Report: Netnography of public transport in UPPER's Living Labs: València, Ile de France, Rome, Oslo and Mannheim

Reported by: Carol Soriano García, Amparo López Vicente, Juan Giménez Pla

Data collected from January to February 2023

April '23

Index:

UPPER

Report: Netnography of public transport in UPPER's Living Labs: València, Ile de France, Rome, Oslo and Mannheim

Netnography**, an online research method originating in* **ethnography, is understanding* **social interaction** *in contemporary* **digital communications** *contexts.* **Netnography** *is a specific set of research practices related to data collection, analysis, research ethics, and representation, rooted in participant observation. In netnography, a significant amount of the data originates in and manifests through the digital traces of naturally occurring public conversations recorded by contemporary communications networks. Netnography uses these conversations as data. It is an interpretive research method that adapts the traditional, in-person* **participant observation** *techniques of* **anthropology** *to the study of interactions and experiences manifesting through* **digital communications** *(*).*

(*)Robert V. Kozinets (1998) ,"On Netnography: Initial Reflections on Consumer Research Investigations of Cyberculture", in NA - Advances in Consumer Research Volume 25, eds. Joseph W. Alba & J. Wesley Hutchinson, Provo, UT : Association for Consumer Research, Pages: 366-371.
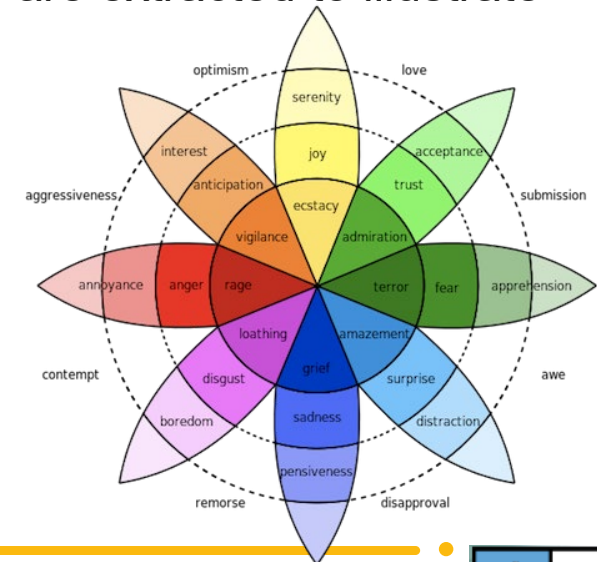
UPPER

1. Objective & methodology (I)

⚲ The **objective** of this work is to analyze **citizen transport** (in its different forms) through the analysis of online comments (*Netnography*).

⚲ The **methodology** consisted of analyzing 5 representative cities in Europe that participate in the UPPER project as Living Labs, and are: **Valencia**, **Ile de France**, **Rome**, **Oslo** and **Mannheim**.

⚲ The following **types of transport** have been analyzed:

  ⚲ Bus

  ⚲ Subway and/or Tram

  ⚲ Taxi

  ⚲ Shared bike

  ⚲ Shared LEV (motorbike and/or e-scooter)

  ⚲ Shared car.

⚲ The **methodological phases** are:

  ⚲ **1. Web Scraping to identify gender and residence** aspects (tourists vs local residents), using gender, language extraction, detection tools (e.g. ScrapeHero or Gender API), and the comments' **rate**.

  ⚲ 2. **Number of reviews per year,** to determine the evolution of usage.

  ⚲ 3. **Analysis of textual data** (natural language processing) represented in:

    ⚲ **Sentiment-polarity analysis**; classifying the comments as POSITIVE, NEGATIVE, MIXED or NEUTRAL

IBV

1. Objective & methodology (II)

- **Analyzing the emotions** and the **hate/aggressive** level of the comments.

- **Word clouds**: The word cloud allow us to synthetically view key words, according to their frequency of occurrence.

- **Semantic analysis** by manual coding: manual coding consists of reading the set or a representative sample of the answers (around 100). Corresponding topics and categories are chosen, according to meaning at expert level.

- Extraction of **characteristic verbatim**: Once the topics of the comments have been identified, the verbatim are extracted to illustrate the topics addressed.

- 4. **Comparative analysis** of cities.

- 5. **Analysis** grouped **by type of transport**.

- 6. **Differences** according **to gender**.

- 7. **Differences between** the opinion of **residents or tourists.**

Robert Plutchik's Wheel of Emotions

2. Sample & sources (I)

SAMPLE:

TYPE OF TRANSPORT:	VALENCIA (SPAIN)		ILE DE FRANCE (FRANCE)		ROME (ITALY)		OSLO (NORWAY)		MANNHEIM (GERMANY)		TOTAL:	
CITIES:	Nº Reviews	Nº Comments	Nº Reviews	Nº Comments	Nº Reviews	Nº Comments	Nº Reviews	Nº Comments	Nº Reviews	Nº Comments	Nº Reviews	Nº Comments
a. SHARED BIKE	387	292	1.194	1.049	-	-	49	49	32	19	1.662	1.409
b. BUS	623	363	952	512	1.087	835	251	140	44	18	2.957	1.868
c. SUBWAY /TRAM	847	847	2.923	2.923	2.377	942	459	336	187	101	6.793	5.149
d. TAXI	1.506	910	2.341	1.647	2.126	829	1.251	662	2.095	1.036	9.319	5.084
e. SHARED LEV	309	174	620	410	699	622	85	75	105	105	1.818	1.386
f. SHARED CAR	93	64	237	191	133	127	608	371	109	105	1.180	858
TOTAL:	**3.765**	**2.650**	**8.267**	**6.322**	**6.422**	**3.355**	**2.703**	**1.633**	**2.572**	**1.384**	**23.729**	**15.344**

UPPER

IBV

2. Sample & sources (II)

TYPE OF TRANSPORT:

SAMPLE:

CITIES:

TYPE OF TRANSPORT	VALENCIA (SPAIN)			ILE DE FRANCE (FRANCE)			ROME (ITALY)			OSLO (NORWAY)			MANNHEIM (GERMANY)			AVERAGE		
	♂	♀	⚥	♂	♀	⚥	♂	♀	⚥	♂	♀	⚥	♂	♀	⚥	♂	♀	⚥
a. SHARED BIKE	59.7%	27.6%	12.7%	49.0%	22.6%	21.8%				63.3%	14.3%	22.4%	87.5%	12.5%	0.0%	66.0%	19.8%	14.2%
b. BUS	55.4%	41.3%	3.4%	64.3%	30.6%	5.0%	59.7%	31.8%	8.5%	65.3%	25.9%	8.8%	77.3%	20.5%	2.3%	64.4%	30.0%	5.6%
c. SUBWAY /TRAM	50.4%	30.0%	19.6%	46.2%	26.5%	27.3%	65.7%	29.1%	5.1%	56.8%	21.2%	22.1%	75.4%	22.5%	2.1%	58.9%	25.9%	15.2%
d. TAXI	53.7%	44.8%	1.6%	55.3%	40.6%	4.1%	55.1%	43.2%	1.7%	70.2%	26.4%	3.4%	79.6%	15.8%	4.7%	62.8%	34.1%	3.1%
e. SHARED LEV	78.3%	18.8%	12.7%	78.1%	19.7%	2.3%	60.7%	21.2%	18.2%	60.0%	20.0%	20.0%	78.1%	17.1%	4.8%	71.0%	19.4%	9.6%
f. SHARED CAR	62.0%	33.7%	4.3%	52.7%	45.1%	2.1%	65.4%	30.8%	3.8%	73.2%	24.3%	2.5%	77.3%	17.3%	5.5%	66.1%	30.3%	3.6%
TOTAL:	59.9%	32.7%	7.4%	58.3%	31.2%	10.4%	61.3%	31.2%	7.5%	64.8%	22.0%	13.2%	79.2%	17.6%	3.2%	64.9%	26.6%	8.6%

UPPER

3. Comparative analysis of cities

CITIES:

Legend:
- Positive
- Negative
- Mixed
- Neutral

	VALENCIA (SPAIN)	ILE DE FRANCE (FRANCE)	ROME (ITALY)	OSLO (NORWAY)	MANNHEIM (GERMANY)	AVERAGE:
Rate	3.6	3.0	2.9	2.8	3.9	3.2

Radar axes (Rate): a. SHARED BIKE, b. BUS, c. SUBWAY /TRAM, d. TAXI, e. SHARED LEV, f. SHARED CAR (scale 1.0–5.0)

Sentiment-Polarity (total)

City	POSITIVE	NEGATIVE	MIXED	NEUTRAL
VALENCIA	48.7%	27.4%	17.1%	6.8%
ILE DE FRANCE	39.4%	37.0%	12.9%	10.8%
ROME	38.9%	35.0%	15.6%	10.5%
OSLO	34.1%	38.5%	20.6%	6.8%
MANNHEIM	41.5%	14.7%	20.9%	22.9%
AVERAGE	40.5%	30.5%	17.4%	11.6%

Sentiment-Polarity (type of transport)

Transport		VALENCIA	ILE DE FRANCE	ROME	OSLO	MANNHEIM	AVERAGE
a.	Shared bike	33.3% / 25.5% / 28.9% / 12.2%	22.1% / 49.0% / 22.6% / 6.3%	—	26.7% / 33.3% / 33.3% / 6.7%	31.6% / 0.0% / 47.4% / 21.1%	28.1% / 28.2% / 33.1% / 10.6%
b.	Bus	45.9% / 34.8% / 12.7% / 6.6%	16.6% / 51.8% / 18.9% / 12.7%	8.4% / 63.0% / 19.7% / 8.9%	12.9% / 60.7% / 17.1% / 9.3%	22.2% / 27.8% / 27.8% / 22.2%	21.2% / 47.6% / 19.3% / 11.9%
c.	Subway/Tram	52.6% / 10.1% / 28.0% / 9.4%	41.0% / 16.7% / 4.4% / 37.9%	33.9% / 22.2% / 22.4% / 21.5%	65.2% / 4.8% / 20.5% / 9.5%	36.6% / 20.8% / 20.8% / 21.8%	45.8% / 14.9% / 19.2% / 20.0%
d.	Taxi	45.1% / 40.4% / 10.3% / 4.2%	83.3% / 8.8% / 4.9% / 3.0%	77.4% / 10.0% / 7.0% / 5.6%	19.9% / 51.8% / 19.2% / 9.1%	83.3% / 7.1% / 3.6% / 6.0%	61.8% / 23.6% / 9.0% / 5.6%
e.	Shared LEV	45.4% / 42.5% / 6.9% / 5.2%	47.2% / 33.3% / 16.4% / 3.2%	69.3% / 6.9% / 8.8% / 15.0%	28.0% / 49.3% / 20.0% / 2.7%	15.1% / 14.2% / 7.5% / 63.2%	41.0% / 29.2% / 11.9% / 17.8%
f.	Shared CAR	69.8% / 11.1% / 15.9% / 3.2%	26.2% / 62.3% / 9.9% / 1.6%	5.6% / 73.0% / 19.8% / 1.6%	51.9% / 31.1% / 13.5% / 3.5%	60.0% / 18.3% / 18.3% / 3.3%	42.7% / 39.2% / 15.5% / 2.6%

Sentiment – Emotions:

City	Joy	Anger	Sadness
VALENCIA	23.1%	21.8%	1.6%
ILE DE FRANCE	25.3%	21.5%	4.6%
ROME	29.2%	20.9%	4.0%
OSLO	16.2%	23.1%	2.5%
MANNHEIM	55.5%	5.3%	1.7%

Level of Hate

City	Level of Hate
VALENCIA	4.8%
ILE DE FRANCE	10.7%
ROME	9.0%
OSLO	5.7%
MANNHEIM	1.7%

Sentiment- Polarity:

| 28.1% | 28.2% | 33.1% | 10.6% |

Level of Hateful:

6.5%

- ● Positive
- ● Negative
- ● Mixed
- ● Neutral

Rate:

3.0 ★★★☆☆

Sentiment- Emotion:

Joy 11.1%

Anger 31.0%

Sadness 7.1%
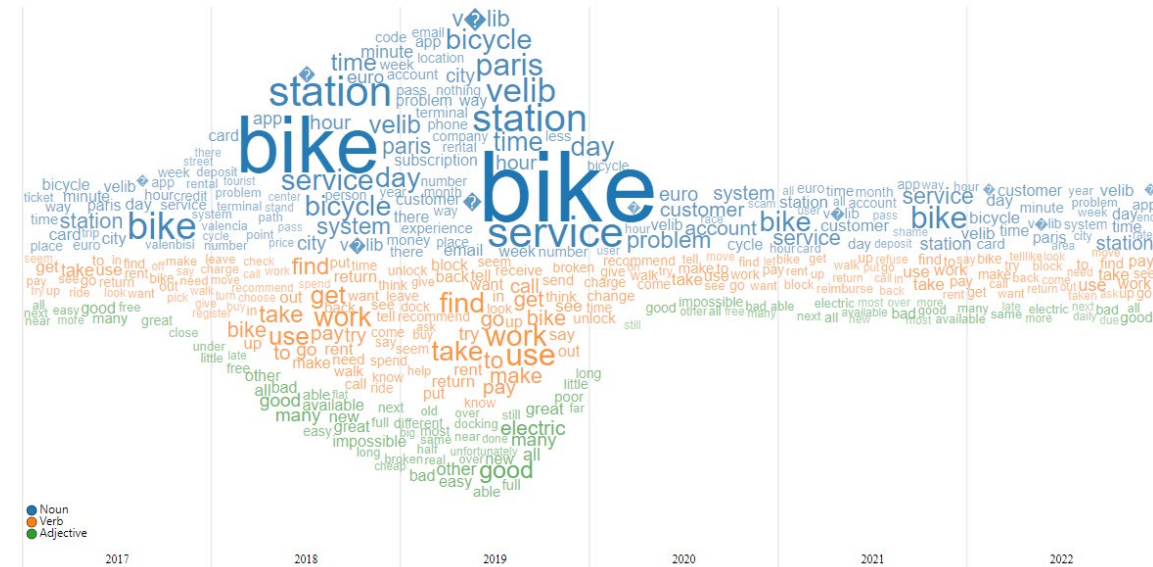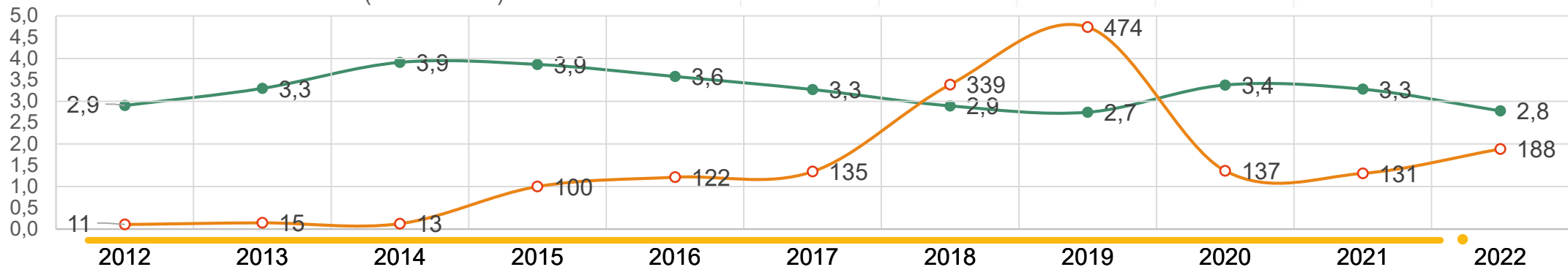
● Noun: #Bike
#Station
#Service
#Day
#Time

