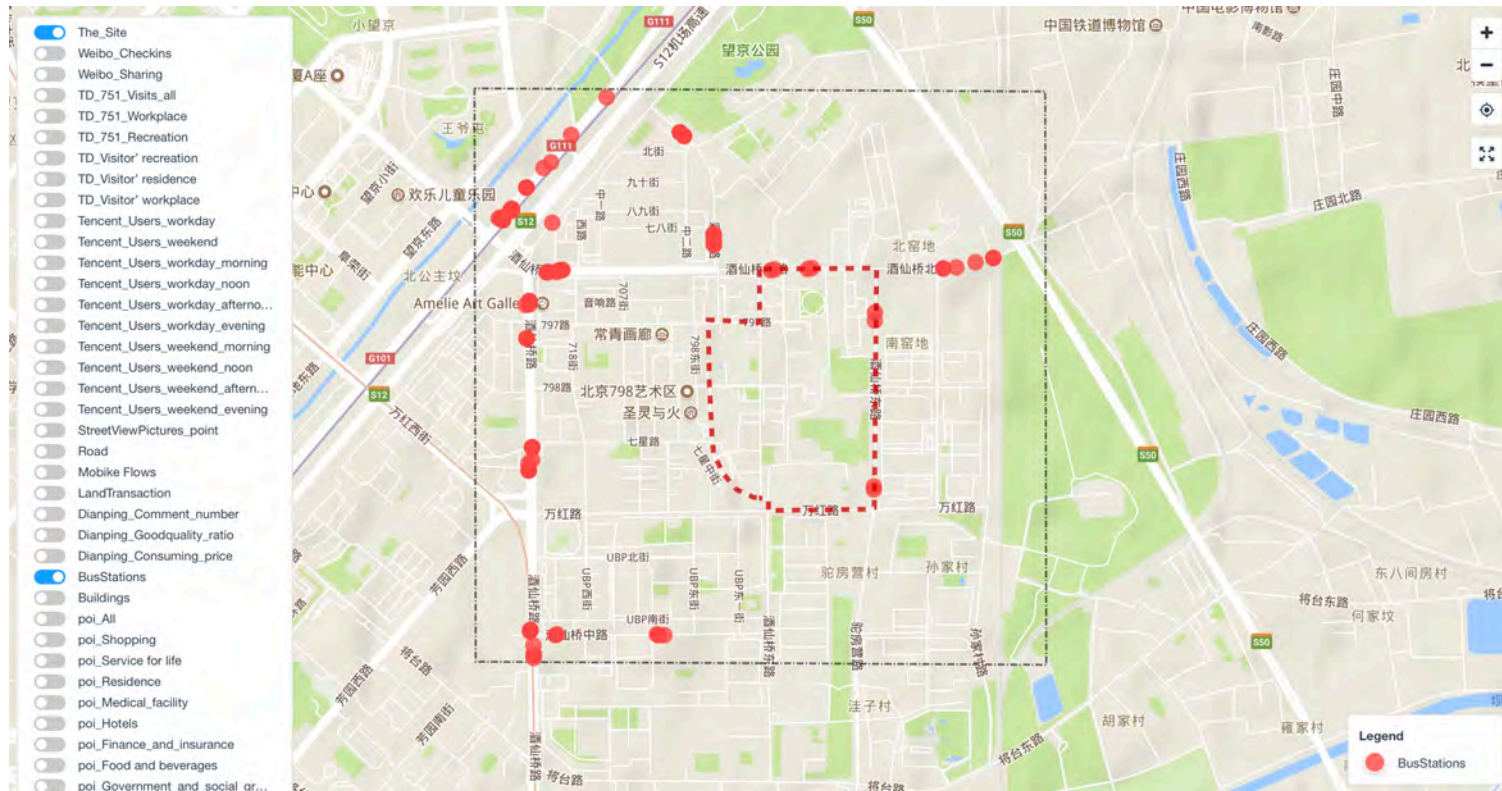
3. BusStations

Bus Station information

Bus station position and name (2014)

Specific Information: Name, number, spell

Sharing transportation



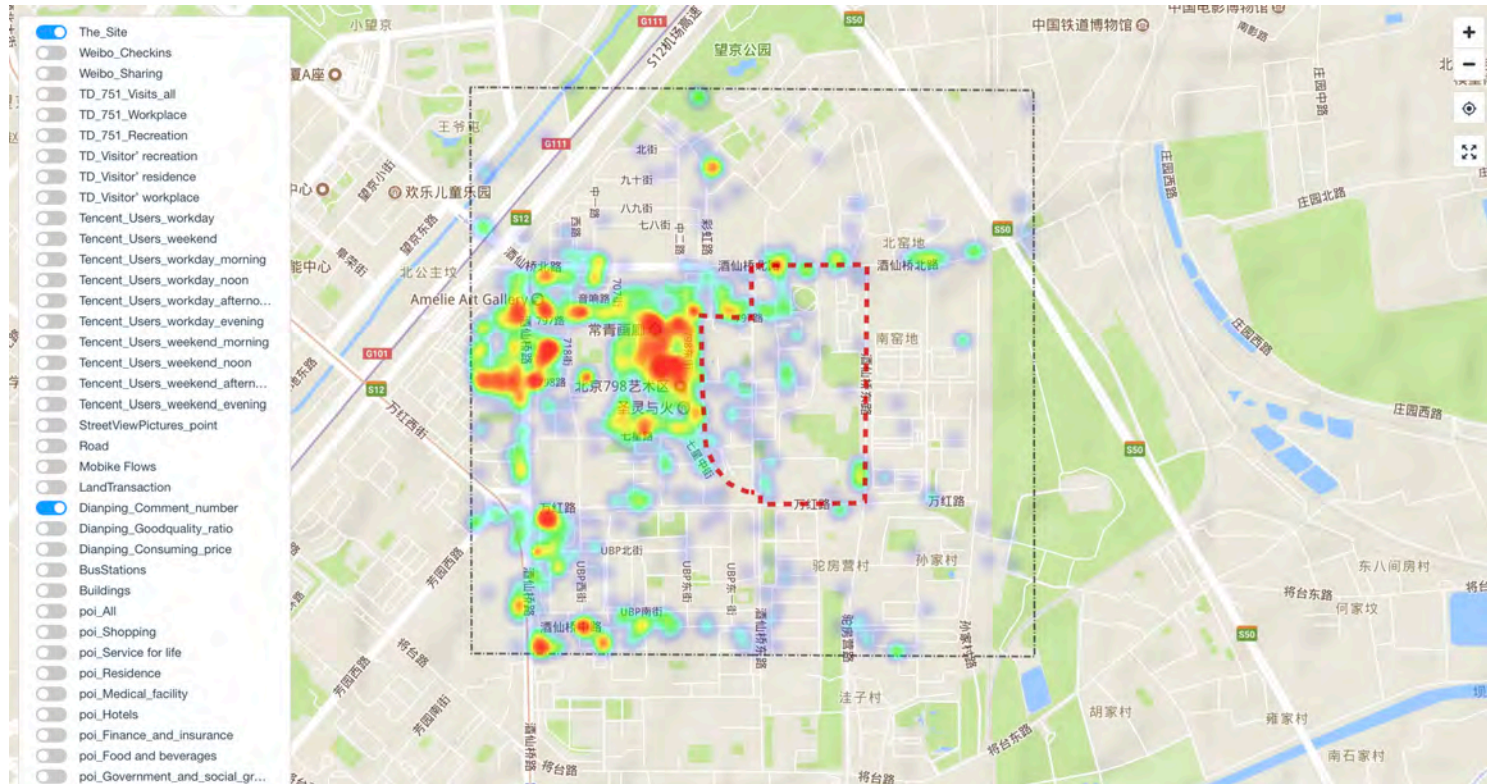
Bus station

4. Dianping Comment and signature point

Tips : Thermodynamic diagrams reflect the density and aggregation of points (high in red and low in blue).

