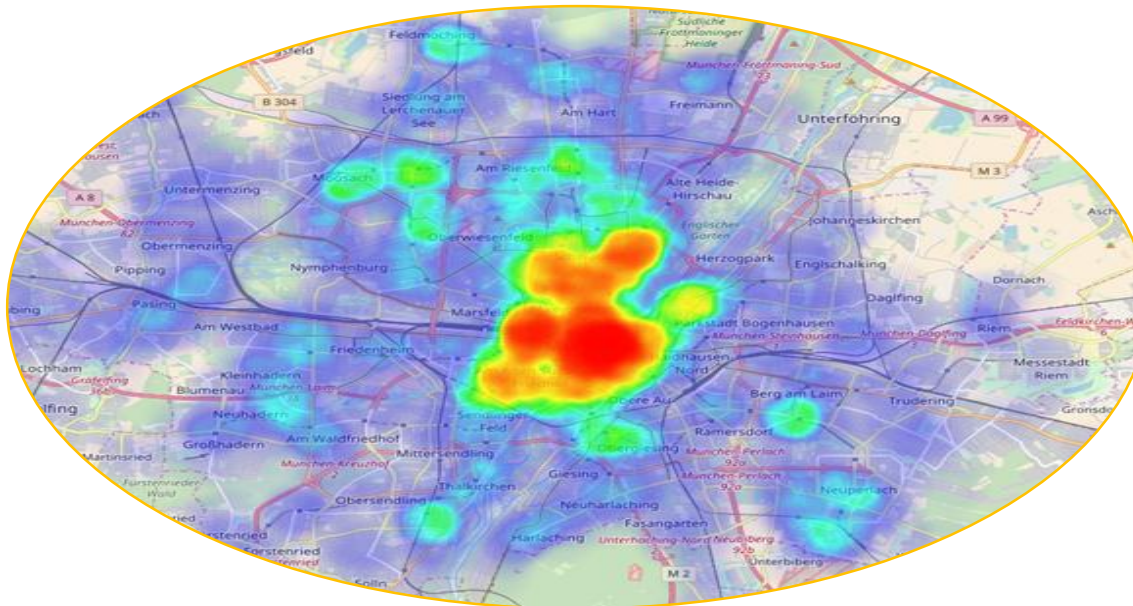


User Guide for Visualization Web-Service

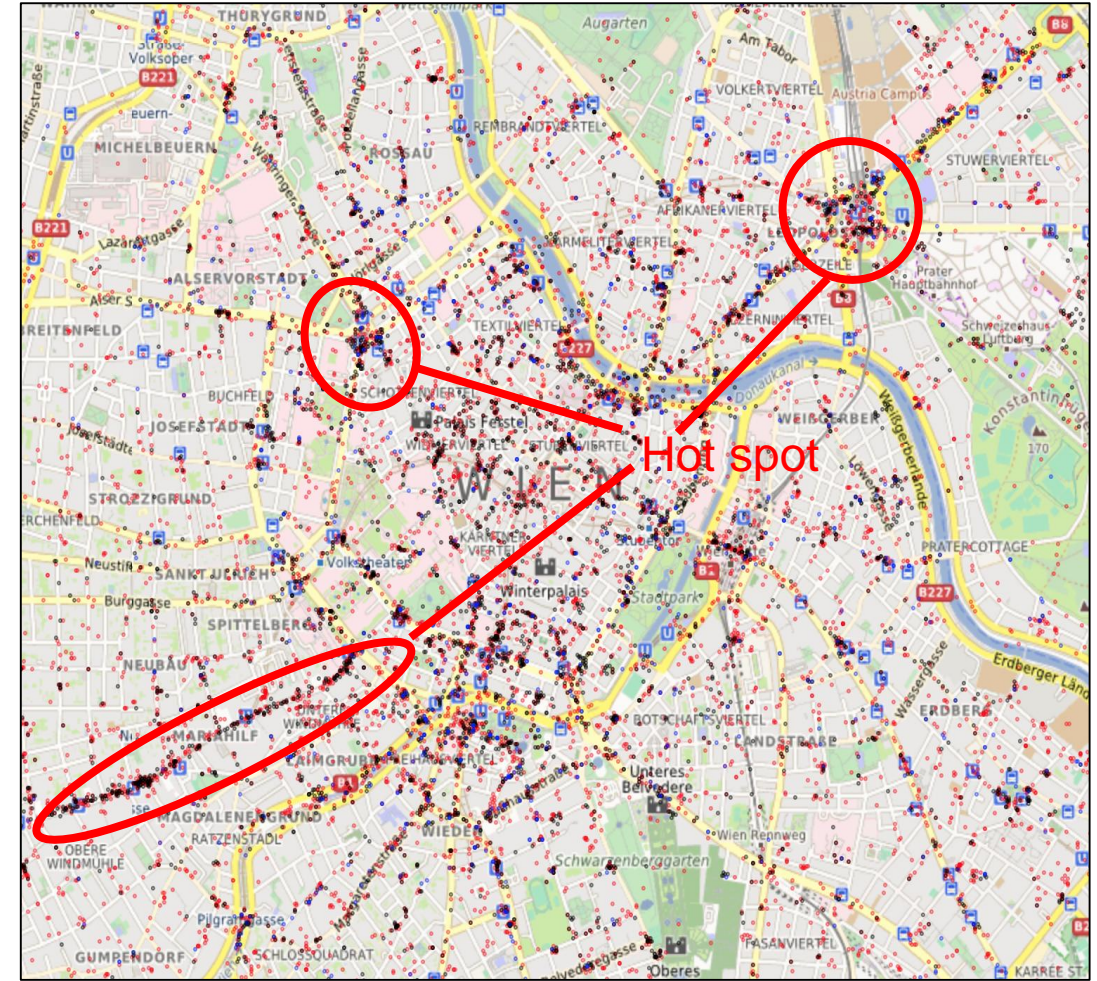
2017.11.27



- Brief
- Geo-map introduction(web-service: <http://13.229.85.131:3838/>)
 - [BikeMapping-Current bike point](#)
 - [Heatmap-Start & End point](#)
 - [Trackpath-Tracking trips](#)
- [How to do maps?](#)