● Verb: #Use
#Work
#Take
#Find
#Pay

● Adjective: #Good
#Many
#Electric
#Available
#All

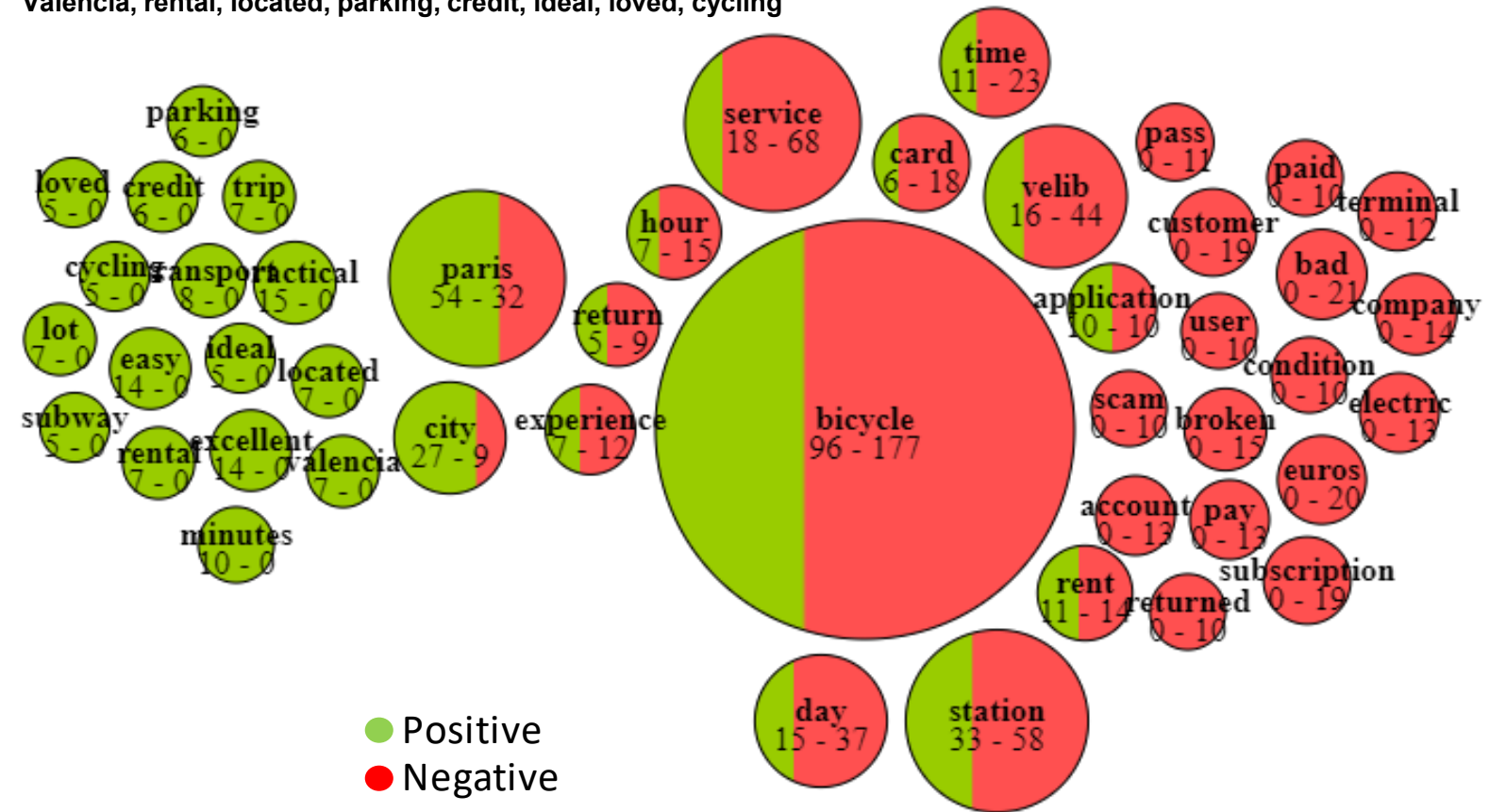**Number of Reviews vs Rate (Shared bike)**

UPPER

4. Analysis by type of transport: **a. Shared Bike** (Valencia+Ile de France+Rome+Oslo+Mannheim)

- The most repeated words are **bicycle**, **station**, and **service**. In all three cases, there are more negative aspects/to improve than positive ones. Therefore, bikes, stations, and services are important and should improve.

- **Velib** and **Paris** also stand out (due to the volume of comments in the city).

- Other areas for improvement are related to time (**time**, **day**, **hour**), **rent**, **card**, **application**, **experience**, and **return.**

- The following words are highlighted in red as negative: **pay/paid, bad, euros, inscription, customer, broken, company, electric, account, terminal, pass, scam, user, returned.**

- The following words are highlighted in green as positive: **practical, easy, excellent, minutes, transport, trip, lot, Valencia, rental, located, parking, credit, ideal, loved, cycling**
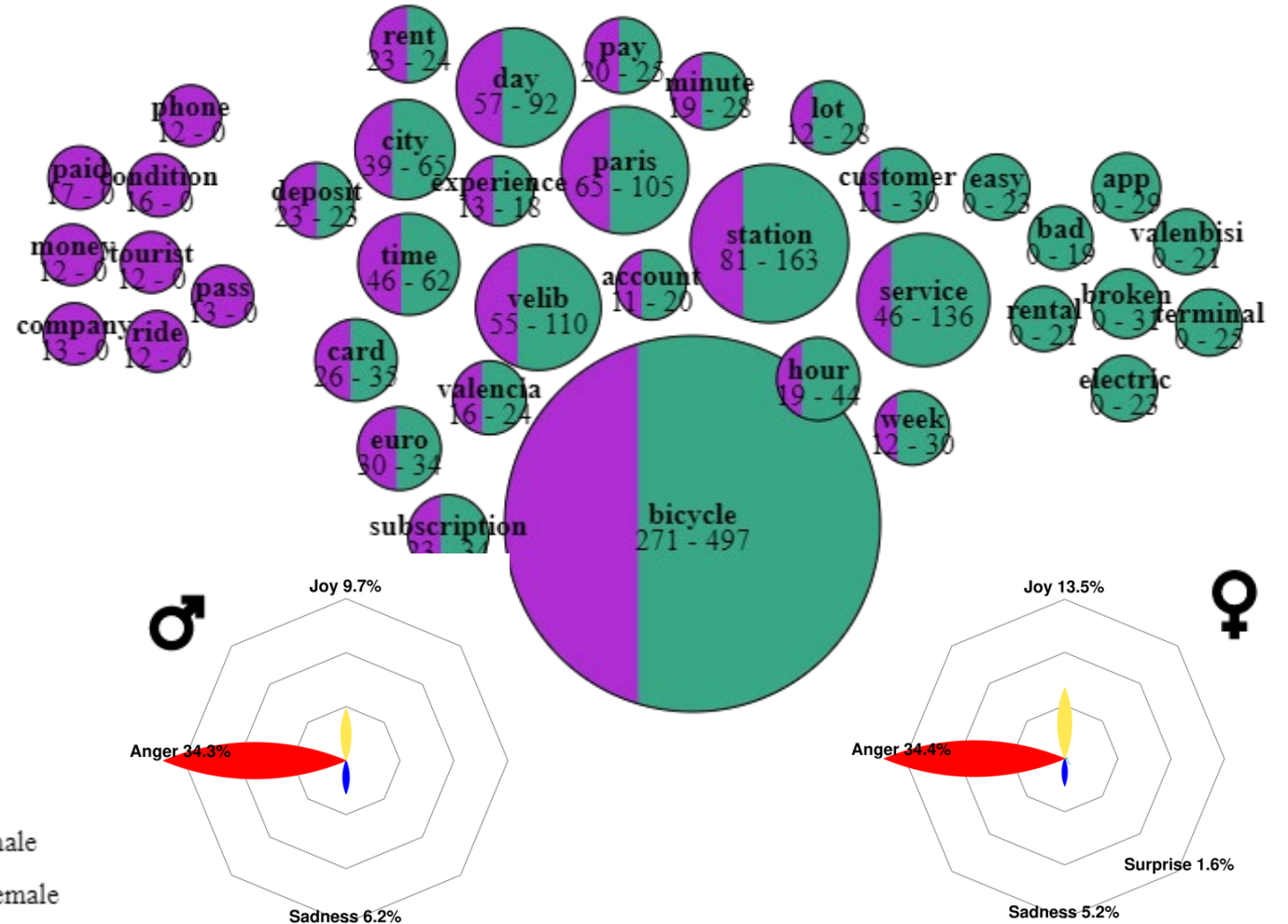
4. Analysis by type of transport: **a. Shared Bike** (Valencia+Ile de France+Rome+Oslo+Mannheim)

- The words that only men say are highlighted as: **broken, app, terminal, electric, rental, Valenbisi** and **bad.**

- The words that only women say are highlighted as: **paid, condition, experience, pass, company, ride, money** and **phone.**

- As for emotions, there are hardly any differences between men and women. The level of hatred is higher in women, 7.3% compared to 5.3% in men.

IMPROVEMENTS & MAINTAIN:

- **To minimize or to eliminate system failures**, and in the event that they occur they must be solved with **good customer service:**

    o Option of attention in different languages (service used by many tourists).

    o That they are solved quickly, at the moment and without costs. (Fast and efficient customer service).

    o Avoid charges for system/service failures (e.g. Advises to remember more frequent problems, such as the bad anchoring of the bike).

- **Well-sized stations:** with enough spaces and bikes (balance according to the influx of users and information in real time)

- **Sufficient and well-located stations,** close to bike lanes and close to other forms of transport, facilitating intermodality.

- **Improvement of the bikes and maintenance of the bikes:** they are considered very heavy with little suspension among other aspects. Need to have electrical rental solutions and accessories to travel with children and/or transport the purchase, etc.

- **App** that notifies in real time about the availability of spaces and bikes, and that works well, is reliable and useful.

- **Transparent and adequate price** with **different types of tickets** for different needs: single ticket, 24 hours, weekly, etc.

- To improve the service by adapting to **new, simpler and more agile forms of payment/rental:**

    o Deposit of less amount of money.

    o 45 minutes free better than 30 min does not meet the needs of tourists.

    o Refund of the deposit in a maximum of 24 hours.

    o Being able to pay with mobile.

- **Continuous service improvement:**

    o Service that adapts to the **changing needs** of inhabitants and tourists.

    o **Being able to have accessories**: being able to place the mobile, transport children, purchase, etc.

- Sufficient, adequate, well signposted and safe "**bike lane**" network.

- **Promotion of the respect** of all citizens for the bike lane and cyclists.

- **Others:** Bikes and covered stations in cities with rain and/or bad weather.

4. Analysis by type of transport: **b. Bus** (Valencia+Ile de France+Rome+Oslo+Mannheim)

Sentiment- Polarity:

| 21.2% | 47.6% | 19.3% | 11.9% |

- ● Positive
- ● Negative
- ● Mixed
- ● Neutral

Level of **Hateful**:

14,3%

Rate:

2.5 ★★⯪☆☆

Sentiment- Emotion:

Joy 9.6%

Anger 42.6%

Sadness 5.2%

Noun: ● #Bus #Driver #Ticket #Service #Time #Line

Verb: ● #Go #Take #Wait #Get #Pass #Know

Adjective: ● #Bad #Good #Late #Public #Other #All

## Number of Reviews vs Rate (Bus)

- ● Noun
- ● Verb
- ● Adjective

UPPER

4. Analysis by type of transport: **b. Bus** (Valencia+Ile de France+Rome+Oslo+Mannheim)

- The most repeated words are **bus**, **service**, **time** and **driver**. In all four cases, there are more negative aspects/to improve than positive ones. Therefore, **bus**, **service**, **time** and **driver** are important and should improve.