Just like Yelp, providing information about consumption and comment (2014)

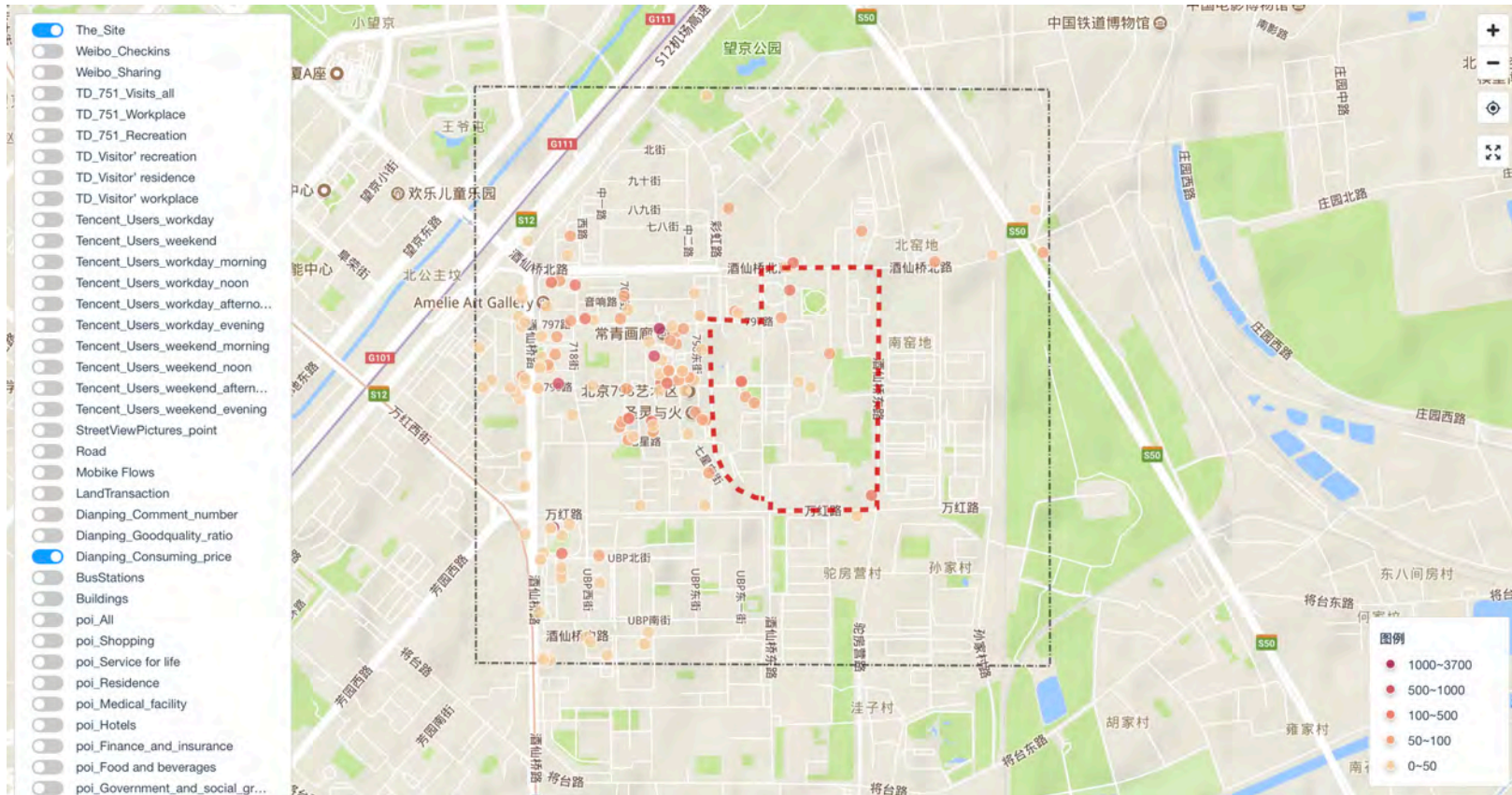
Specific Information: Location, name, rating, comment, consumption, parking space