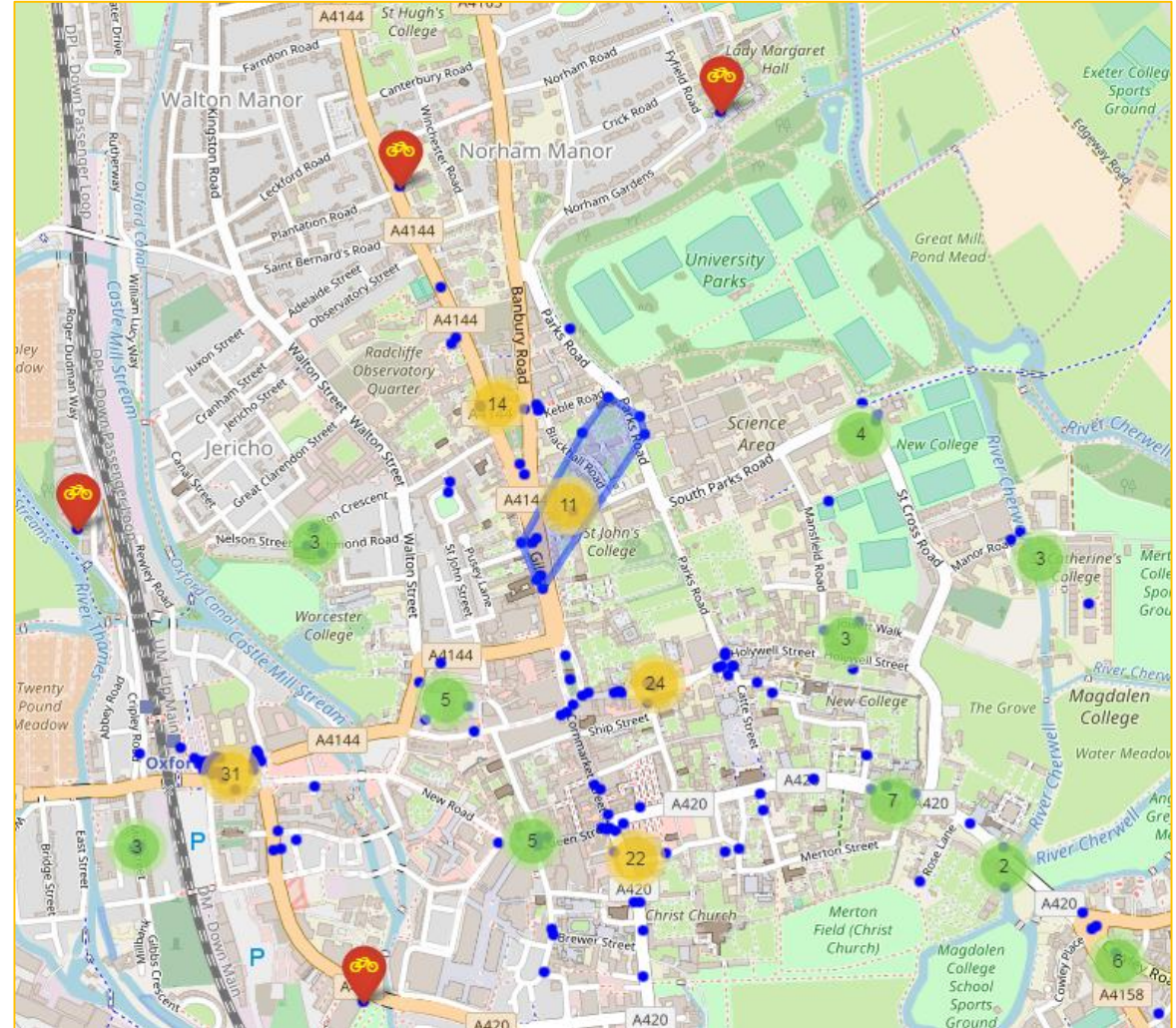
To become a data driven company like us, we collect diversity data, such as coordinate data and so on, but how can we get some valuable information from those data?

Visualizing them on map, we create a mapping web-service. Through bike-mapping map, heat map and Track path map. We not only can know the riding condition, but operate bikes easily.



Bike Mapping

- End point of last trip or the deployed point(bikes which haven't been ridden before)
- It shows the regional bikes amount.(you can move the mouse to the number and see the range of region)
- If the single bike cannot be counted to the near bikes, it will show the red-yellow icon.