- The following words are highlighted in red as negative: **bad, minute, worst, waiting, day, lat, atac, arrive, schedule, city,…**

- The following words are highlighted in green as positive: **attention, excellent, friendly, fast, staff, office, Valencia, appointment,…**
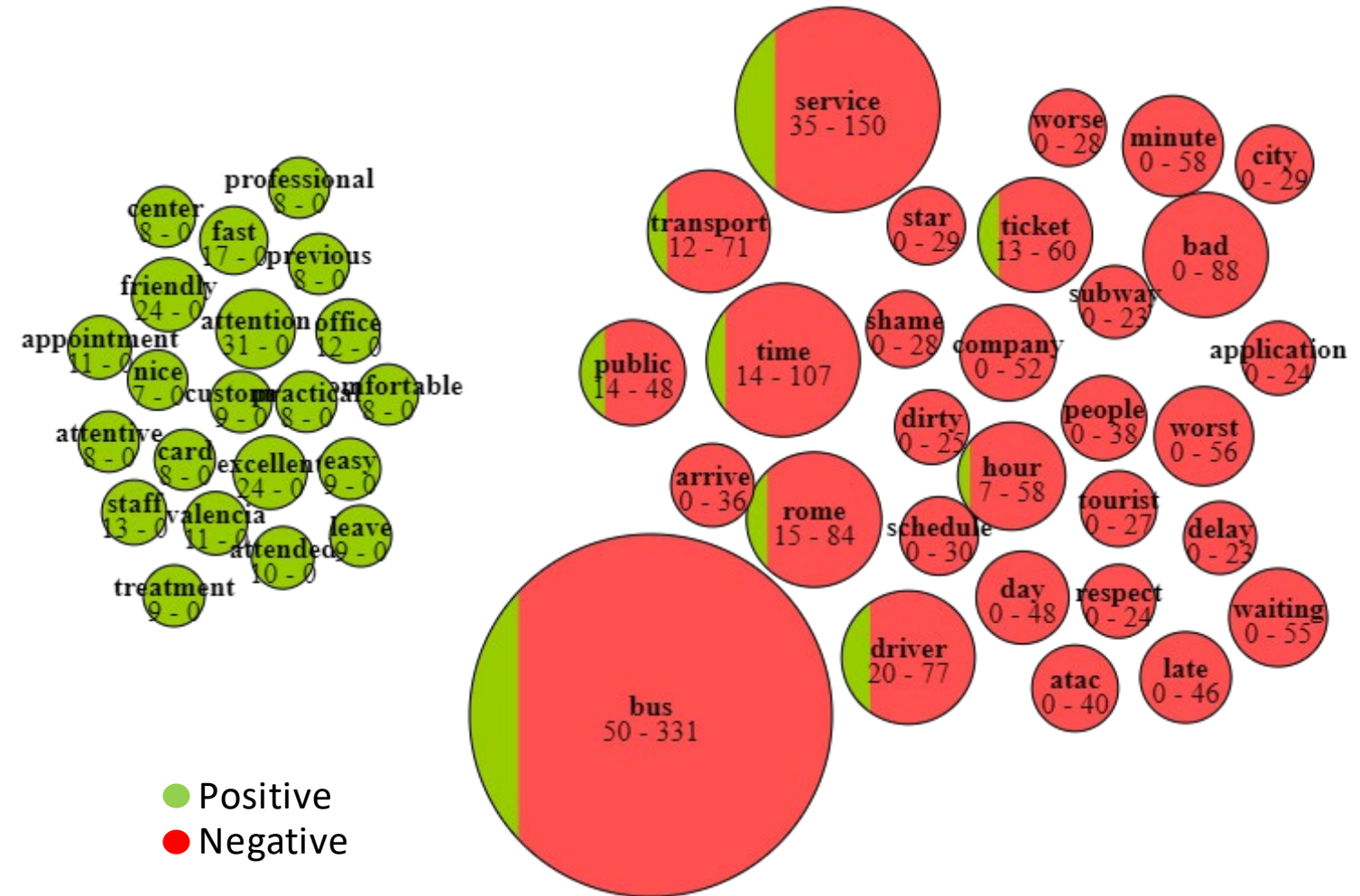
4. Analysis by type of transport: **b. Bus** (Valencia+Ile de France+Rome+Oslo+Mannheim)

- The words that only men say are highlighted as: **city, schedule, delay, tourist** and **shame.**

- The words that only women say are highlighted as: **star, app, subway, respect** and **staff.**

- As for emotions, there are hardly any differences between men and women. Slightly higher level of anger in women. The level of hatred is higher in women, 13.3% compared to 11.2% in men.
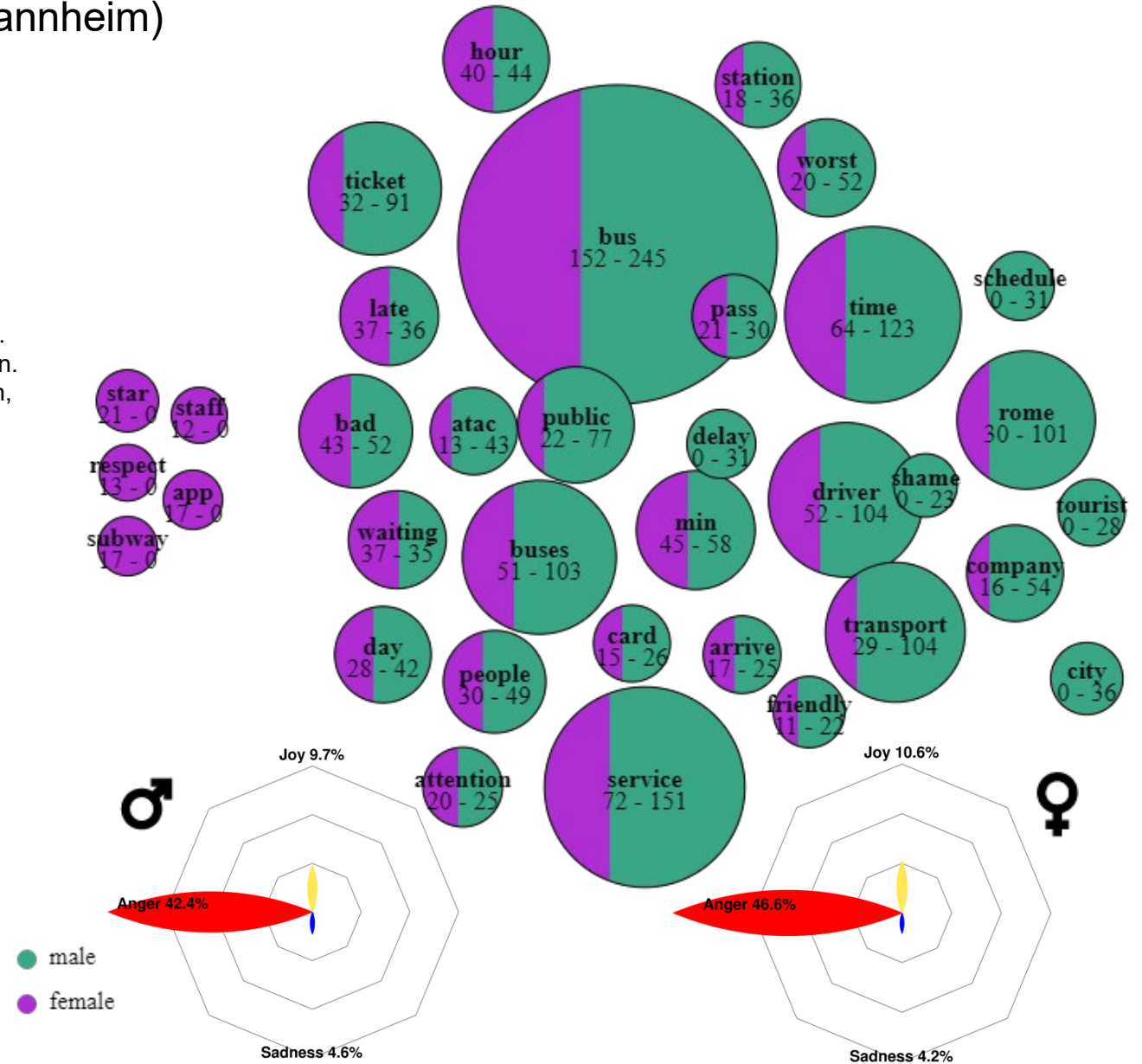
IMPROVEMENTS & MAINTAIN:

- **Higher frequency** of buses, more buses.

- Greater **punctuality and reliability** (no delays).

- Good **customer service** (quick resolution, 24 hour attention, etc.) and **adequate management** of the public service.

- **Higher capacity buses**, interior redesign to make better use of space.

- **Safe driving**, not so aggressive (avoiding braking and accelerating).

- **Improved attention from drivers** (friendliness and professionalism). (e.g. that they always stop at the bus stops)

- **Intuitive service, easy to use and well signposted**. Easy to get tickets and pay.

- **App** improvement:
  - No bugs, reliable, usable, fast,
  - app accurately informing about the times of the buses,
  - app managing the purchase/recharge of tickets in an agile way.

- **Adequate price** with different types of tickets. As well as cheaper tickets and discounts.

- **More service time** slot (day and night), especially **more night service**.

- More **comfort and modernization of buses** (new services, new needs)

- **Cleanliness and good maintenance**.

- **Good connection** to the airport and other means of transport.

- **Avoid fines** for not knowing how the service works, for being poorly explained, difficult to understand, etc.

- **Greater accessibility** of stops and buses for people with functional diversity, the elderly, baby carriages, ramp lighting, etc.

- **Clear rules** for users and encouragement of respect for them.

- **Speed**.

- **Well located stops**.

- **Adequate air conditioning**; neither cold nor heat

- **Greater safety** for those who are standing, redesign of the way of walking, e.g. semi-sitting

- **Improved security** against theft, etc.

4. Analysis by type of transport: **c. Subway / Tram** (Valencia+Ile de France+Rome+Oslo+Mannheim)

Sentiment- Polarity:

45.8%	14.9%	19.2%	20.0%

- ● Positive
- ● Negative
- ● Mixed
- ● Neutral

Level of Hateful:

13,2%

Rate:

3.7 ★★★★☆

Sentiment- Emotion:

Joy 15.0%

Anger 15.7%

Sadness 4.7%

● Noun: #Metro #Ticket #Station #Train #Day #Line

● Verb: #Get #Use #Go #Take #Buy #Pay

● Adjective: #Easy #Good #All #Many #Other #Clean

- ● Noun
- ● Verb
- ● Adjective

Number of Reviews vs Rate (Subway / Tram)

UPPER

4. Analysis by type of transport: **c. Subway / Tram** (Valencia+Ile de France+Rome+Oslo+Mannheim)

- The most repeated words in addition to **subway** and **Paris** (due to the volume of comments in the city) are: **ticket, station, city, time, easy, train** and **day.**

- These aspects have positive and negative comments (to improve), especially **ticket** (ease, options, price)**, station** and **train.**

- The following words are highlighted in green as positive: **easy, clean, excellent, lines, beautiful, efficient, Oslo, fast, pass, Valencia, visit, center** and **network.**

- The following words are highlighted in red as negative: **dirty, service, people, bought, machine, bad, tourist, experience, Rome, stairs, pass, fine, children** and **careful.**
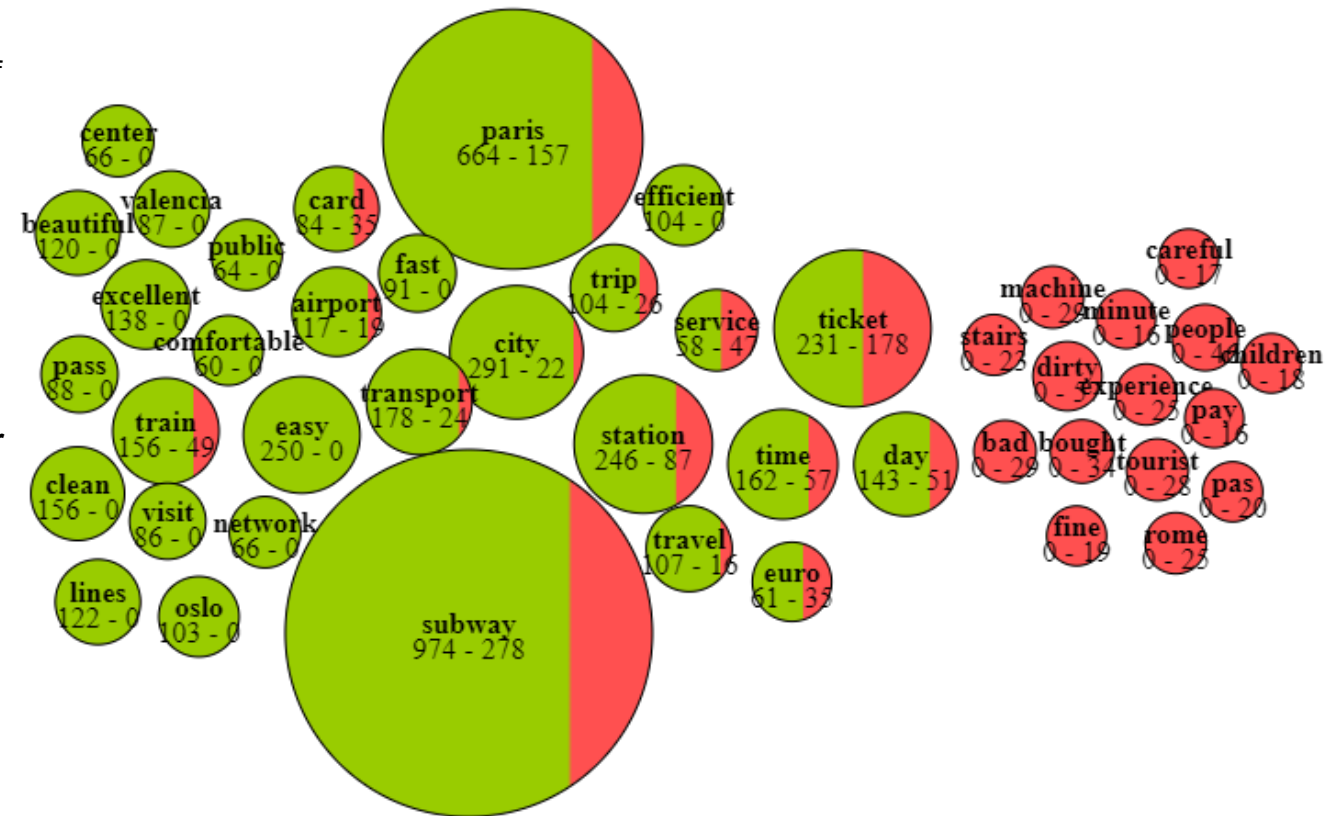
- Positive
- Negative

4. Analysis by type of transport: **c. Subway / Tram** (Valencia+Ile de France+Rome+Oslo+Mannheim)

- The words that only men say are highlighted as: **beautiful, Rome, excellent, efficient** and **Oslo.**