Density of
comment

4. Dianping Comment and signature point

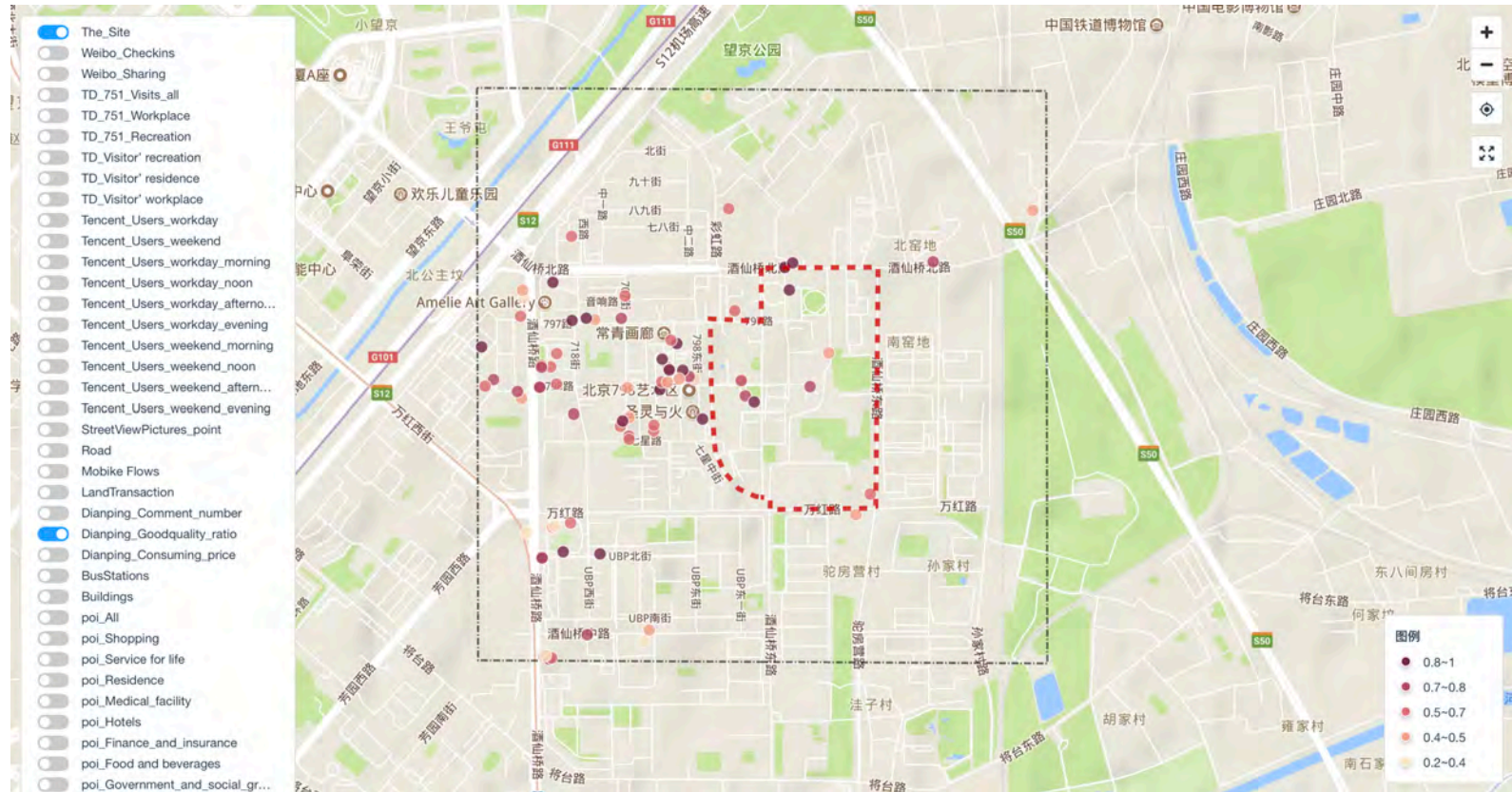
Sharing leisure



Average
consuming
price

4. Dianping Comment and signature point

All remark ≥ 20



Good quality
ratio

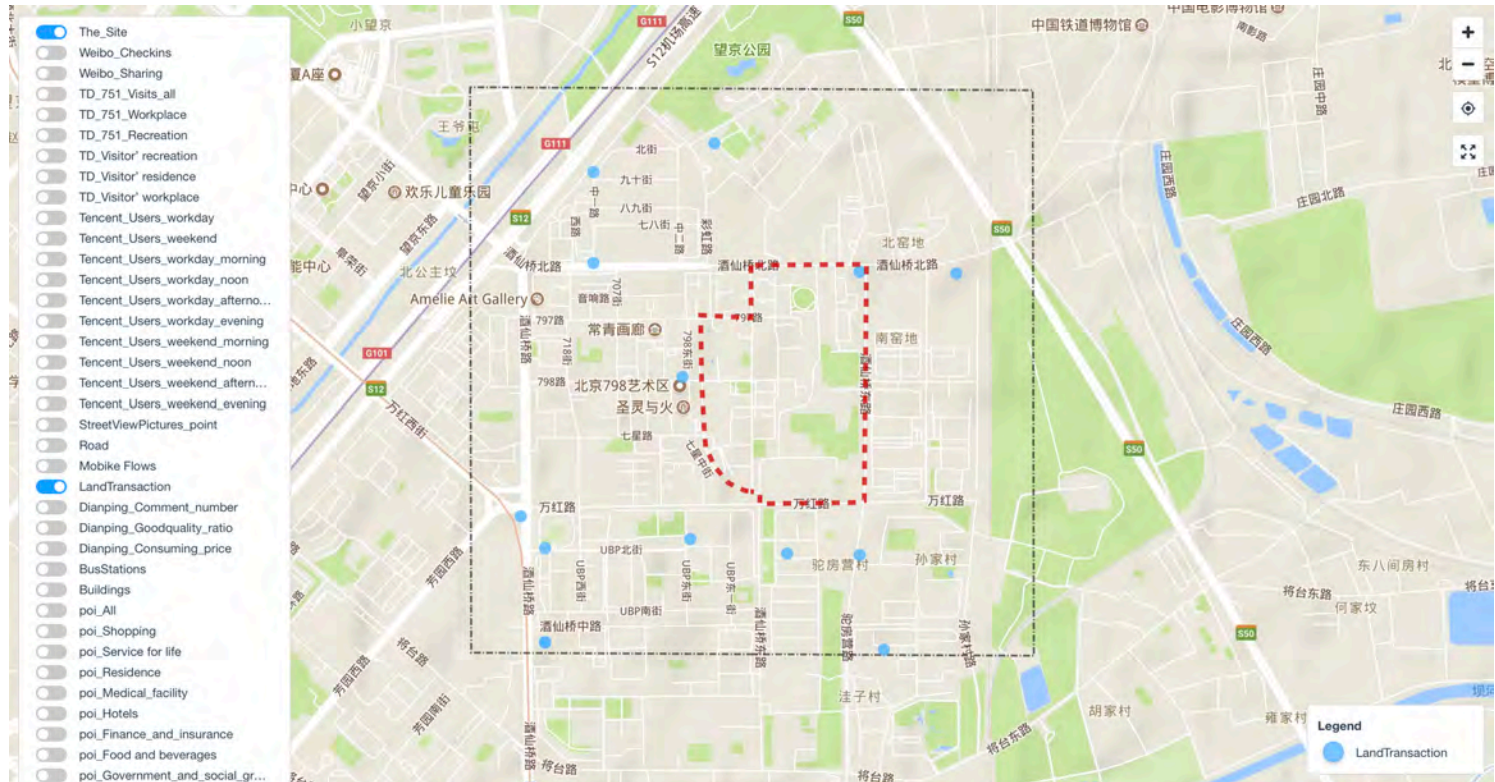
5. LandTransaction

Land transaction information

Key Fields : Land transaction information

Specific Information: Land use, plot ratio, land price

Sharing boundary



Land
transaction

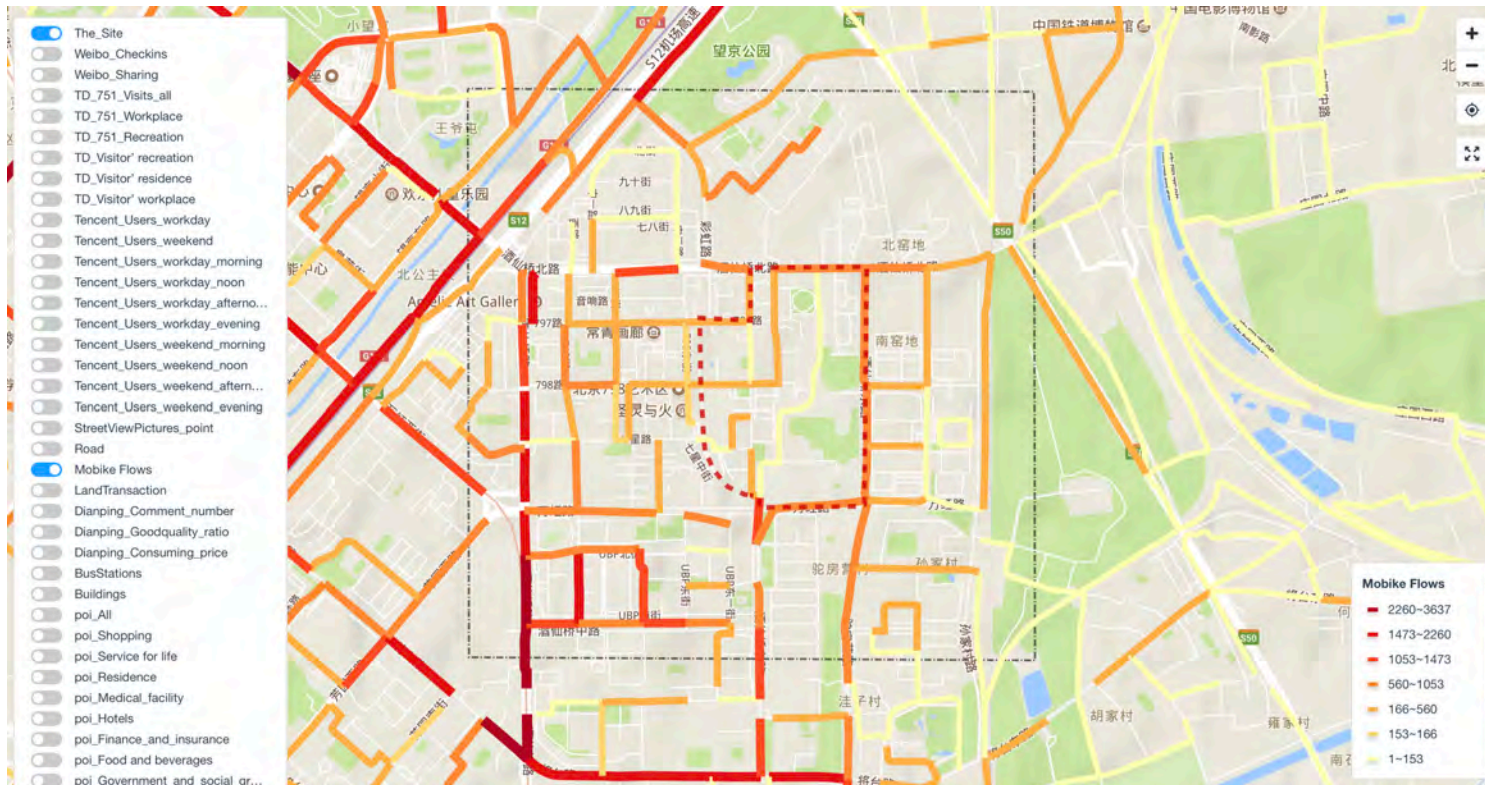