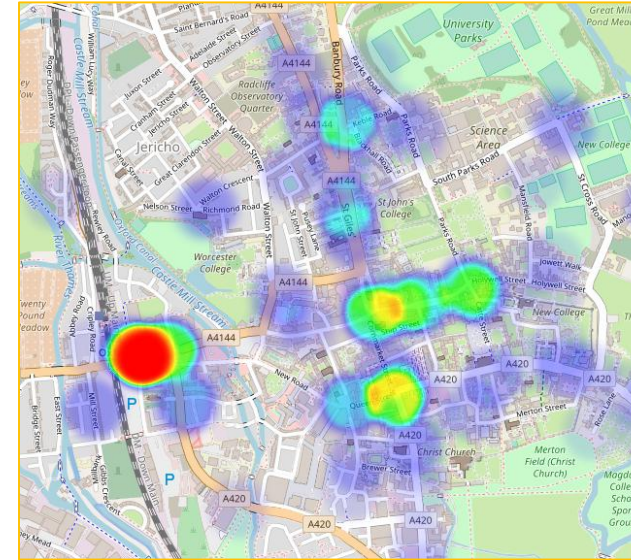
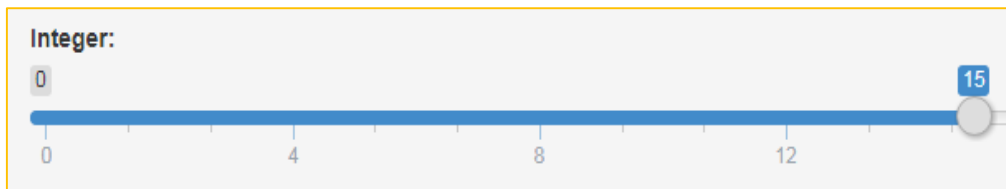


Current bike point(last trip end point)

**Now we collect the coordinate data from user's mobile device, so it might be a bit bias.*

Heatmap

- It shows the distribution of start point and end point. (High density = Red region, Low density = blue region)
- Compare the heat map of start & end point to see the users riding condition
- Adjust the slider to change the radius(no unit) of every hot spot



Start point

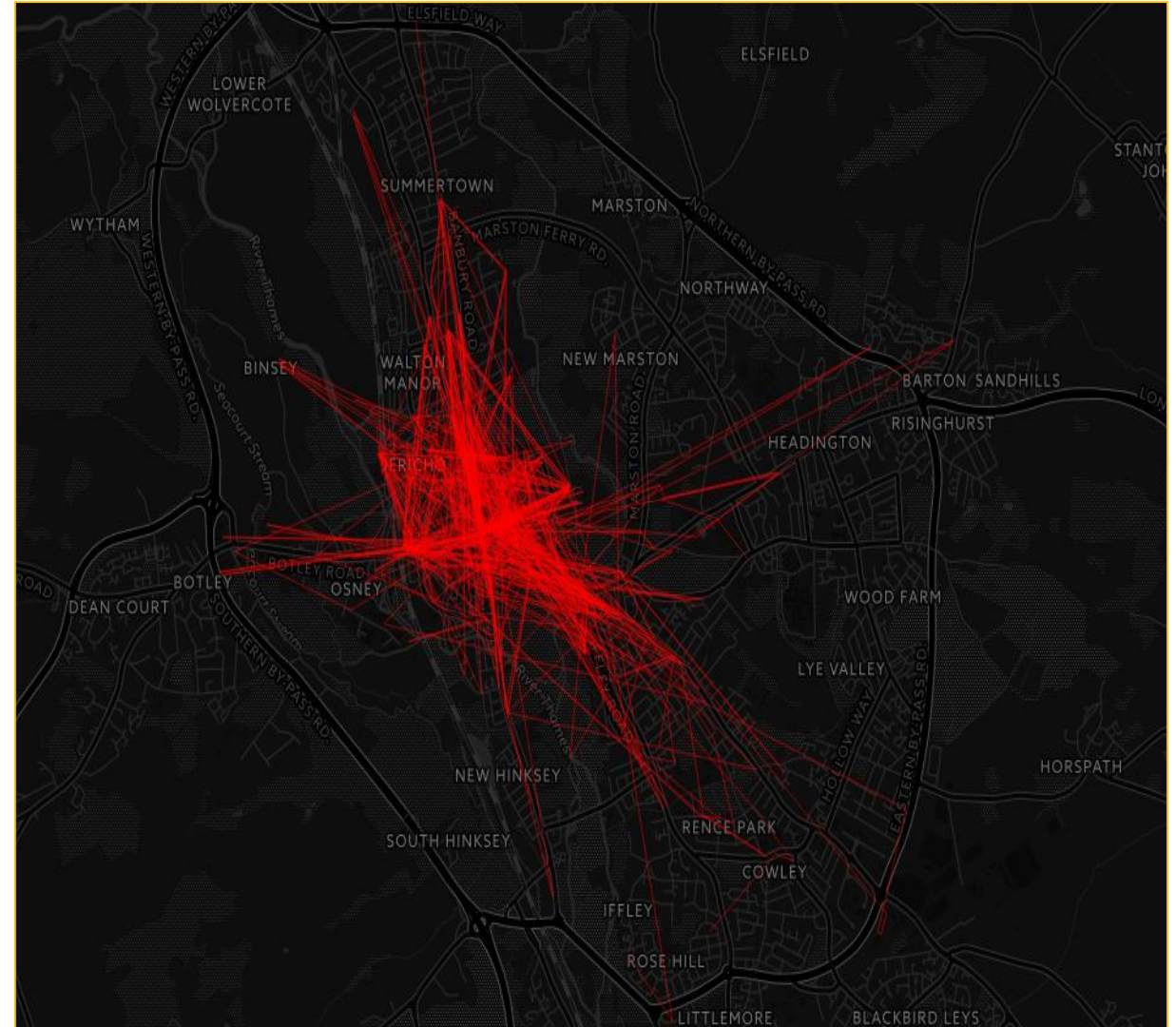


End point

**Now we collect the coordinate data from user's mobile device, so it might be a bit bias.*

Track path

- Except for the start and end points, we collect the coordinate data every few seconds during a trip. Therefore, we can connect every single point to become a line and see the user trip path.
- Notice!! Every trip might contain a few coordinate points, thus, **filtering data first and don't upload the data size more than 3MB**(or you can separate to several cities)