- The words that only women say are highlighted as: **bought, map, bus, minute,** and **machine.**

- There are no significant differences in detected emotions and level of hatred.
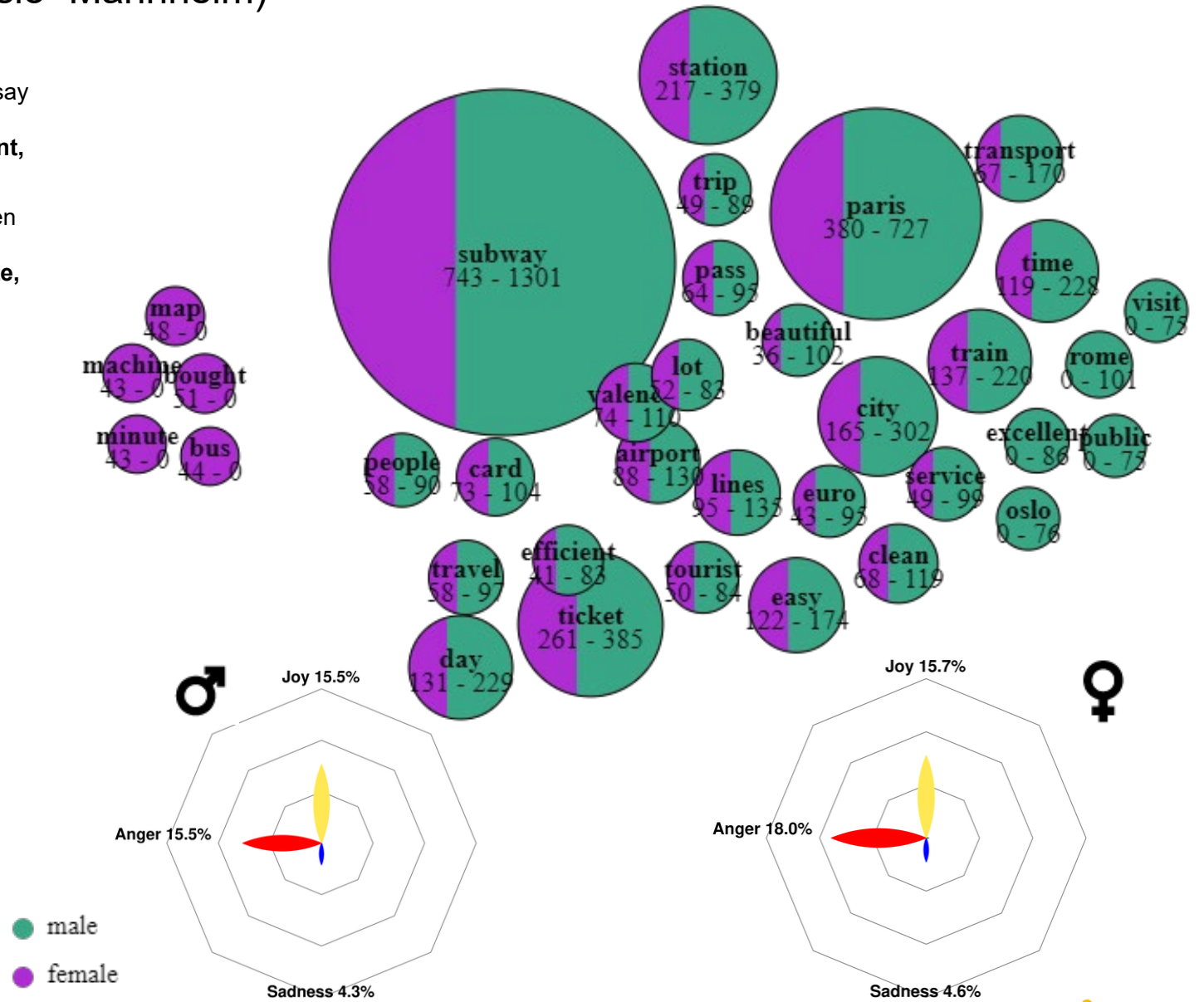
station
217 - 379

transport
67 - 170

trip
49 - 89

paris
380 - 727

subway
743 - 1301

pass
64 - 95

time
119 - 228

visit
0 - 75

map
48 - 0

beautiful
36 - 102

train
137 - 220

rome
0 - 101

machine
43 - 0

bought
51 - 0

lot
52 - 83

valenc
74 - 110

city
165 - 302

minute
43 - 0

bus
44 - 0

excellen public
0 - 86 0 - 75

people
58 - 90

card
73 - 104

airport
88 - 130

lines
95 - 135

euro
43 - 95

service
49 - 99

oslo
0 - 76

efficient
41 - 83

tourist
50 - 84

clean
68 - 119

travel
58 - 97

easy
122 - 174

ticket
261 - 385

day
131 - 229

♂

Joy 15.5%

Anger 15.5%

Sadness 4.3%

Joy 15.7%

♀

Anger 18.0%

Sadness 4.6%

● male
● female

IMPROVEMENTS & MAINTAIN:

- **Cleaning and maintenance** (Trains and stations, escalators, vending machines, especially in the suburbs, etc.). Maintenance and renovation of trains.
- **Improved comfort, efficiency and usability**.
- **Good connections** with the airport, the rest of the city and other transport (important stations).
- **Being able to get everywhere** with enough lines and stops.
- Improved **security against theft**, etc.
- **Higher frequency** of trains.
- **Punctuality**, **speed** and **reliability** (precision).
- **To eliminate or to minimize fines** for failures or ignorance. (tourists): e.g. by mistake throwing the ticket before leaving.
- **Improvement of accessibility**: people with reduced mobility, baby carriages, etc.
- **Improved customer service** (solve doubts and incidents in a friendly way in several languages), friendly staff.
- **Variety of ticket types** (e.g. day, week or month tickets).
- **Adequate price.**
- **Well marked**. Information available, complete, reliable and accurate on screens, web, etc.
- **Adequate air conditioning.**
- **Clear rules of use and behavior (**supervision, communication campaigns, sanctions,...) and encouragement of respect by users.
- Greater **night service**.
- **Troubleshooting trains**, minimizing problems/errors with ticketing machines (ticketing, etc.).
- **More space inside**. Redesign to optimize space.
- **To facilitate various forms of payment** (e.g. a photo is not necessary for the card).
- **Others:** being able to get bikes on the train (even if they are not collapsible,...), ...

4. Analysis by type of transport: **d. Taxi** (Valencia+Ile de France+Rome+Oslo+Mannheim)

Sentiment- Polarity:

61.8% 23.6% 9.0% 5.6%

- Positive
- Negative
- Mixed
- Neutral

Level of **Hateful**:

2.9%

Rate:

3.6 ★★★★☆

Sentiment- Emotion:

Joy 48.9%

Anger 12.9%

Sadness 1.2%

Noun: #Driver #Service #Taxi #Time #Punctually #Quality

Verb: #Take #Call #Thank #Come #Wait #Use

Adjective: #Good #Friendly #Puntually #Nice #Bad #Fast
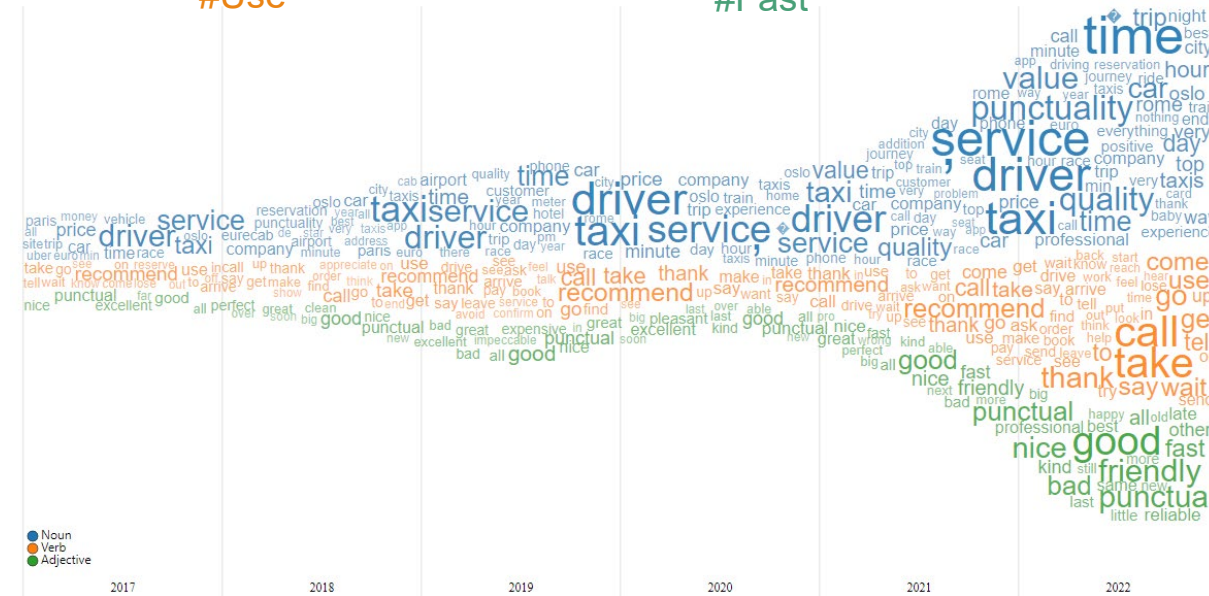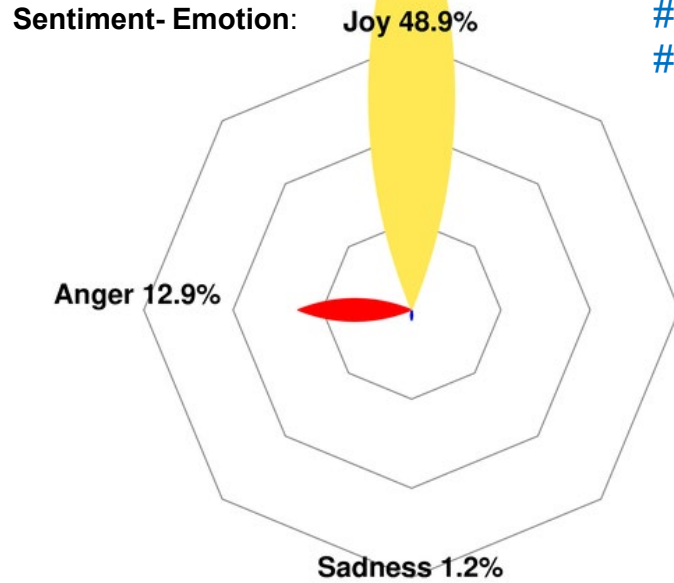
Number of Reviews vs Rate (Taxi)
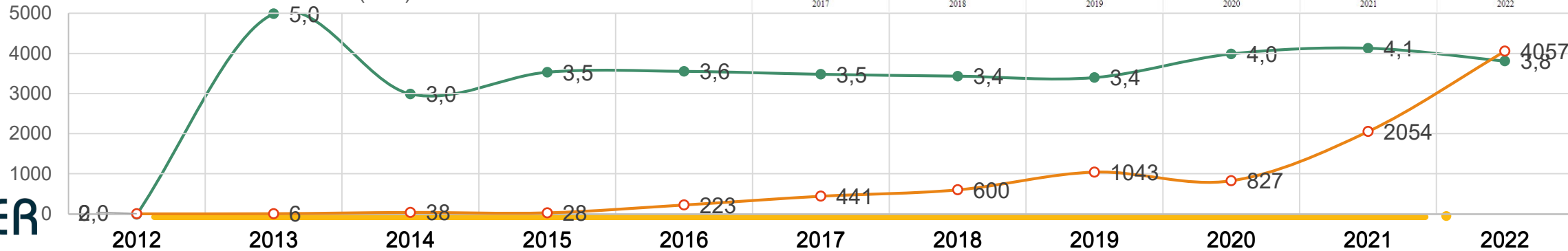
2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022

5,0 3,0 3,5 3,6 3,5 3,4 3,4 4,0 4,1 3,8

2,0 6 38 28 223 441 600 1043 827 2054 4057

UPPER

4. Analysis by type of transport: **d. Taxi** (Valencia+Ile de France+Rome+Oslo+Mannheim)

- The most repeated words in addition to **taxi** are: **service, driver, professional, time, excellent** and **recommend.**

- These aspects have more positive comments than negative ones, therefore they are well resolved.