6. Mobike Flows

Flows of Mobike

Key Fields: Flows of Mobike (sharing bikes) (2017.09.05)

Meanings: Location, time, length, width, speed limit, flows (uv)

Sharing
transportation



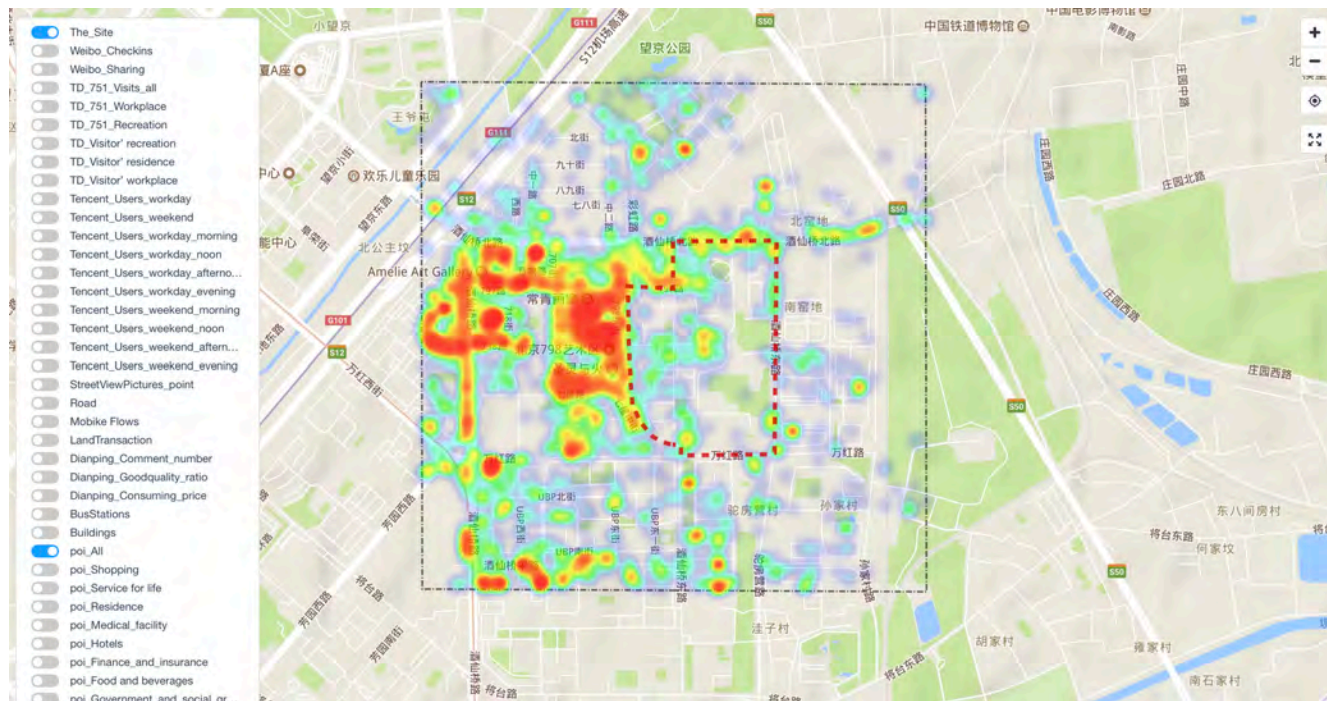
Flows of Mobike

7. POI

Point of Interest

Key Fields : POI (point of interest), a specific point location that someone may find useful or interesting. These information includes shopping, residence, hotels, finance, government, education, and so on. (2016, Gaode/amap)