Trip track

**Now we collect the coordinate data from user's mobile device, so it might be a bit bias.*

How to do maps?

Work flow

Export the Map data on
BDP dashboard

oBike-{Country Name}
→ Map_data({Country Name})

Options:

1. BikeMapping
2. Heatmap
3. Trackpath



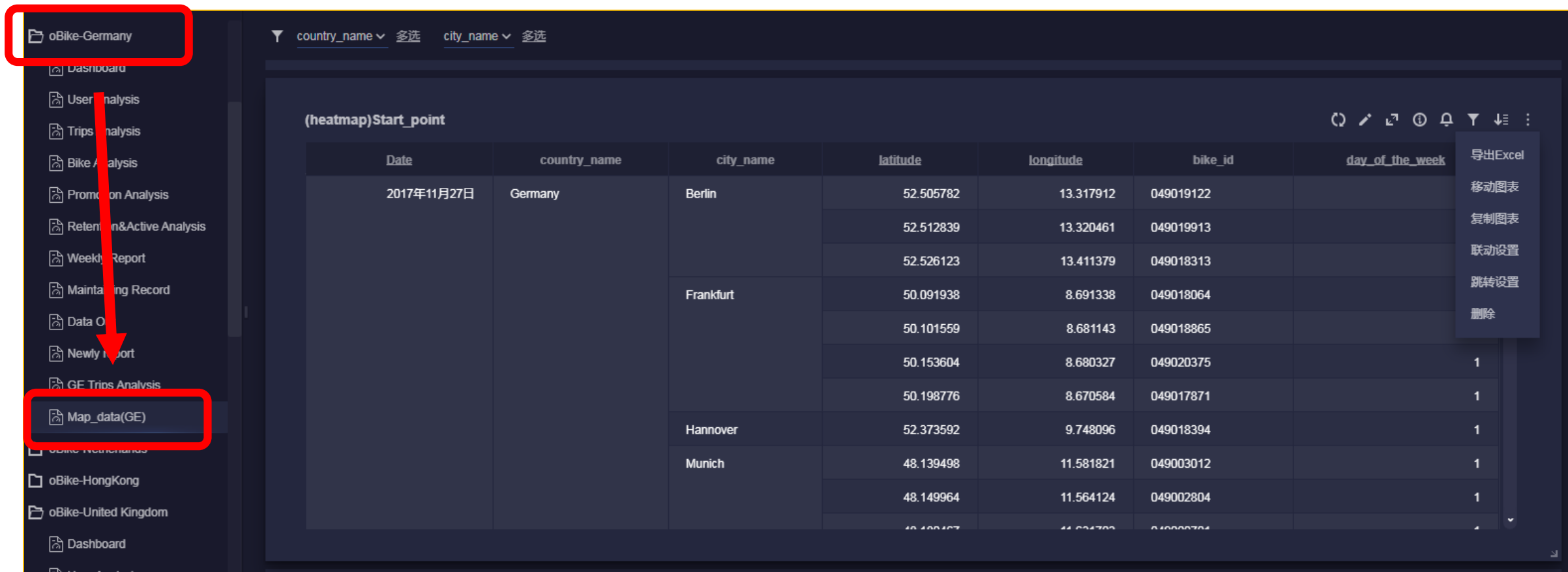
Upload to the web-
service(<http://13.229.85.131:3838>)

Note:

- Please **filter** the data in excel before upload them(especially Track path)
- Format: must be **xlsx.file**
- Cannot contain **missing value**