- The following words are highlighted in green as positive: **professional, excellent, recommend, friendly, perfect, super, pleasant, nice,....**

- The following words are highlighted in red as negative: **time, phone, minute, bad, company, called, arrive, expensive, waiting, answer, customer, day, star, told, night, worst, impossible** and **cost.** All of them refer mainly to the waiting times on calls and service arrivals and the cost of the service.

trip 134 - 55
time 261 - 103
arrive 84 - 57
taxi 372 - 411
perfect 160 - 0
punctual 371 - 0
rome 86 - 0
valencia 0 - 21
called 0 - 62
reliable 69 - 0
satisfied 85 - 0
nice 86 - 0
quality 81 - 0
driver 575 - 145
told 0 - 30
answer 0 - 40
cost 0 - 21
bad 0 - 82
paris 85 - 0
customer 0 - 37
friendly 241 - 0
motorcycle 55 - 0
efficient 55 - 0
oslo 0 - 51
phone 0 - 100
worst 0 - 28
impeccable 71 - 0
minute 53 - 93
impossible 0 - 21
waiting 0 - 42
night 0 - 29
hour 0 - 55
experience 103 - 31
recommend 260 - 19
price 91 - 43
car 81 - 48
expensive 0 - 45
star 0 - 32
day 0 - 36
company 90 - 63
super 155 - 0
service 981 - 148
professional 554 - 0
airport 106 - 44
excellent 327 - 0
fast 131 - 0
pleasant 123 - 0

● Positive
● Negative

4. Analysis by type of transport: **d. Taxi** (Valencia+Ile de France+Rome+Oslo+Mannheim)

- The words that only men say are highlighted as: **Oslo**, **customer, efficient** and **reliable**

- The words that only women say are highlighted as: **arrived, hour, race** and **bad.**

- There are no significant differences in detected emotions and level of hatred. There is a tendency for women to have a higher level of joy and a lower level of hatred.
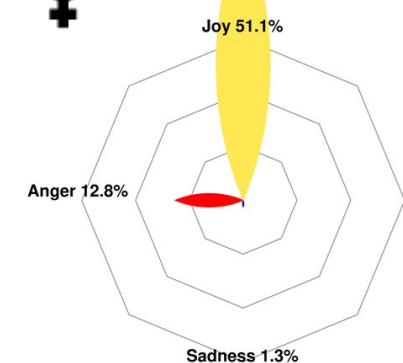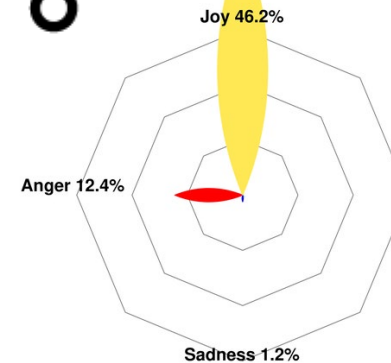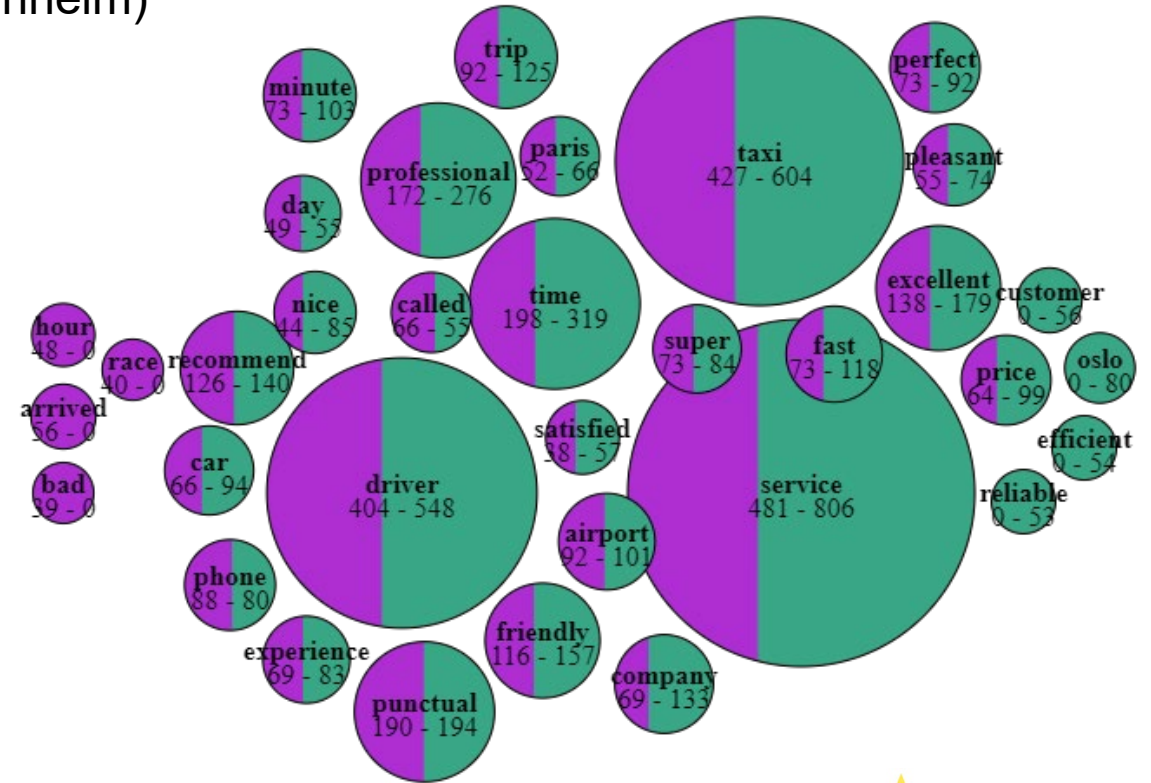
● male
● female

IMPROVEMENTS & MAINTAIN:

- **Friendly and professional driver** (faster/shorter routes). In addition to being efficient, safe and flexible (in the face of changes).
- **Speed, punctuality, reliability and precision**: if service cancellations, the taxi arrives on time and otherwise they notify you.
- **Good customer service**; fast, flexible and friendly.
- **Quick telephone attention and easy reservation**.
- **Quick** to go to the taxi.
- **Good price**, good value for money and payment with all the comforts and facilities (various forms of payment).
- **Transparency** in prices, rates. Fixed price that does not vary.
- **Clean and comfortable** cars.
- More **service at night**.
- **More accessible cars** and with a suitable car seat for babies / children.
- Being able to recover **lost objects**.
- **App** useful, reliable and easy to use.
- **Taxi availability**.
- **Airport service**.
- Automatic **refund**.
- **Others:** low-emission taxis, home pick-up service, a driver who doesn't talk much, who smells good, who speak different languages, you can go wherever you want without restrictions...

Sentiment- Polarity:

| 41.0% | 29.2% | 11.9% | 17.8% |

- 🟢 Positive
- 🔴 Negative
- 🟡 Mixed
- ⚪ Neutral

Level of **Hateful**:

3.5%

Rate:

3.6 ★★★⯪☆

🔵 Noun: #Scooter #Service #Motorcycle #Customer #Rome #Time

🟠 Verb: #Use #Take #Recommend #Work #Rent #Go

🟢 Adjective: #Good #Great #Practical #Bad #Easy #Friendly
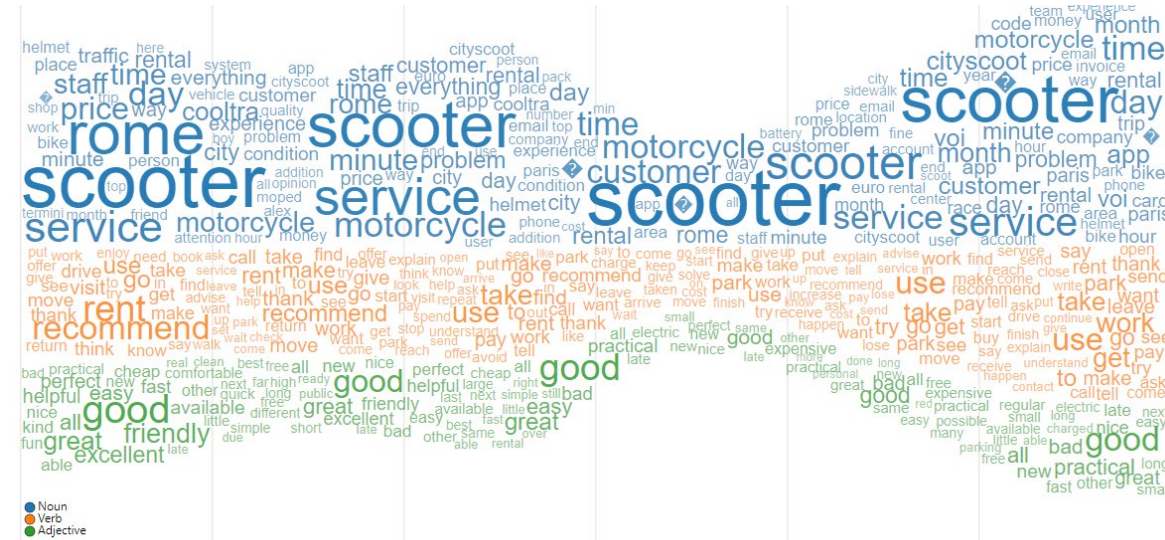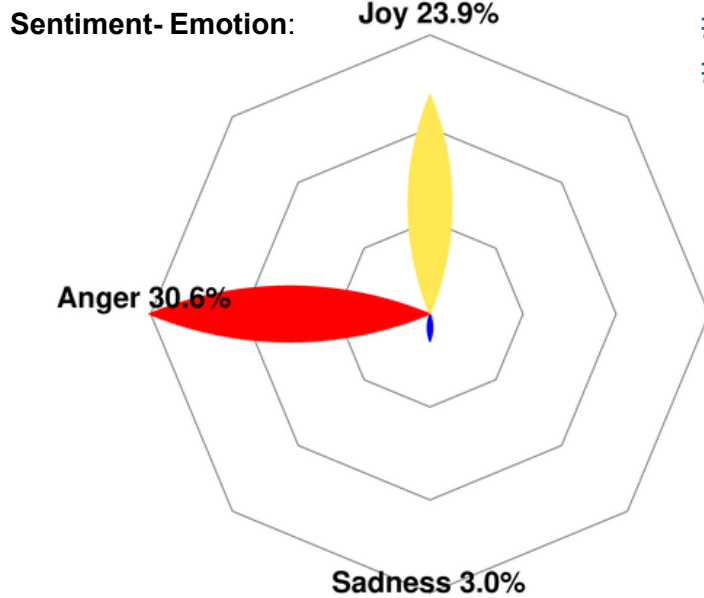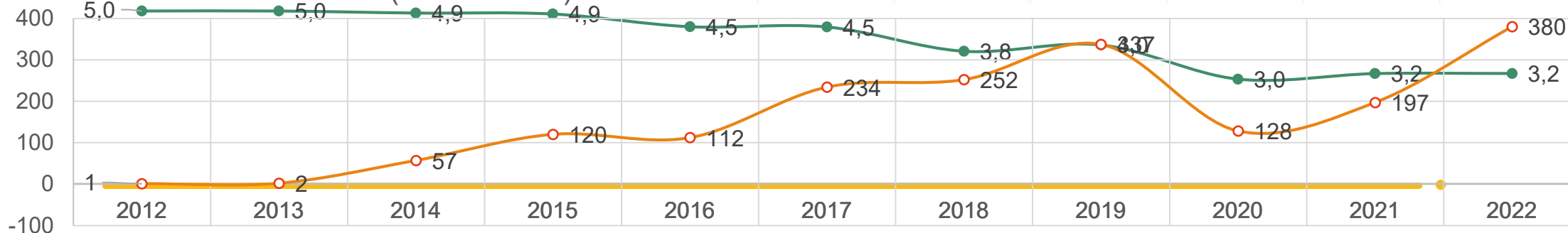
Sentiment- Emotion:

Joy 23.9% / Anger 30.6% / Sadness 3.0%

Number of Reviews vs Rate (Shared LEV)

UPPER

4. Analysis by type of transport: **e. Shared LEV** (Valencia+Ile de France+Rome+Oslo+Mannheim)

- The most repeated words in addition to **scooter /motorcycle** are: **service, rome, rent, excellent, time** and **customer.**

- These aspects have more positive comments than negative ones, therefore they are well resolved. Except for **customer** and **time**, which have the same number of positives as negatives

- The following words are highlighted in green as positive (in addition to scooter/motorcycle, service, rent, Rome): **excellent, friendly, city, day, staff, experience, recommend, super** and **practical.**

- The following words are highlighted in red as negative (in addition to **time** and **customer**): **minute, bad, application, month, Cityscoot, phone, VOI, user, euros, card, expensive, company, finish, impossible** and **flee.** Many words refer to app failures, inability to close the service, and the cost of the service.

super 38 - 0
rome 124 - 0
scooter 192 - 58
coltra 34 - 0
attention 18 - 0
fast 21 - 0
satisfied 20 - 0
experience 43 - 8
easy 28 - 0
paris 24 - 0
perfect 32 - 0
motorcycle 81 - 35
finish 0 - 10
company 0 - 10
parking 0 - 9
expensive 0 - 10
voi 0 - 13
price 43 - 12
rent 105 - 28
trip 17 - 12
cityscoot 0 - 16
phone 0 - 13
euros 0 - 11
anonent 0 - 8
city 50 - 0
helpful 18 - 0
hours 0 - 9
minute 0 - 25
month 0 - 19
card 0 - 11
recommend 40 - 0
bicycle 17 - 8
bad 0 - 22
application 0 - 20
friendly 50 - 0
condition 27 - 0
customer 27 - 27
time 33 - 32
impossible 0 - 10
flee 0 - 10
fun 21 - 0
visit 26 - 0
practical 32 - 0
user 0 - 12
excellent 74 - 0
service 173 - 75
staff 44 - 0
day 47 - 19

● Positive

● Negative

4. Analysis by type of transport: **e. Shared LEV** (Valencia+Ile de France+Rome+Oslo+Mannheim)

- The words that only men say are highlighted as: **condition**, **bad** and **perfect**

- The words that only women say are highlighted as: **coltra, satisfied, nice** and **hour.**