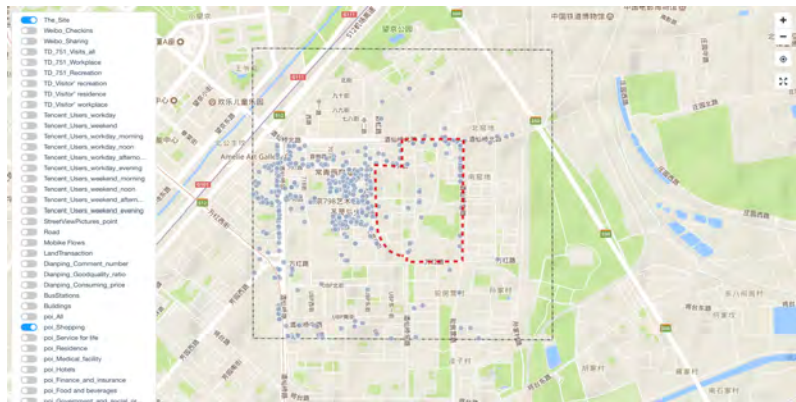
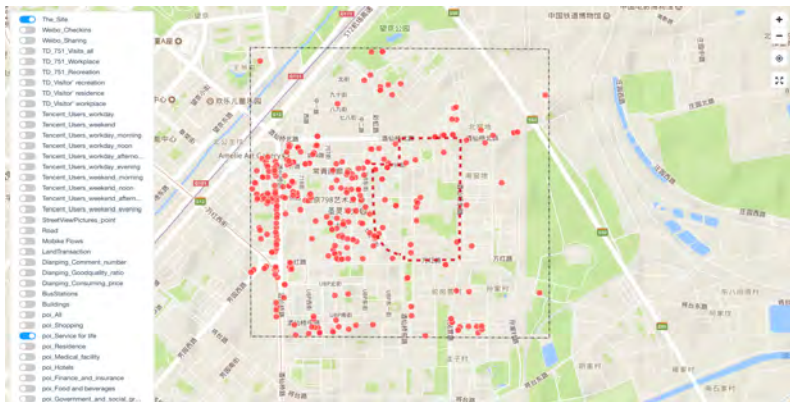
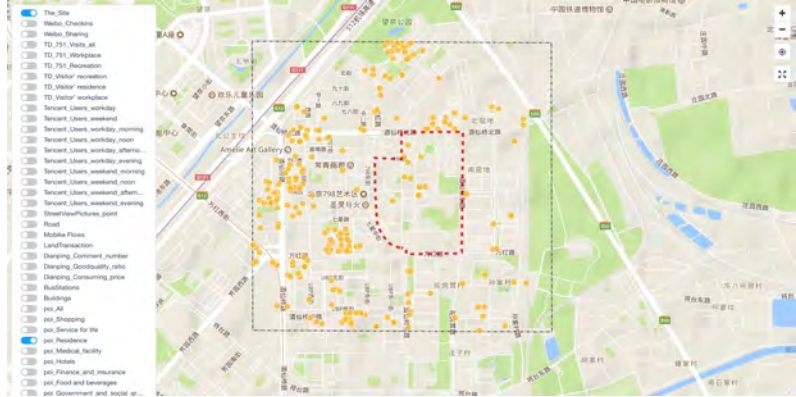
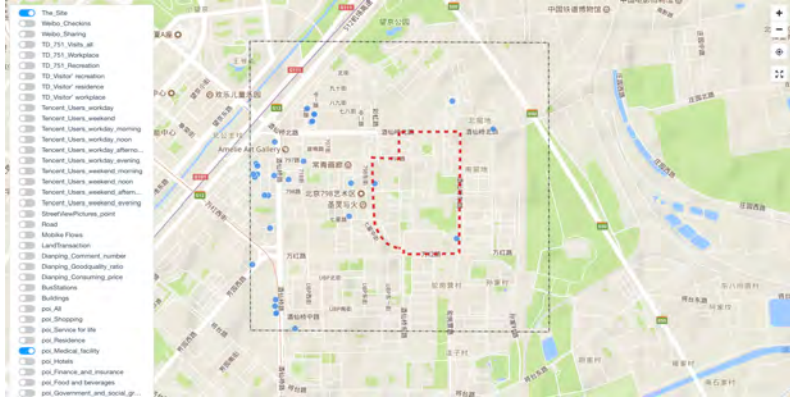
Specific Information: POI location, name, type



Density of
all POI

7. POI Point of Interest

Sharing
infrastructure



Sharing boundary

Sharing work

Sharing leisure

Sharing residential

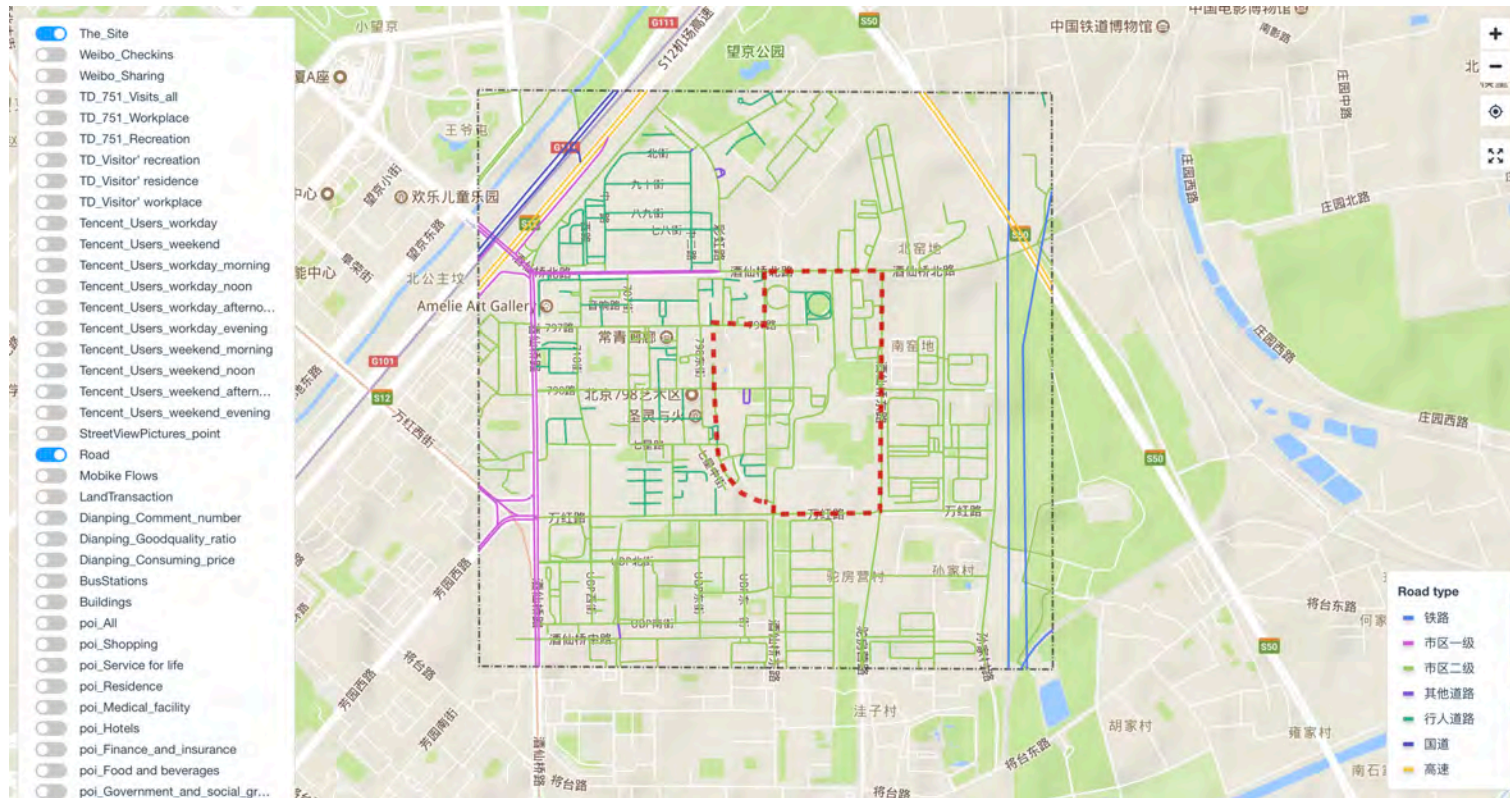
Several kinds of POI

8. Road

Road information

Key Fields : Road information (2016, Gaode/amap)
Specific Information: Name, road grade, length, type