How to do maps? -Demo

Step1: Find the Map data on BDP

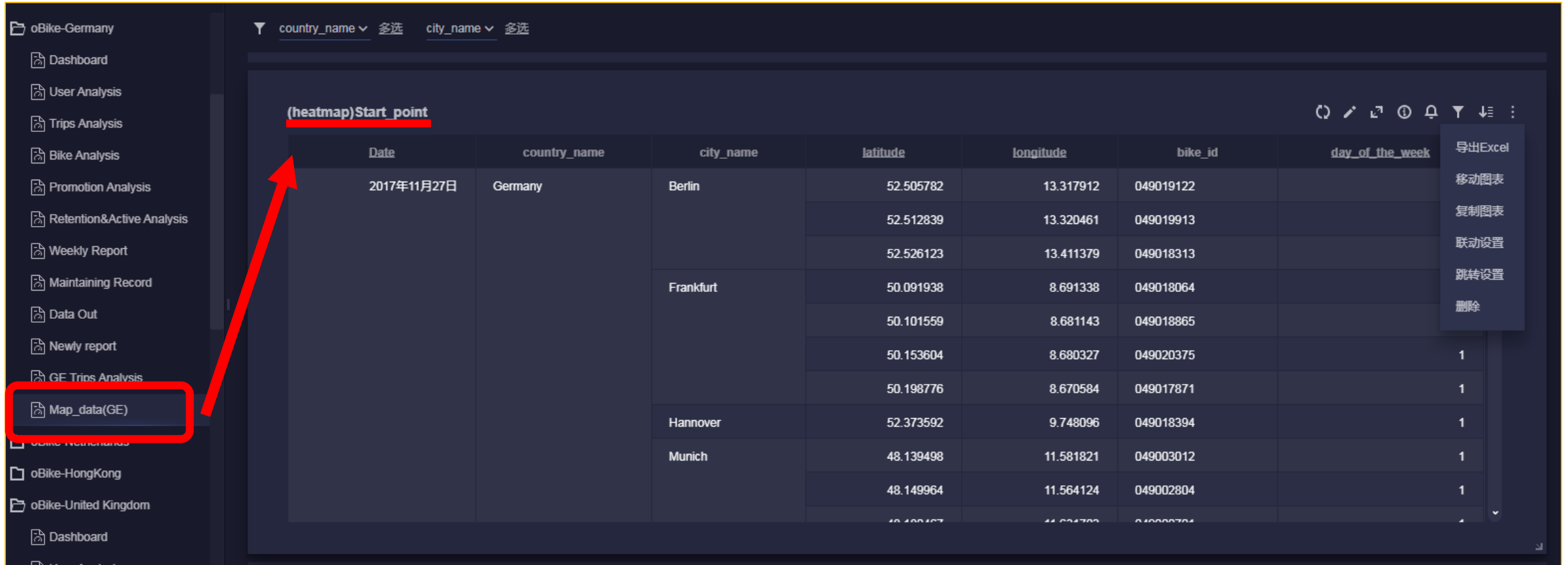


The screenshot shows the oBIKE BDP interface. On the left is a navigation menu with various options. A red box highlights 'oBike-Germany' at the top, and another red box highlights 'Map_data(GE)' further down. A red arrow points from the top box to the bottom box. The main area displays a table titled '(heatmap)Start_point' with columns: Date, country_name, city_name, latitude, longitude, bike_id, and day_of_the_week. The table shows data for Germany, specifically for Berlin, Frankfurt, Hannover, and Munich. A context menu is open on the right side of the table, showing options like '导出Excel', '移动图表', '复制图表', '联动设置', '跳转设置', and '删除'.

Date	country_name	city_name	latitude	longitude	bike_id	day_of_the_week
2017年11月27日	Germany	Berlin	52.505782	13.317912	049019122	
			52.512839	13.320461	049019913	
			52.526123	13.411379	049018313	
		Frankfurt	50.091938	8.691338	049018064	
			50.101559	8.681143	049018865	
			50.153604	8.680327	049020375	1
		Hannover	50.198776	8.670584	049017871	1
			52.373592	9.748096	049018394	1
			Munich	48.139498	11.581821	049003012
		48.149964		11.564124	049002804	1
		48.139498		11.581821	049003012	1

How to do maps? -Demo

Step2: Choose the sheet you want(bikemapping, heatmap or trackpath)



The screenshot shows the oBIKE web application interface. On the left sidebar, the 'Map_data(GE)' option is highlighted with a red box and a red arrow. The main area displays a data table for Germany. The table has columns: Date, country_name, city_name, latitude, longitude, bike_id, and day_of_the_week. The data is filtered by country_name (Germany) and city_name (Berlin, Frankfurt, Hannover, Munich). A context menu is open over the table, showing options: 导出Excel, 移动图表, 复制图表, 联动设置, 跳转设置, and 删除.

Date	country_name	city_name	latitude	longitude	bike_id	day_of_the_week
2017年11月27日	Germany	Berlin	52.505782	13.317912	049019122	
			52.512839	13.320461	049019913	
			52.526123	13.411379	049018313	
		Frankfurt	50.091938	8.691338	049018064	
			50.101559	8.681143	049018865	
			50.153604	8.680327	049020375	1
			50.198776	8.670584	049017871	1
		Hannover	52.373592	9.748096	049018394	1
		Munich	48.139498	11.581821	049003012	1
			48.149964	11.564124	049002804	1