- There are no significant differences in detected emotions and level of hatred. There is a tendency for women to have a higher level of joy and a lower level of hatred.
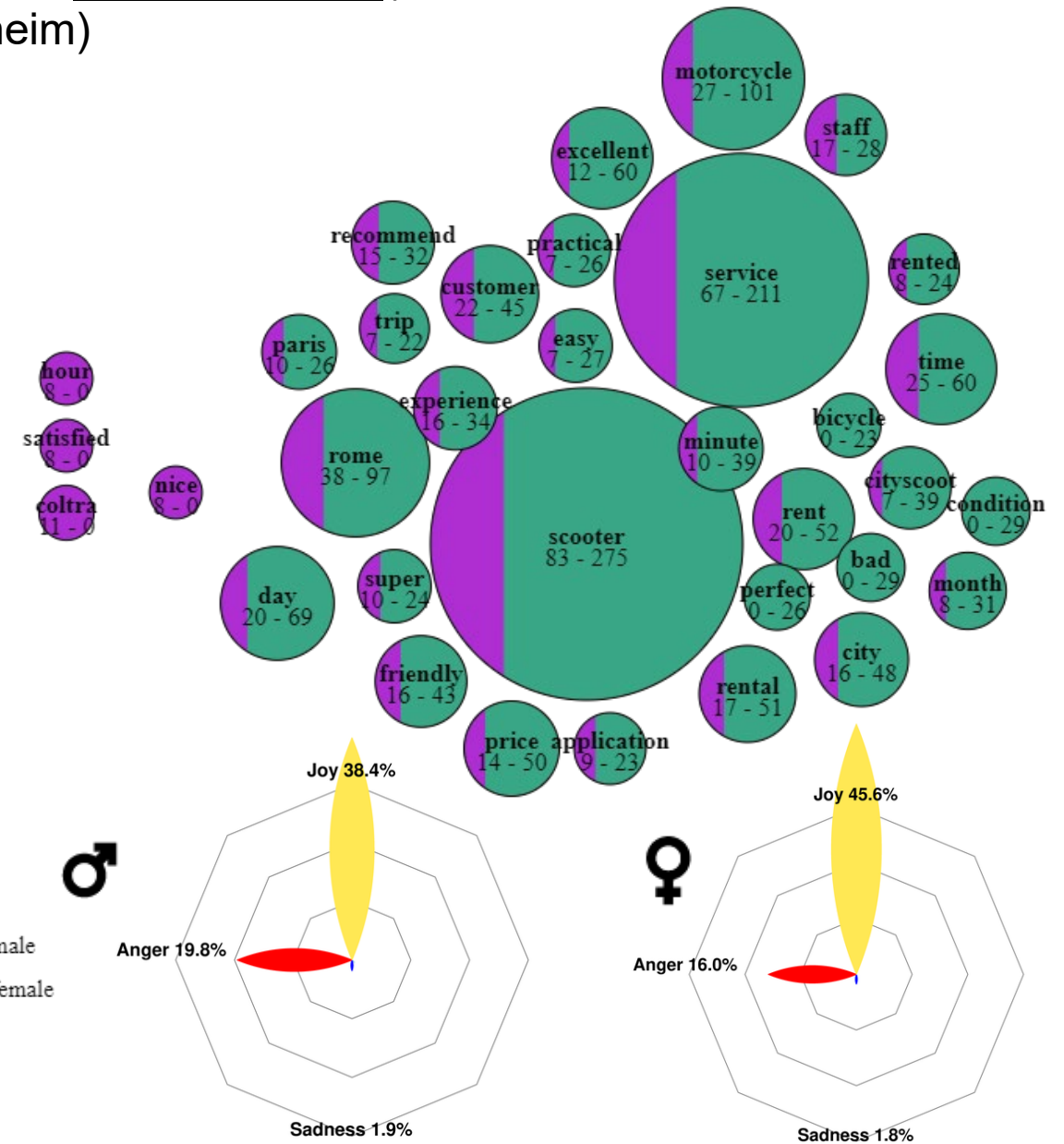
IMPROVEMENTS & MAINTAIN:

- **Easy-to-use service** (simple, easy to understand, fast, agile and satisfactory) and without errors, minimizing system errors (e.g. improper charges).

- Fast, decisive and adequate **customer service**: 24-hour availability, kindness, etc.

- **Quality and reliable service**: The motorcycles must work well, be easy to drive and have good maintenance, cleanliness, etc.

- Usable, functional, useful and flawless **app**.

- It is a **real alternative** to other forms of transport, it must be improved, regulated and maintained.

- **Suitable price:**
  - **Transparent** price.
  - **Agile and simple forms of payment and rental** (not having to pay a deposit and enter a lot of personal information, etc.).
  - With **discounts according to use and user profiles**.
  - Automatic return (less than 24h)

- **Availability** of motorcycles / e-scooters.

- **To avoid parking** motorcycles/skates **in a disorderly manner** (areas that disturb pedestrians, etc.)

- With an **attractive, comfortable, functional and resistant design**.

- With **insurance** that is managed with the rental and covers the users.

- **Compatibility with cards** from other countries such as the US card.

- **Expansion of the service** radius to areas that do not have it.

- Adequate and secure **management of personal data**.

Sentiment- Polarity:

- 🟢 Positive
- 🔴 Negative
- 🟡 Mixed
- ⚪ Neutral

| 42.7% | 39.2% | 15.5% | 2.6% |

🔵 Noun: #Car #Service #Customer #Rental #App #Time

🟠 Verb: #Rent #Use #Take #Get #Pay #Make

🟢 Adjective: #Good #Bad #Easy #Simple #Other #Many
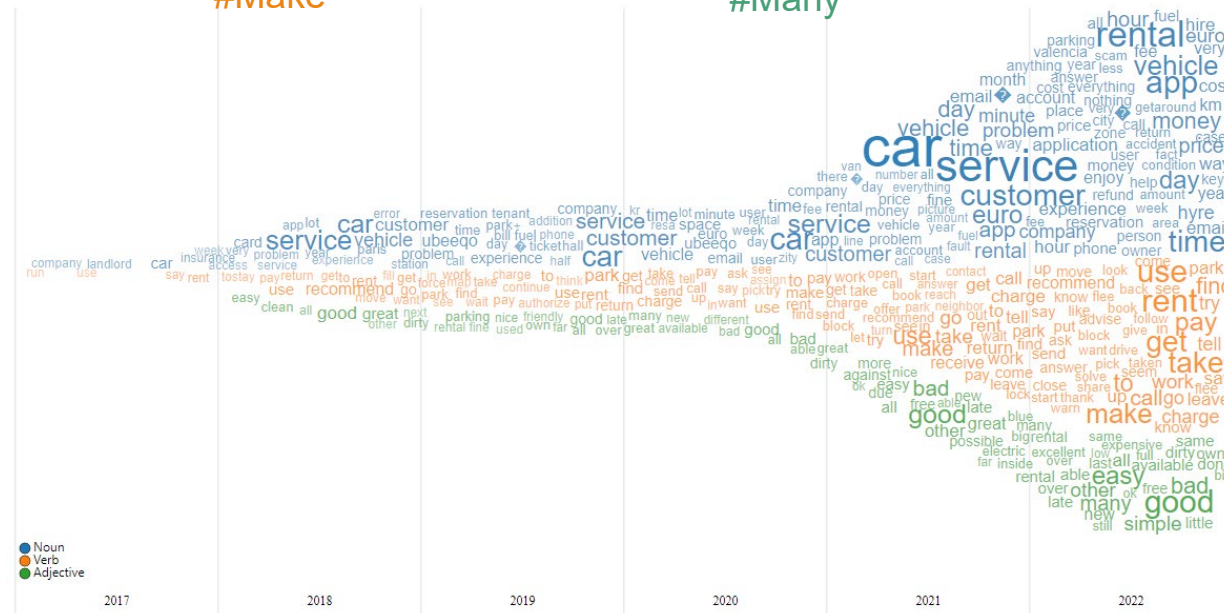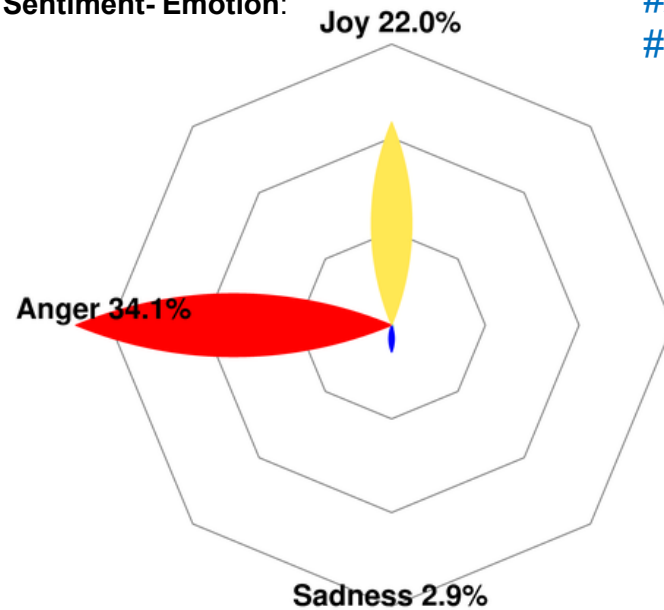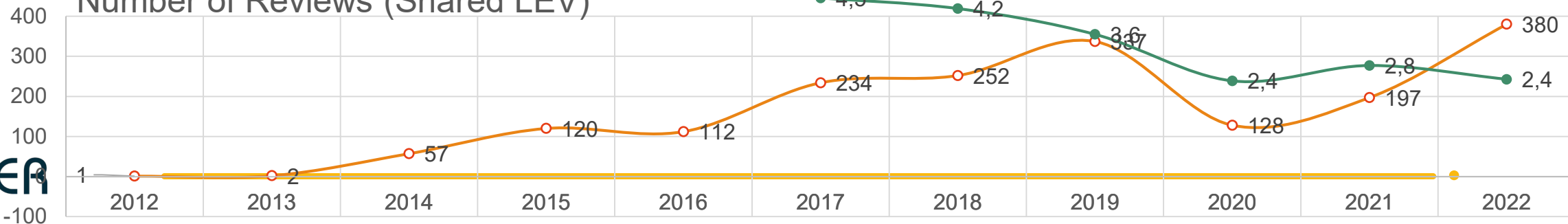
Level of Hateful:

5.8%

Rate:

3.6 ★★★☆☆

Sentiment- Emotion:

Joy 22.0%

Anger 34.1%

Sadness 2.9%

Number of Reviews (Shared LEV)

- Noun
- Verb
- Adjective

4,5 — 4,2 — 3,6/3,7 — 2,4 — 2,8 — 2,4

1 — 2 — 57 — 120 — 112 — 234 — 252 — 337 — 128 — 197 — 380

2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022

UPPER

4. Analysis by type of transport: **f. Shared Car** (Valencia+Ile de France+Rome+Oslo+Mannheim)

- The most repeated words in addition to **car** are: **service, rent, customer, easy, app, experience, time** and **simple.**

- These less **easy** and **simple** aspects have a high number of negative comments and therefore need to be improved, especially those related to: **customer, time,** and **experience**.

- The following words are highlighted in green as positive (in addition to easy and simple): **excellent, price, practical, happy, satisfied** and **fantastic.**

- The following words are highlighted in red as negative (in addition to service, customer and experience): **bad, app, company, scam, euros, month, recommend, day** and **flee.** Words that refer to poor management by companies, excessive cost, app not working well, difficulty in parking, and dirtiness of the vehicles.
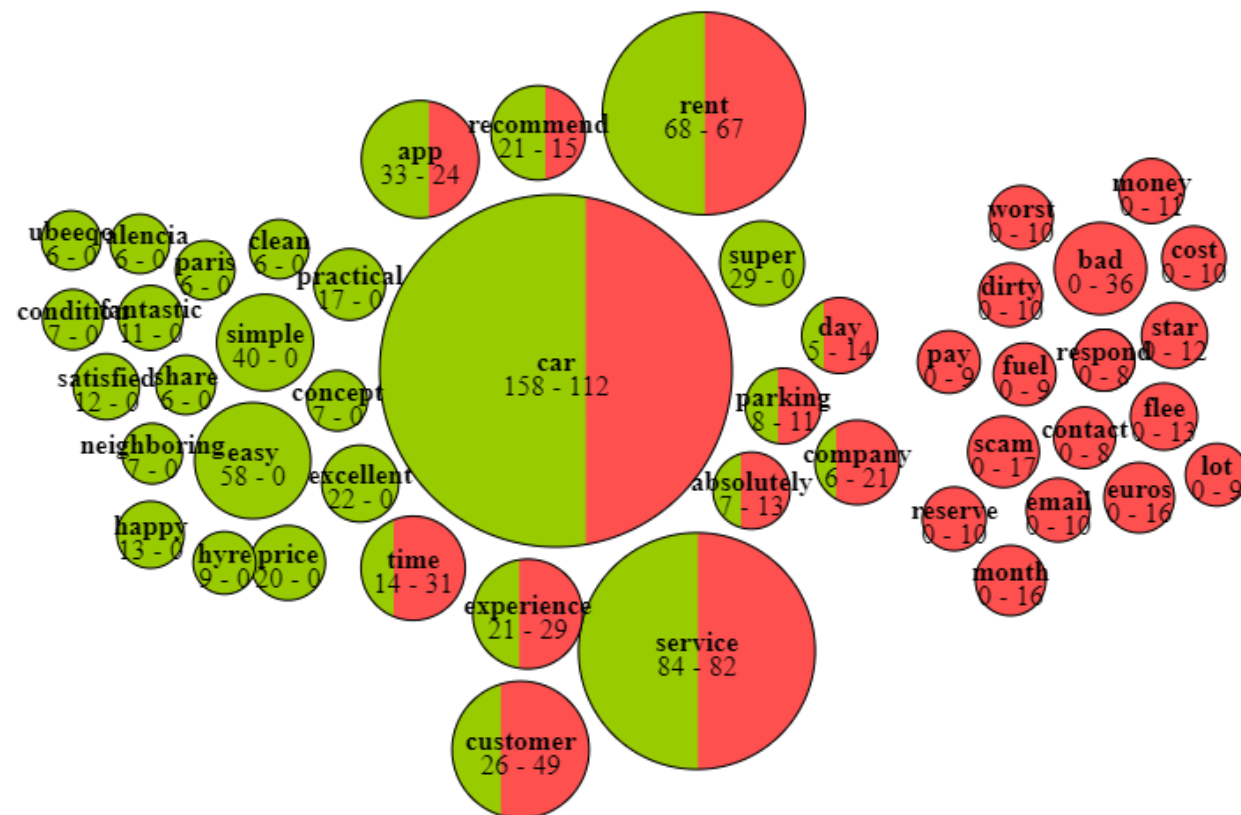
app 33 - 24
recommend 21 - 15
rent 68 - 67
super 29 - 0
money 0 - 11
worst 0 - 10
bad 0 - 36
cost 0 - 10
dirty 0 - 10
ubeeq 6 - 0
valencia 6 - 0
clean 6 - 0
paris 6 - 0
practical 17 - 0
conditi 7 - 0
fantastic 11 - 0
simple 40 - 0
car 158 - 112
day 5 - 14
pay 0 - 9
fuel 0 - 9
respond 0 - 8
star 0 - 12
satisfied 12 - 0
share 6 - 0
concept 7 - 0
parking 8 - 11
flee 0 - 13
neighboring 7 - 0
easy 58 - 0
excellent 22 - 0
company 6 - 21
absolutely 7 - 13
scam 0 - 17
contact 0 - 8
lot 0 - 9
happy 13 - 0
hyre 9 - 0
price 20 - 0
time 14 - 31
reserve 0 - 10
email 0 - 10
euros 0 - 16
experience 21 - 29
service 84 - 82
month 0 - 16
customer 26 - 49