Sharing transportation



Road type

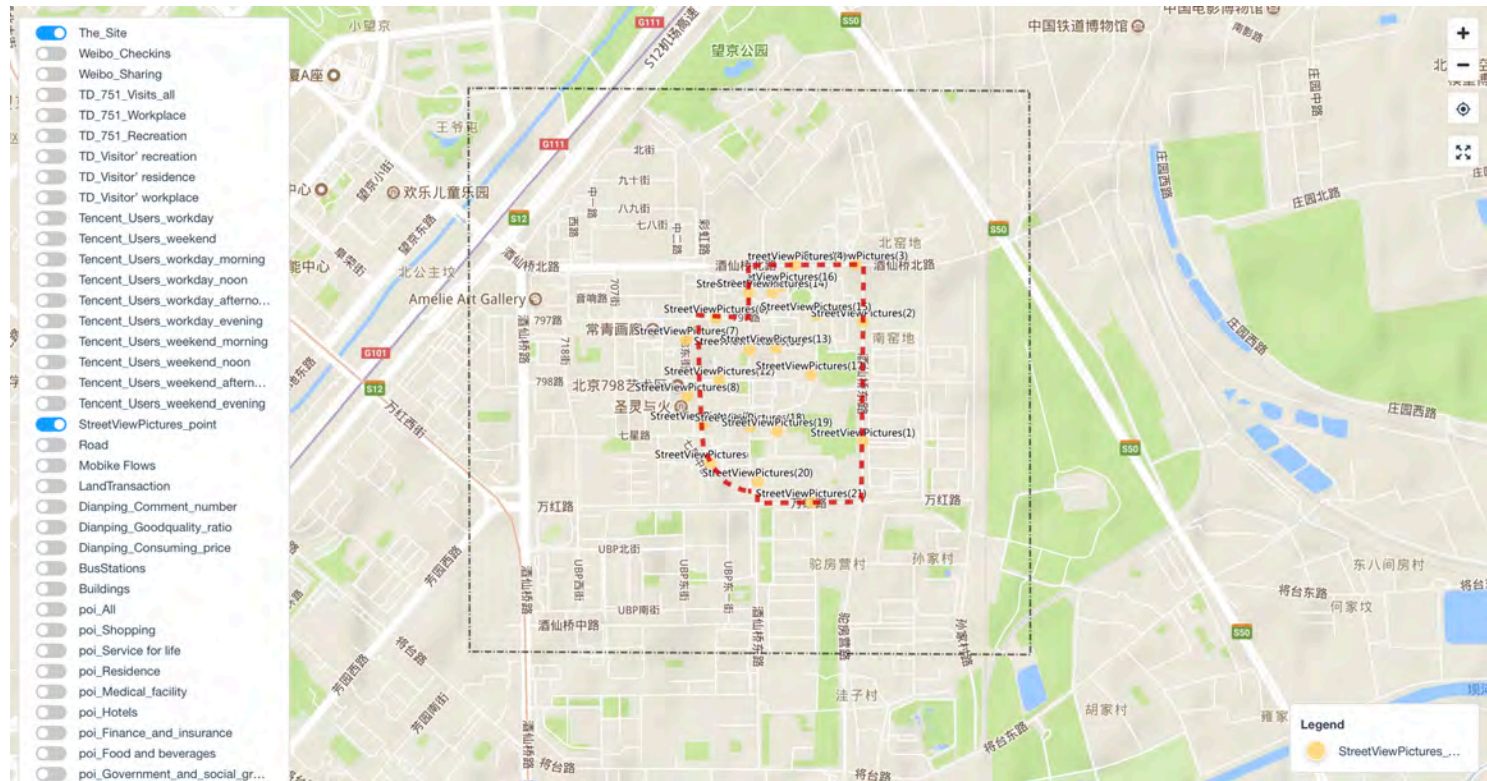
9. StreetViewPicture_point

Street view pictures

Key Fields : In keeping with the file 'StreetViewPictures'
Specific Information: Location and picture number