How to do maps? -Demo



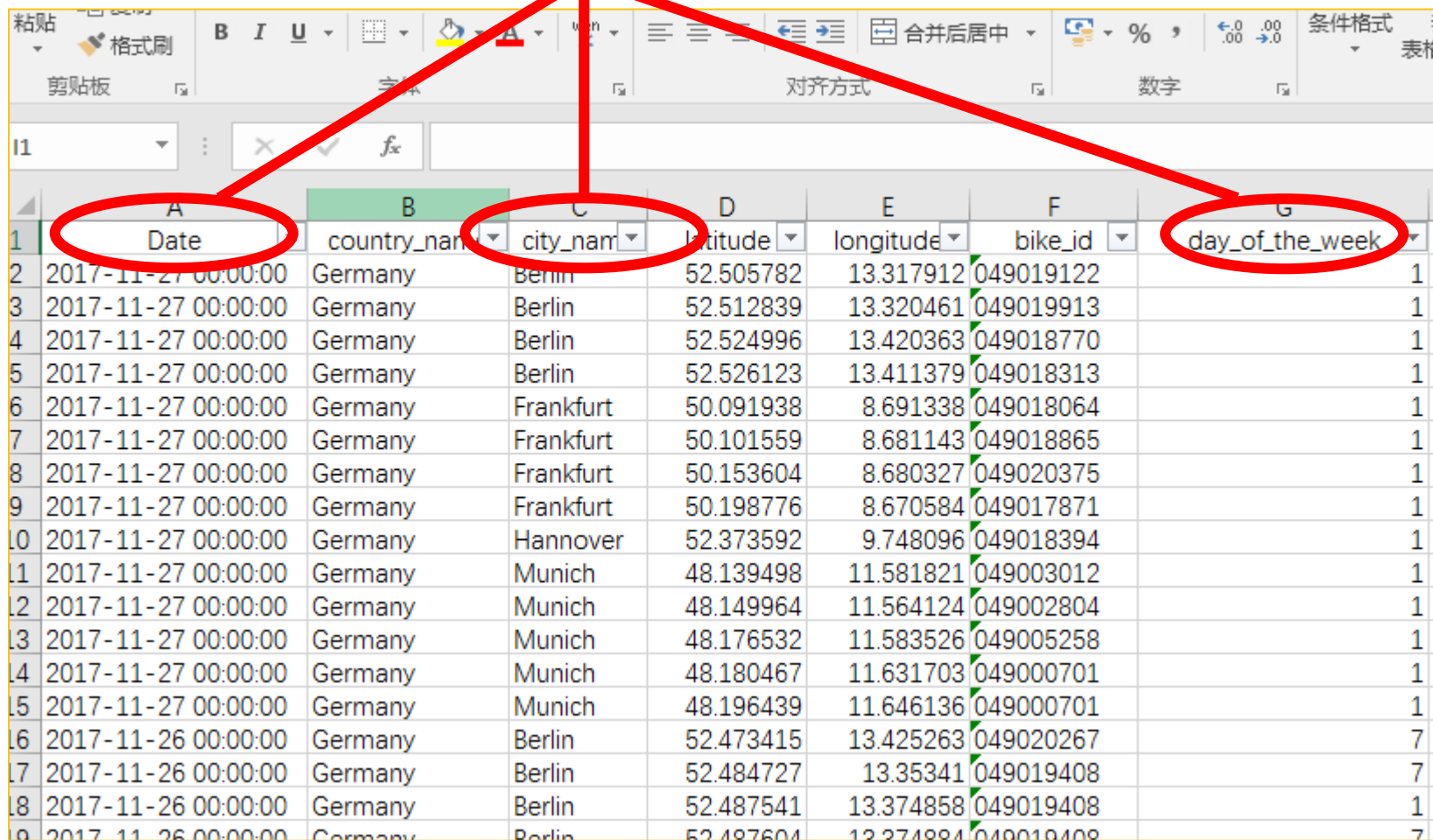
Step3: Export the file(xlsx)

The screenshot shows the oBIKE web application interface. On the left is a sidebar with navigation items: oBike-Germany, Dashboard, User Analysis, Trips Analysis, Bike Analysis, Promotion Analysis, Retention&Active Analysis, Weekly Report, Maintaining Record, Data Out, Newly report, GE Trips Analysis, Map_data(GE), oBike-Netherlands, oBike-HongKong, oBike-United Kingdom, and Map Analysis. The main area displays a heatmap titled '(heatmap)Start_point' and a data table below it. The table has columns: Date, country_name, city_name, latitude, longitude, bike_id, and day_of_the_week. A red arrow points from the heatmap title to the '导出Excel' (Export Excel) button in the table's action menu. The table data is as follows:

Date	country_name	city_name	latitude	longitude	bike_id	day_of_the_week
2017年11月27日	Germany	Berlin	52.505782	13.317912	049019122	
			52.512839	13.320461	049019913	
			52.526123	13.411379	049018313	
		Frankfurt	50.091938	8.691338	049018064	
			50.101559	8.681143	049018865	
			50.153604	8.680327	049020375	1
			50.198776	8.670584	049017871	1
		Hannover	52.373592	9.748096	049018394	1
		Munich	48.139498	11.581821	049003012	1
			48.149964	11.564124	049002804	1

How to do maps? -Demo

Step4: Filter the data(e.g. city_name : Berlin, Date = 2017.11.01-2011.11.10)



	A	B	C	D	E	F	G
	Date	country_name	city_name	latitude	longitude	bike_id	day_of_the_week
1	2017-11-27 00:00:00	Germany	Berlin	52.505782	13.317912	049019122	1
2	2017-11-27 00:00:00	Germany	Berlin	52.512839	13.320461	049019913	1
3	2017-11-27 00:00:00	Germany	Berlin	52.524996	13.420363	049018770	1
4	2017-11-27 00:00:00	Germany	Berlin	52.526123	13.411379	049018313	1
5	2017-11-27 00:00:00	Germany	Frankfurt	50.091938	8.691338	049018064	1
6	2017-11-27 00:00:00	Germany	Frankfurt	50.101559	8.681143	049018865	1
7	2017-11-27 00:00:00	Germany	Frankfurt	50.153604	8.680327	049020375	1
8	2017-11-27 00:00:00	Germany	Frankfurt	50.198776	8.670584	049017871	1
9	2017-11-27 00:00:00	Germany	Hannover	52.373592	9.748096	049018394	1
10	2017-11-27 00:00:00	Germany	Munich	48.139498	11.581821	049003012	1
11	2017-11-27 00:00:00	Germany	Munich	48.149964	11.564124	049002804	1
12	2017-11-27 00:00:00	Germany	Munich	48.176532	11.583526	049005258	1
13	2017-11-27 00:00:00	Germany	Munich	48.180467	11.631703	049000701	1
14	2017-11-27 00:00:00	Germany	Munich	48.196439	11.646136	049000701	1
15	2017-11-26 00:00:00	Germany	Berlin	52.473415	13.425263	049020267	7
16	2017-11-26 00:00:00	Germany	Berlin	52.484727	13.35341	049019408	7
17	2017-11-26 00:00:00	Germany	Berlin	52.487541	13.374858	049019408	1
18	2017-11-26 00:00:00	Germany	Berlin	52.487604	13.374858	049019408	7