- Positive
- Negative

4. Analysis by type of transport: **f. Shared Car** (Valencia+Ile de France+Rome+Oslo+Mannheim)

- The words that only men say are highlighted as: **excellent**, **lot, concept, month, hour,...**

- The words that only women say are highlighted as: **super, euros, pay, card, renting, scam, practical money** and **hour.**

- As for emotions, there are hardly any differences between men and women. The level of hatred is higher in women, 6.1% compared to 5.0% in men.
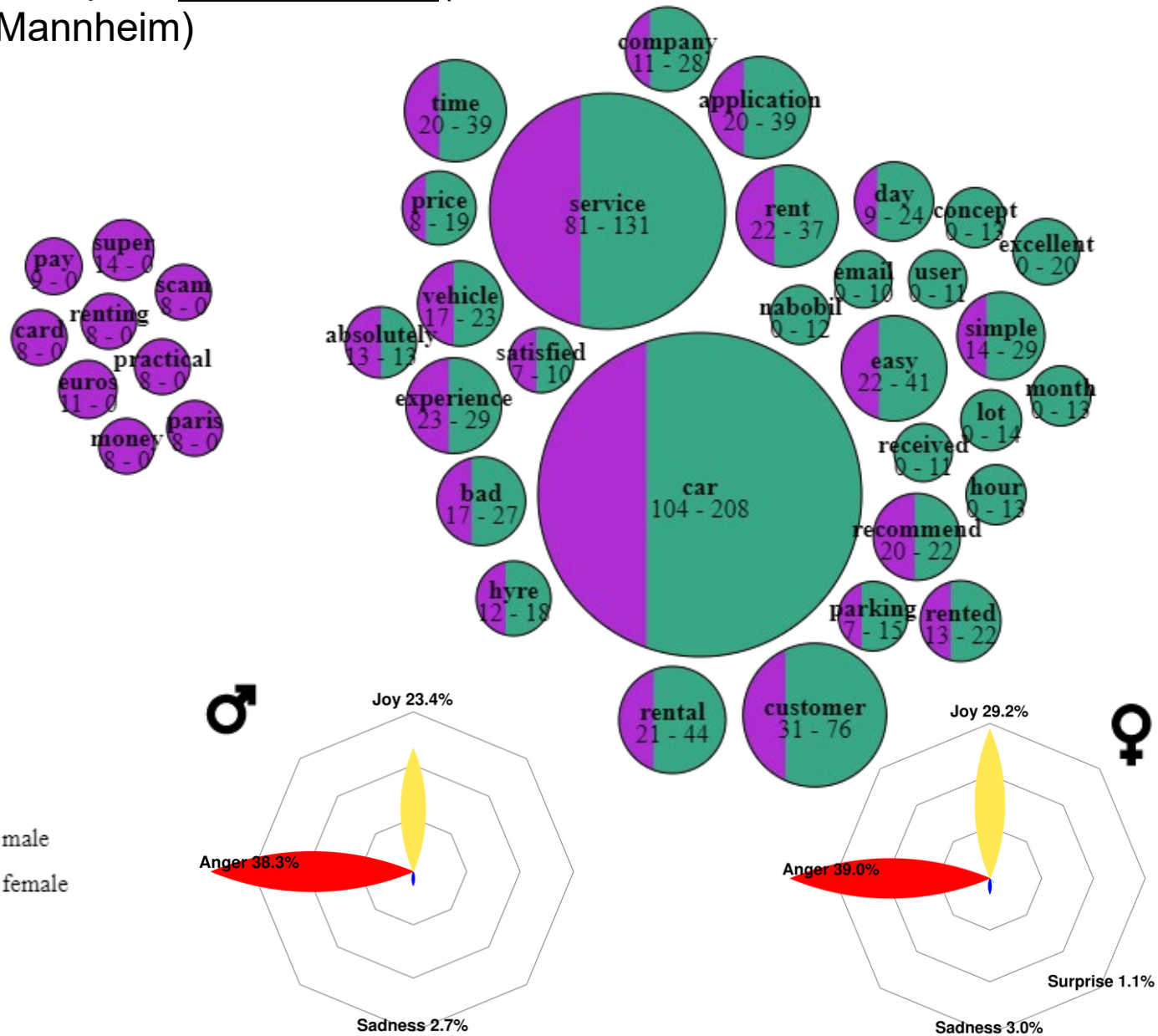
company 11 - 28
time 20 - 39
application 20 - 39
price 8 - 19
service 81 - 131
rent 22 - 37
day 9 - 24
concept 0 - 1
excellent 0 - 20
vehicle 17 - 23
email 0 - 10
user 0 - 11
nabobil 0 - 12
simple 14 - 29
absolutely 13 - 13
satisfied 7 - 10
easy 22 - 41
month 0 - 13
experience 23 - 29
lot 0 - 14
received 0 - 11
car 104 - 208
hour 0 - 13
bad 17 - 27
recommend 20 - 22
hyre 12 - 18
parking 7 - 15
rented 13 - 22
rental 21 - 44
customer 31 - 76

super 14 - 0
pay 9 - 0
scam 8 - 0
renting 8 - 0
card 8 - 0
practical 8 - 0
euros 11 - 0
paris 8 - 0
money 8 - 0

● male
● female

♂ Joy 23.4%
Anger 38.3%
Sadness 2.7%

♀ Joy 29.2%
Anger 39.0%
Surprise 1.1%
Sadness 3.0%

IMPROVEMENTS & MAINTAIN:

- Good **customer service** with professionalism and good treatment.
- **Useful and practical** service:
  - For **people who do not have a car**, a good alternative to owning a car.
  - To **move around the city**, go to the center and also outside the city.
- **Suitable price:**
  - **It should cost less than owning a car.**
  - Competitive price, **good value for money** and **free registration.**
- **To avoid fines and charges for service / system failures.** For example:
  - The doors do not close and the service cannot be closed.
  - Errors in app or it doesn't work.
  - Not being able to park in the areas due to lack of parking spaces.
  - Problems to lock and unlock cars
  - Cars that are not rented in the end, are returned and the system does not record it
  - Pay admission fee 2 times because the car does not go.

- To avoid **charging problems**. For example:
  - Discharged electric cars (i.e. less than 30% battery)
  - Autonomy indicating unreliable
  - Fines for leaving the car with less than 30% battery
  - False or disproportionate mileage
  - There is no cable in the car or it is broken
- It must be a **fast service** (in 4 min, immediate), easy to use and simple.
- **App** easy to use and works well.
- **Cars have to work well**, be easy to drive, comfortable. If possible, be automatic and have a variety of models / typologies.
- **Cars in good condition**, clean and well maintained.
- **Availability** of cars throughout the city, always close to the user.
- **Facilities to park** (free blue zone or similar).
- **Cars that do not pollute**: electric, ecological.
- **Maintain the quality of the service** over time, with improvements and good maintenance.
- **Vouchers / Discounts for different** types of **user profiles** (eg couples, families, etc.).

IBV

València: Netnography of transport

5.1. València (Spain). Netnography of **transport**

TYPE OF TRANSPORT:	Nº Reviews	Nº Comments	♂	♀	?	Inhabitants	Tourist	Company	Web, social media, etc.
SAMPLE:			**USER PROFILE:**					**SOURCES:**	
a. SHARED BIKE	387	292	59.7%	27.6%	12.7%	52.6%	47.4%	Valenbisi	Google Reviews / tripadvisor
b. BUS	623	363	55.4%	41.3%	3.4%	96.4%	3.6%	EMT	Google Reviews / Twitter
c. SUBWAY /TRAM	847	847	50.4%	30.0%	19.6%	26.7%	73.3%	Metro Valencia	tripadvisor
d. TAXI	1.506	910	53.7%	44.8%	1.6%	94.2%	5.8%	Radio Taxi Valencia, …	Google Reviews
e. SHARED LEV	309	174	78.3%	18.8%	12.7%	78.3%	21.7%	YEGO Valencia Muving Valencia Cooltra Valencia	Google Reviews
f. SHARED CAR	93	64	62.0%	33.7%	4.3%	96.8%	3.2%	CARGREEN MOVILIDAD SOSTENIBLE, S.L.	Google Reviews
TOTAL:	**3.765**	**2.650**	**59.9%**	**32.7%**	**7.4%**	**74.2%**	**25.8%**		

UPPER

IBV

5.1. València (Spain). Netnography of **transport**

Sentiment- Polarity (total):

48.7% | 27.4% | 17.1% | 6.8%

POSITIVE NEGATIVE MIXED NEUTRAL

Sentiment- Polaritty (per type of transport):

a) Shared bike — 33.3% | 25.5% | 28.9% | 12.2%

b) Bus — 45.9% | 34.8% | 12.7% | 6.6%

c) Subway/Tram — 52.6% | 10.1% | 28.0% | 9.4%

d) Taxi — 45.1% | 40.4% | 10.3% | 4.2%

e) Shared LEV — 45.4% | 42.5% | 6.9% | 5.2%

f) Shared CAR — 69.8% | 11.1% | 15.9% | 3.2%

Level of **Hateful**: 4.8%

Sentiment –Emotions:

Joy 23.1%
Anger 21.8%
Sadness 1.6%

- Positive
- Negative
- Mixed
- Neutral

RATE (by type of transport):

a. SHARED BIKE 3.5
b. BUS 3.4
c. SUBWAY /TRAM 3.9
d. TAXI 3.4
e. SHARED LEV 3.7
f. SHARED CAR 3.9

RATE (total):

3.6 ★★★☆

Number of reviews (by type of transport):

Taxi
Subway/Tram
Bus
Shared Bike
Shared LEV
Shared Car

Shared bike — Bus — Subway / Tram — Taxi — Shared LEV — Shared CAR

UPPER | IBV

a. Shared Bike | **33.3%** | **25.5%** | **28.9%** | **12.2%**
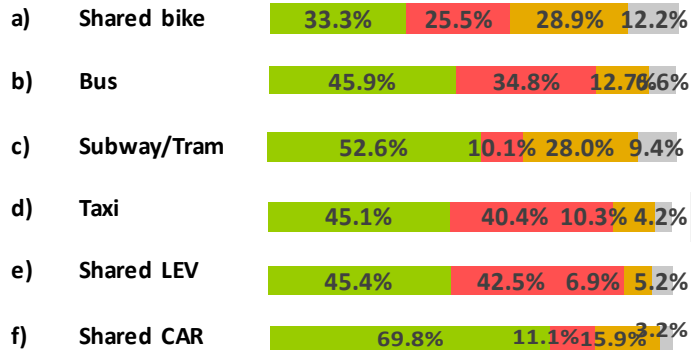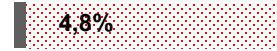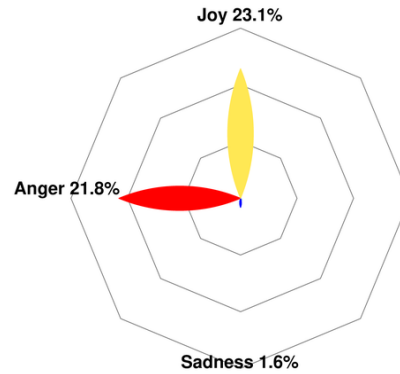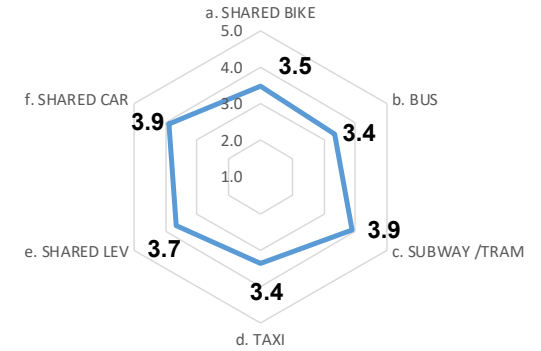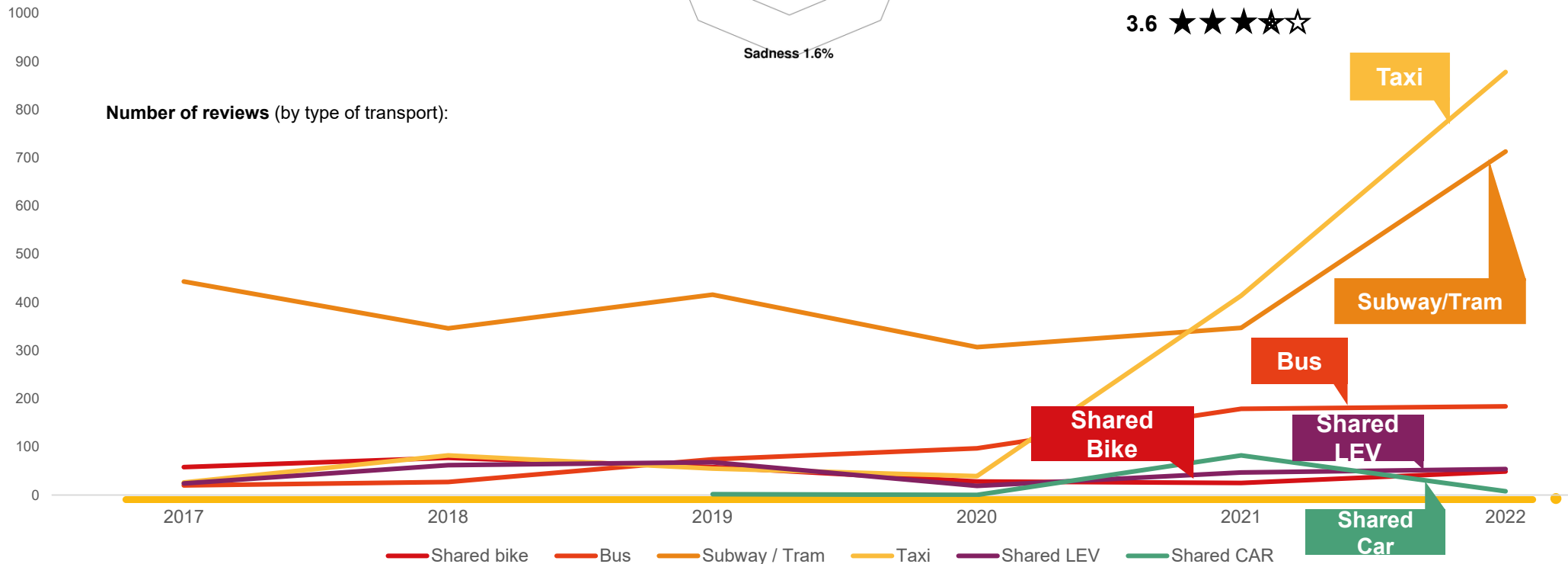
● Positive
● Negative
● Mixed
● Neutral
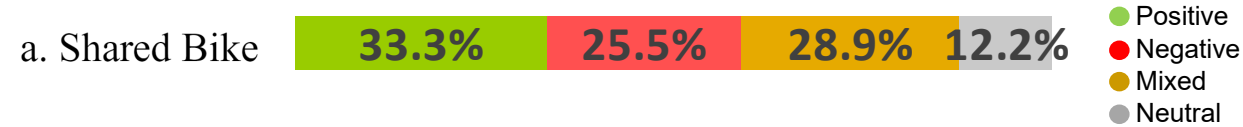
POSITIVE 33.3%