Sharing
heritage

Sharing
boundary



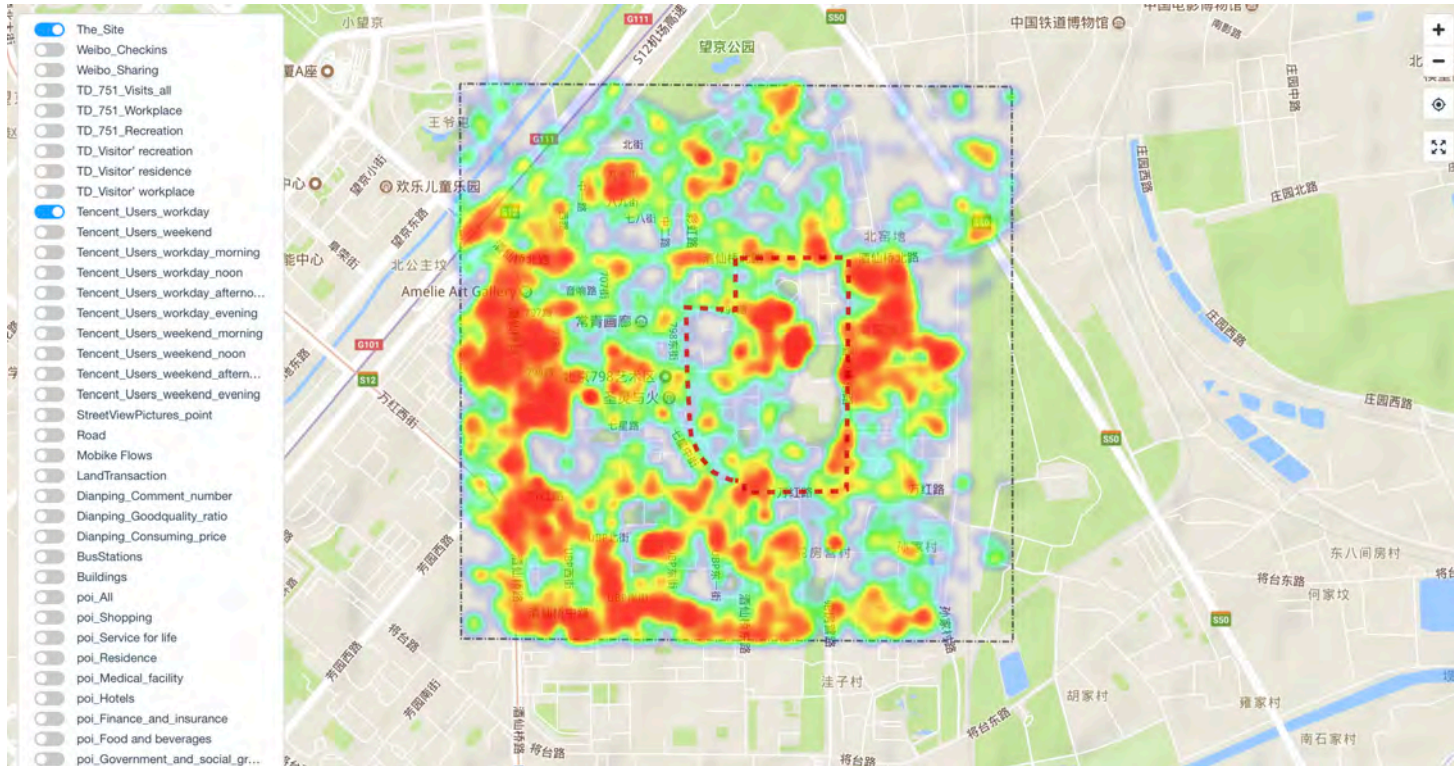
Street view
pictures

10. Tencent_User_weekend\workday

Activity density of Tencent users in different time

Sharing work

Sharing leisure



weekend	2017.12.09 (Saturday)
workday	2017.12.09 (Wednesday)
morning	8:00-9:00
noon	13:00-14:00
afternoon	17:00-18:00
evening	21:00-22:00

Tencent_User_workday

11. Talking data (TD)

Points of different activities

A large body of location based service data

Key Fields : Points of different activities in 751 analysis scope \ different activities' places in Beijing of visitors who have been to 751 analysis scope (2016.05.25)

Specific Information: Location, times, user_id and other personal information

Layer	Meaning	User numbers
TD_751_Visit_all	All visit points in 751 analysis scope	97405
TD_751_Workplace	Places of work in 751 analysis scope	25443
TD_751_Recreation	Places of recreation in 751 analysis scope	45463
TD_Visitor's Recreation	Recreation places of people who have been to 751 analysis scope	63970
TD_Visitor's Residence	Residence of people who have been to 751 analysis scope	67546
TD_Visitor's Workplace	Workplace of people who have been to 751 analysis scope	72288

Sharing work

Sharing leisure

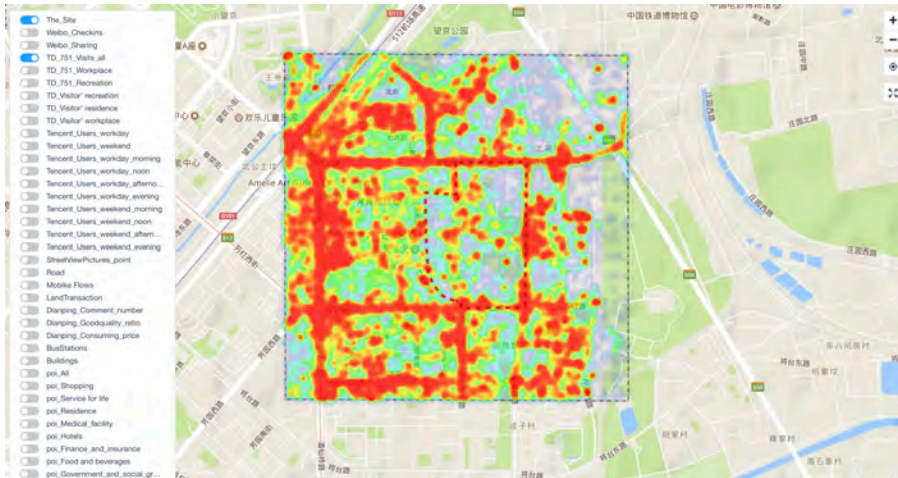
Sharing residential

11. Talking data (TD)

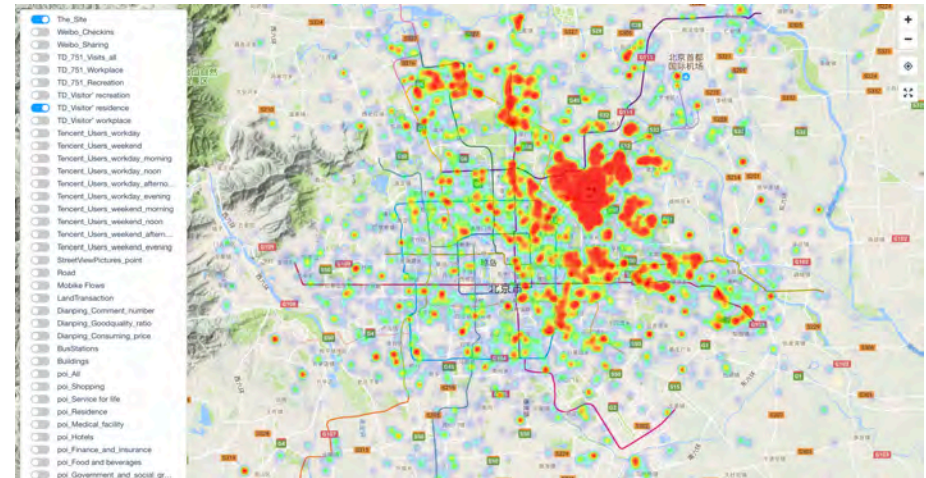
Points of different activities

Key Fields : Points of different activities in 751 analysis scope \ different activities' places in Beijing of visitors who have been to 751 analysis scope (2016.05.25)