How to do maps? -Demo

Step5:Upload data to the web-service to get the result!(<http://13.229.85.131:3838>)

Uploading Files

Choose xlsx file

Browse...

No file selected

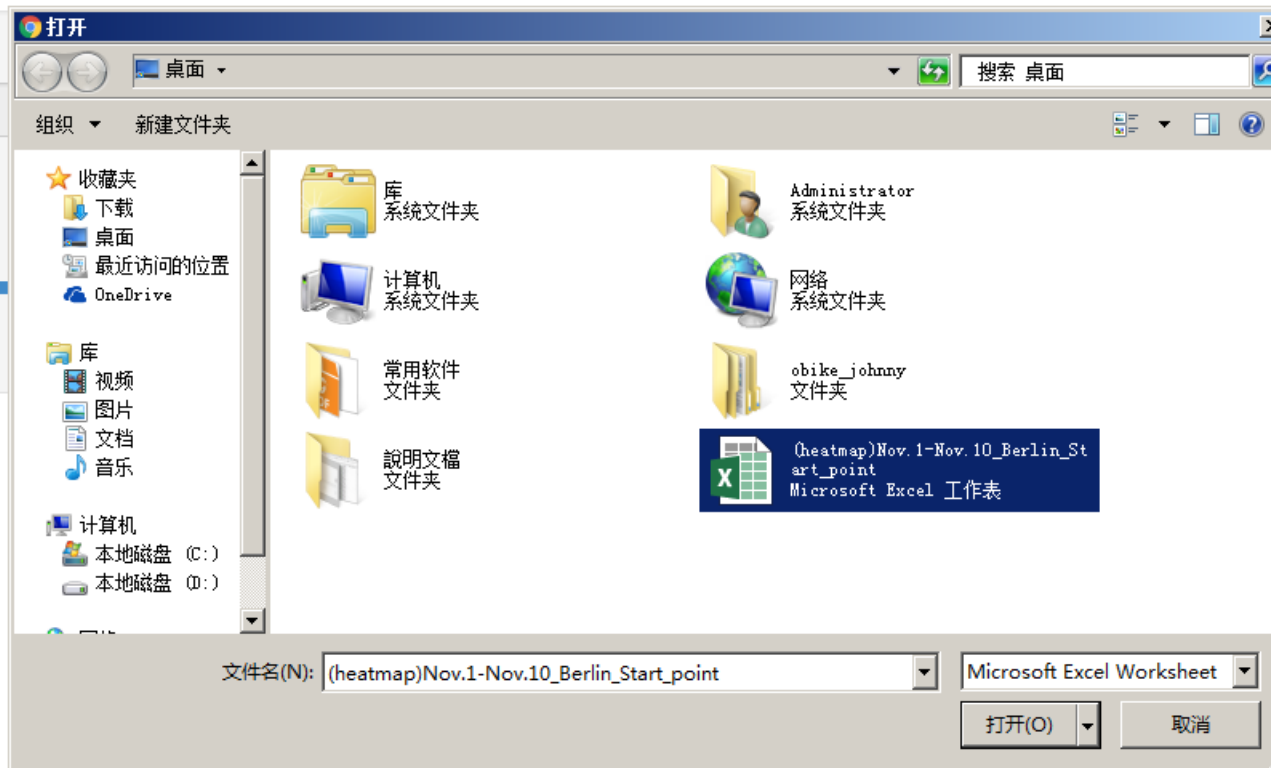
Integer:

0

0

4

8



How to do maps? -Demo



Step6:Upload data to the web-service to get the result! (<http://13.229.85.131:3838>)

Uploading Files

Choose xlsx file

Browse... (heatmap)Nov.1-Nov.10_Berlin_Start_point.xlsx

Upload complete

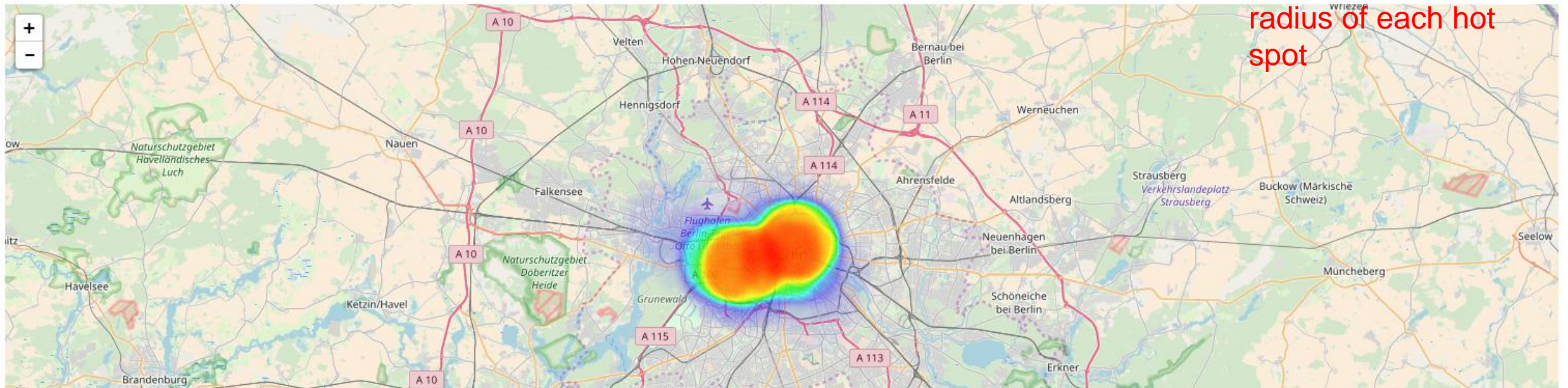
Integer:

0

0 4 8 12 16 20 24 28 32 36 40

40

Customize the
radius of each hot
spot



Q1. Why can't we find all pass data in BDP dashboard?

Ans :

Temporarily, according to the market requests and web-service burden, we just open the data period such like:

(Heatmap) Start_point : in 30 days(include today)

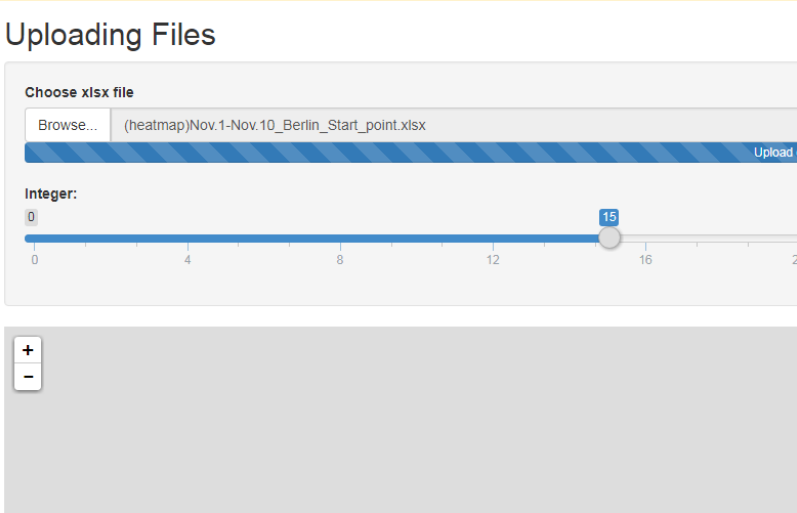
(Heatmap) End_point : in 30 days(include today)

(Trackpath) Tracking_trips: in 7 days(include today)

Q2. Why web-service appears the error message after uploading the data?(display grey image)

Ans :

There might be some missing value. Please omit the row of missing value and re-upload the data again.



Uploading Files

Choose xlsx file

Browse... (heatmap)Nov.1-Nov.10_Berlin_Start_point.xlsx

Integer: 15

+

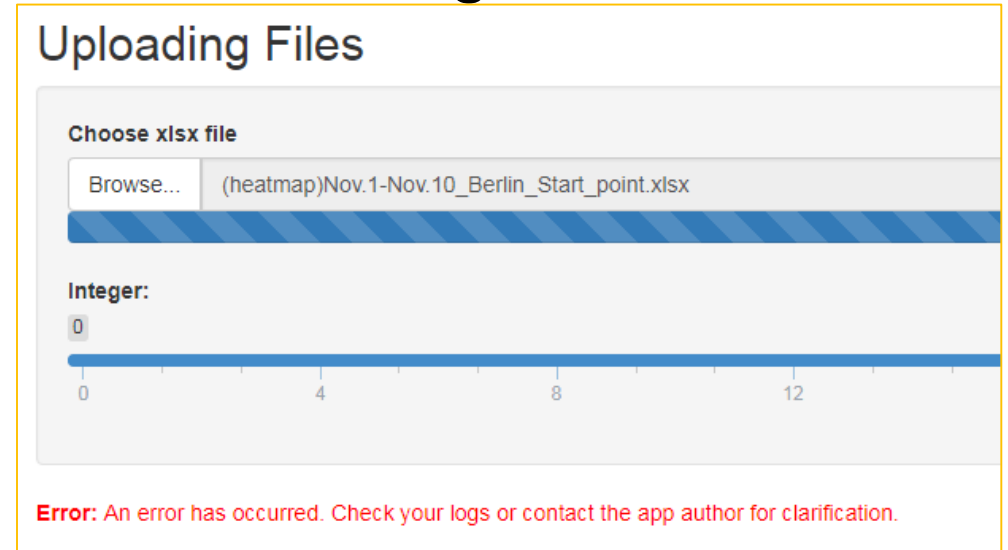
-

Q3. Why web-service appears the error message after uploading the data?

Ans:

Verify whether the data contain those column below or not(case-sensitive)?

- BikeMapping : bike_id, latitude, longitude
- Heatmap : latitude, longitude
- Trackpath : track_id, latitude, longitude



Q4. Why web-service doesn't display the map after uploading the data for a while?

Ans: The uploaded data size might be too large. (especially track path, we collect the coordinate data every few seconds during a trip.)

Uploading data recommendation:

BikeMapping & Heatmap : data size below **5MB**

Trackpath : data size below **3MB**

Thank you