Specific Information: Location, times, user_id and other personal information



All visit points in 751 analysis scope



Residence of people who have been to 751 analysis scope

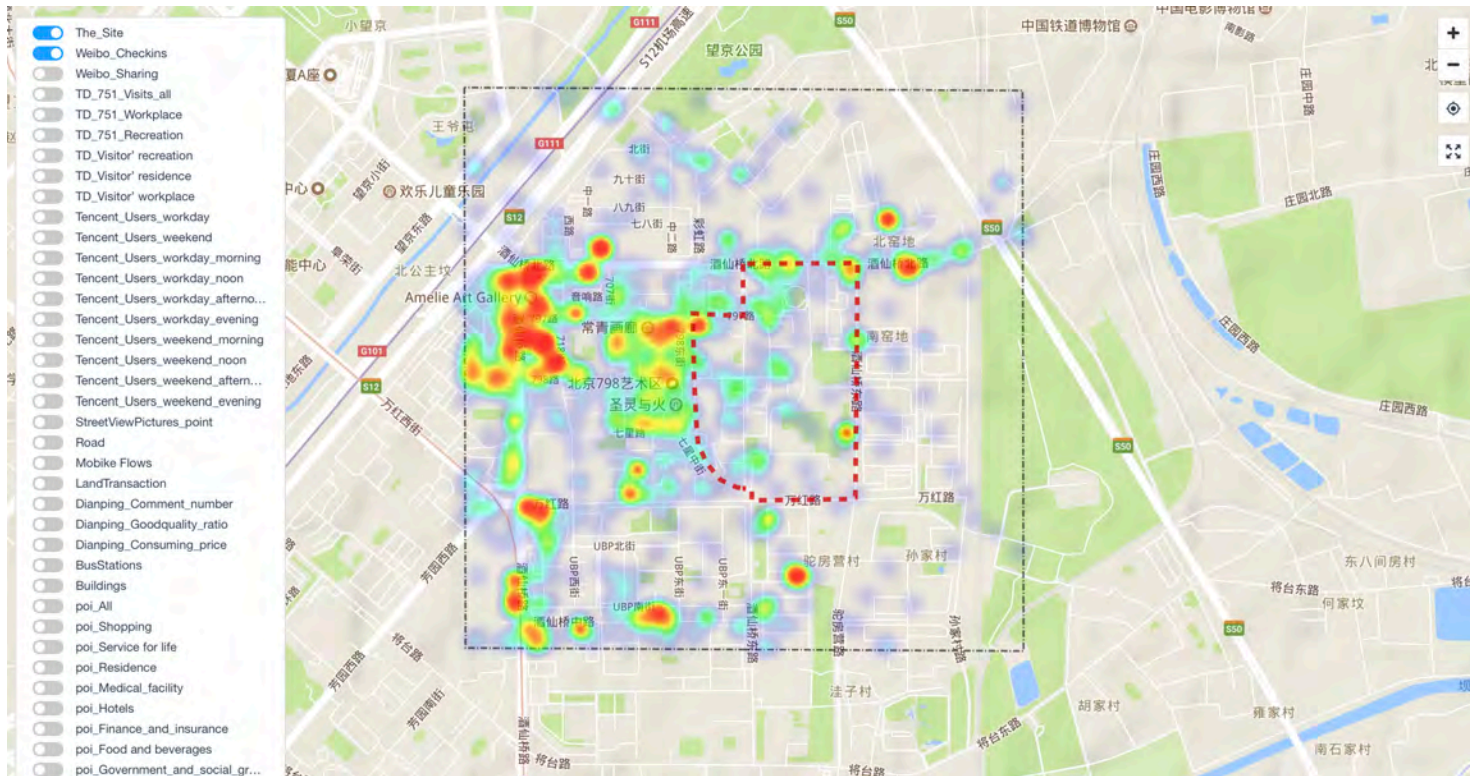
12.Weibo_POI_Checkins

Weibo checkins information

Key Fields: The density of Checkins

Specific Information: Checkin number, type, user number

Sharing leisure



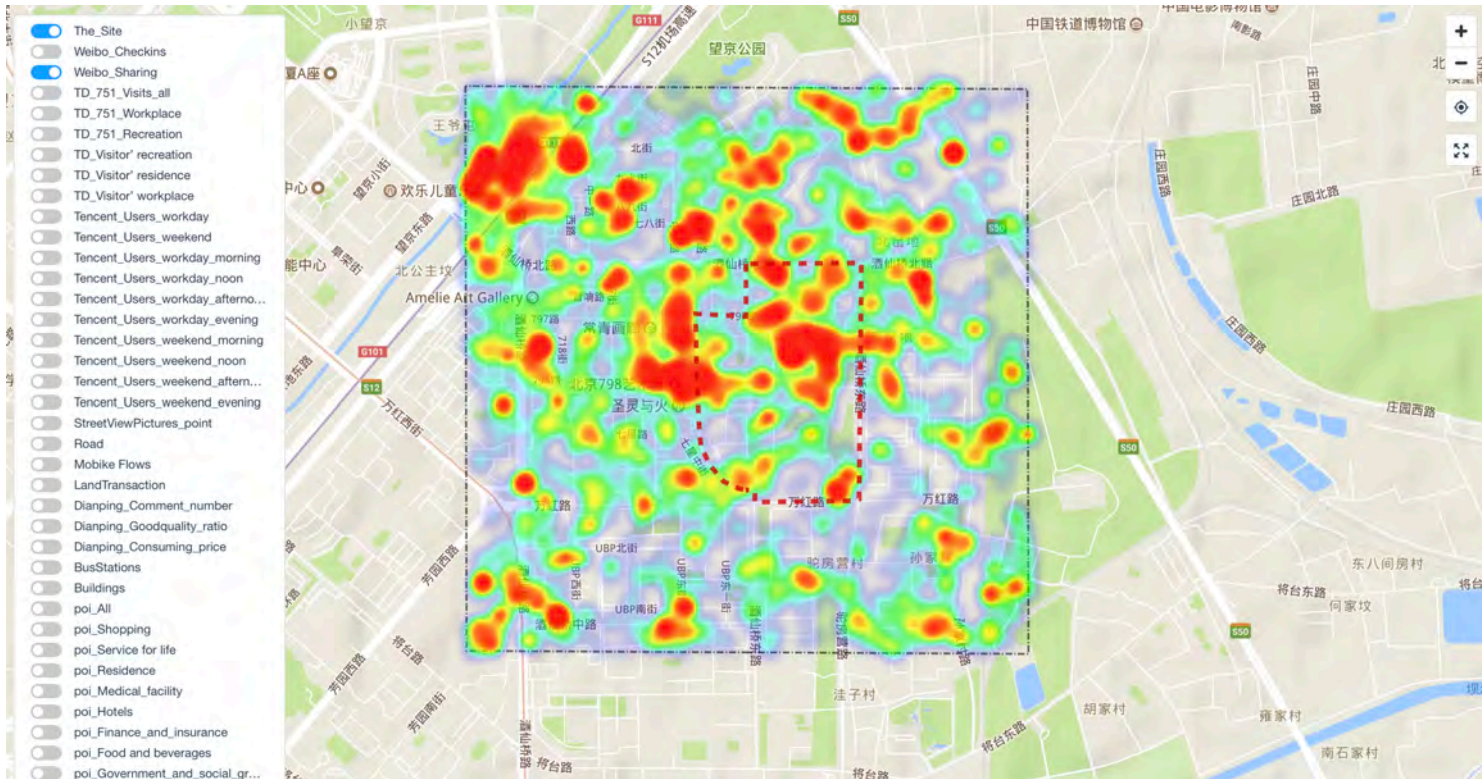
Density of
Weibo
Checkins

13. Weibo sharing

Location of Weibo sharing

Key Fields: The density of Weibo sharing
Specific Information: Location, time, user ID

Sharing leisure



Density of
Weibo sharing

Spatial quality Analysis

Score for street view pictures

Reference

Index	Scoring basis	Yes	No
Pedestrian space	Whether there is a barrier or green belt in a motorway?	1	0
Buildings	Whether the wall is continuous and pleasant, or with plants (for buildings with a wall) ?	1	0
	Whether the building interface is continuous (for buildings without a wall)?	1	0
	Whether the facade of the building embodies the elements of the historic street and is compatible with the environment?	1	0
Bicycle space	Whether there is some space for bicycle parking?	1	0
	Whether the parking space is combined with the greening?	1	0
Small open space	Whether there is an open space and effectively combined with the building?	0.5-1	0

Spatial quality Analysis

Score for street view pictures

Reference

Index	Scoring basis	Yes	No
Urban space node	Whether there is an important and marked city space node?	0.5-1	0
Public pedestrian traffic in the neighborhood	Whether the pedestrian space is marked by the features of privacy?	1	0
	Whether there is a clear exit?	1	0
Street hygiene	Whether the street is neat and free of garbage?	1	0
Street landscape	Whether the street lamps and furniture reflect some culture or history?	1	0
Motor vehicle parking	Whether there is a car park along the street?	-1	0



The end