- The most important thing is the **good location of the station** (11.0%):
  - Near the bike path.
  - Well connected with other transport (e.g. near tram stations), facilitating intermodality.
  - Near the historical center, commercial, etc.
- In second place, **the availability of bicycles** at each station (9.6%), **adequate price** (8.3%) and **30 min free** (1.4%).
- Another aspect that is repeated is the **adequacy of the city of Valencia for this service** (7.8%): a city without slopes, flat (2.8%), with a lot of bike lanes (4.1%), with good weather (0.9%).
- **Pleasant, satisfactory, simple service** and it **works well** (5.0%).
- **Useful and practical** service (4.6%).
- It is very important that there are **spaces to leave the bicycle**, that the station has a **size according to its influx / use**.
- It is a **healthy** service (1.8%) **and sustainable** (0.9%).
- The **App is very useful** to know where the nearest stations are and the availability of bicycles and spaces to leave them (1.8%).
- There are few positive comments about the bicycles (0.9%) and they refer to **robustness, resistance and comfort**.

NEGATIVE 25.5%

- The largest number of complaints is focused on **Customer Service** (5.5%):
  - They do not attend in English.
  - There is no contact email or it is not easily found.
  - There is no problem/breakdown resolution at the moment. When they call by phone they do not pick up, therefore, they cannot solve the problem at the moment.
- The most frequent problems is that the **system does not work properly** (5.0%):
  - **Failures in the anchorage** that supposes that the users think that they have returned the bike correctly and this is not the case.
  - Another failure that usually occurs is that they pay the subscription and **do not obtain the code** to be able to use the service.
- **Incidents with cards and extra payments** (3.7%):
  - Lack of transparency: Users complain about extra/additional costs that are hidden or not easily read.
  - They take time to return the deposit (e.g. to return the 150 euros it can take up to 3 weeks).
  - If their credit card expires during the year, the service is blocked and they cannot use it or change their payment card.
- Another frequent problem is **the bikes** (3.2%):
  - **Heavy** (1.4%).
  - Old, broken, damaged brakes (0.9%).
  - They should have support or electric option.
  - **Others**: Uncomfortable, slow, they slip, they go wrong.
- Only **30 minutes free system is not clear** to everyone **and it is not useful for tourists** (3.2%).
- When they arrive at a station there are **no spaces** to leave the bike (2.8%).
- There are **no bicycles** (2.3%).
- **Others**: the **app** is not useful to find out if there are spaces and/or bikes, not very usable, (...)

Noun (blue) · Verb (orange) · Adjective (green)

2017 2018 2019 2020 2021 2022

#Bike: "They are quite heavy bikes but it is a very important service for the city".
#Station: "Very small station". "A large station with many bikes".
#City: "Except for the weight of bicycles and some specific incidents, the service is good and helps improve mobility in the city"." The stations are present in many points of the city".
#Service: "I would never recommend this service. First of all, when you have any problem and want to inquire how to fix it…".
#System: "To use the system of this municipal transport of Valencia, you need to make a Valenbisi card..."
#Hour: "Bikes are rented out on a weekly basis as opposed to daily and the payment structure favours short rides under a half hour... not good for exploring".
#Minute: "Buried somewhere in terms and conditions, that are NOT obvious, you have to return the bike every 30 minutes to a docking station to avoid extra charges".
#Week: "You pay for a week (around € 14) or take an annual subscription".
#Valencia: "Valencia is a city to go around absolutely by bike".
#Subscription: "Making the subscription I discovered that it was necessary to leave € 150 with deposit that would be returned at the end of the subscription".
#Time: "So you have to dodge, avoid searching, searching takes time".

#Use: "If you come back I would rent "normal" bikes or use very efficient means.".
#Take: "On the post you always have to enter your ticket number and personal pin code, after which you can take a bike with you.".
#Charge: "…they charge me € 27, I call it to claim, nor at scandalous hours, at 5: at 5: at 5: 30 in the afternoon on a Monday, and my surprise is that they do not take it…".
#Pay: "if your lap lasts less than half an hour, you will only pay the initial figure of the subscription…".
#Get: "They serve to get you out of trouble, but they are bad, hard bicycles with poor maintenance".
#Go: "… , moreover the city is covered with many cycle paths, which allows you to go where you want to use the pedestrian sidewalks or the roads.".
#See: "Via the Allbikesnow app you can see on your smartphone where there are bikes at your place of destination"
#Leave: "It is enough, however, at the end of the half hour, change the bike and leave another half hour for free.

#Many: "There are many stations in the city for the bikes and with the app you can easily find them".
#Good: "When you stay for several days it is a good way to move..".
#Free: "…install the application with a parking lot, it will also show the availability free places and free slots…".
#Heavy: "The bikes themselves are quite heavy making it difficult to check a map when you are stopped".
#Bad: "They serve to get you out of trouble, but they are bad, hard bicycles with poor maintenance".
#Full: "Another full station, keep looking......".
#Available: "It usually has available holes and bicycles."

Number of Reviews vs Rate (Shared bike- València)

Chart data points:

Green line (Rate): 2012: 2,9 | 2013: 2,6 | 2014: 2,8 | 2015: 3,5 | 2016: 3,8 | 2017: 3,9 | 2018: 3,7 | 2019: 3,8 | 2020: 3,9 | 2021: 3,7 | 2022: 4,5

Orange line (Number of Reviews): 2012: 9 | 2013: 9 | 2014: 11 | 2015: 24 | 2016: 38 | 2017: 58 | 2018: 77 | 2019: 58 | 2020: 28 | 2021: 25 | 2022: 45

IMPROVEMENTS & MAINTAIN:

- **To minimize or to eliminate system failures**, and in the event that there are any that are solved with **good customer service**:
  - Service option in English, keep in mind that in Valencia it is used by many tourists.
  - Failures must be solved quickly and without additional costs.
- **Advices to remind the most usual problems**, as the incorrect anchorage.

- **Resize the stations** so that they all have **spaces and bikes**.

- **Sufficient and well-located stations**, close to bike lanes and close to other forms of transport, favoring intermodality.

- **App that warns in real time** about the availability of spaces and bikes, working well and being reliable.

- Improved bike **maintenance**.

- **Improved bikes**: users consider them very heavy. To offer electric bikes option, and a chair to carry children.

- In the city of Valencia it is widely used by tourists (45% approx.) and they consider that the limit of 30 free minutes does not suit their needs.

- To improve the rental service by adapting to new, **simpler and more agile forms of payment/rental**. For example:

  - No need for a deposit of 150 €.

  - Being able to pay with mobile.

  - Being able to pay for a single use (single ticket)

b. Bus

45.9%	34.8%	12.7%	6.6%

● Positive
● Negative
● Mixed
● Neutral

POSITIVE
45.9%

- Good service, bus and/or line that **reaches everywhere** (12.8%)
- **Good bus frequency** (5.8%).
- Good **customer service**; resolution of incidents and procedures (5.2%).
- Friendly and professional **drivers** (3.5%)
- Long hours and **availability** of night hours (1.7%)
- **App** works well and is useful (1.7%)
- Long and **high-capacity** buses (1.1%)
- **New buses** (more comfortable and with accessories such as plugs) (1.1%)
- **Others**: ventilation, efficiency, speed, tranquility.

NEGATIVE
34.8%

- **Low frequency** of passage, there are **no buses**, waits of more than 20 minutes (7.0%)
- **Lack of punctuality** (waiting time notices are not reliable / accurate) (3.5%)
- **App:**
  - Improvable (4.1%)
  - Fails a lot (5.2%)
  - Inaccurate indicated times (4.1%)
  - Online card recharge fails (4.1%)
  - Low reliability (3.5%)
  - Error when giving the route (1.7%)
  - Can't see remaining trips (1.7%)
  - Does not recognize location (1.1%)
  - Others: incompatibility, does not read QR, does not update,...
- **Limited hours**; the daytime hours end early and at night it is scarce (2.3%).
- Harsh driving (1.1%)
- Drivers lack empathy and kindness (1.1%)
- **Others**: lack of accessibility, screens or light in canopies do not work, users do not comply with the rules, there is a lack of service in new neighborhoods, expensive tickets.

IBV

Legend:
- Noun
- Verb
- Adjective

2017 | 2018 | 2019 | 2020 | 2021 | 2022

#Bus: "Good bus line, very good cadence and covers an important part of the city".

#Service: "This line is very well provided a good service".

#Driver: "...most sympathetic drivers but a lot of car and bike invading the bus lane with what they have to paste brakes".

#Line: "Good bus line. Quite punctual at times".

#Time: "The application fails many times."

#Stop: "My stop that is 1593, fails when trying to see buses or trying to put it in favorites. ".

#Frequency: "Put more frequencies. Fix the app. That never works well and above all and important put more night frequency! ".

#User: "They would increase frequencies, more buses could, and more drivers, to give good quality and user service.".

#Card: "the application has not been going well when I put the numbering the bonobús card I do not get the trips that I have left".

#Night: "The ordinary service ends very soon and the night service very badly at times and waiting time.".

#App: "I take line 70 when I finish working and there is not a single day that passes buses at the time in which the EMT application puts !! !".

#Go: "Check the app or talk to the responsible person and that the bus goes at the right speed, I do not understand why hurry, or the failure is human or the app is of no use.".

#Take: "It is worth with the 90 is a circular bus I take it many times and usually there is no incidence."

#Work: It is going well 1 in 100 times, to go to work, of course it is nothing reliable…".

#See: "... the option to see the card balance never works ...".

#Wait: "Line 73 stop 472 PTXINA TODAY MONDAY, JANUARY 9 29 minutes of waiting. I arrive at 9:21 and the bus passes at 9:50!".

#Leave: "The drivers are rude, and if they see you running and climb the last person of the stop they close the door in the face and leave.".

#Know: "And why don't the screens work in all bus shelters to know when the bus arrives?"

#Say: "He always says "we feel it, it has not been possible to connect with the server." I have tried another Android mobile and neither, there are several days"

#Good: "After 10 years I take the bus again and I am surprised at the good service".

#Bad: "drivers with very little empathy to the public and in general they drive very badly.".

#Many: "I have not been updated how many trips I have in the bonobús, and it does not let me recharge online, I really do not know why, I have already tried many things for solve it, but nothing".

#Public: "I always by bus public transport every time better. This government tastes.".

#Full: "I have come to go to the Perelló returning at night and everything full and in the middle of the two baby carts making a natural border and nobody passed to the background".

#More: "That facilitate carrying the bikes folding to the bus is a step. Thus mobility becomes more sustainable, thanks"

#Full: "It is always too full unless it is early morning"

5.1.2. València (Spain). Netnography of <u>Bus</u>

Number of Reviews vs Rate (Bus - València)

IMPROVEMENTS & MAINTAIN:

- More buses to **increase frequency**
- Better **punctuality**
- Improvement of the **app**:
    - No bugs, reliable, user-friendly, fast, with precise bus schedules, and with an agile ticket purchase/loading system)
- **Extended service** hours (day and night)
- Increased bus capacity
- Improved **bus driving**, less aggressive (less sudden stops and accelerations)
- Friendliness and **empathy** from drivers
- Improved customer service
- Better buses in terms of **comfort** and modernization (new services, new needs)
- **Greater accessibility** for people with disabilities, seniors, and baby/child strollers
- Clear rules for users and promotion of respect for them
- Cheaper tickets and discounts

5.1.3. València (Spain). Netnography of <u>Subway/Tram</u>

d. Subway / Tram

| 52.6% | 10.1% | 28.0% | 9.4% |

- 🟢 Positive
- 🔴 Negative
- 🟠 Mixed
- ⚪ Neutral

POSITIVE
52.6%

- **Well connected** to the airport, etc (20.6%)
- **You can get to almost anywhere in the city** (12.7%), even to the beach (6.3%)
- **Clean and well-maintained** (14.3%)
- **Functional, comfortable** (9.5%)
- **Punctual**, precise with the minutes it says it will take (9.5%)
- **Suitable bonuses/cards** for multiple trips, tourism and different modes of transportation (9.5%)
- **Easy to use**, understandable and intuitive (9.5%)
- **Fast** (9.5%)
- **Efficient** (6.3%)
- **New and modern** (4.8%)
- **Simple** because it has few lines (4.8%)
- **Good frequency** of service (3.2%)
- **Others**: peaceful, safe, well signposted, with a good website, allows pets, (...)

NEGATIVE
10.1%

- **Low frequency** of service (9.5%)
- **Lack of civility**: people not wearing masks, not paying for tickets, entering with wet bathing suits, etc. (9.5%)
- **Lack of maintenance** in stations, broken escalators, vending machines not working (7.9%)
- **Inadequate air conditioning** (6.3%)
- **Poorly functioning website** (6.3%)
- **Expensive ticket** (single fare without pass) (6.3%)
- **Metro very crowded** (4.8%)
- Need for **improvement/ lack of signage** (3.2%)
- **Reduction of service** (3.2%)
- **Incorrect information on website** about schedules, etc. (3.2%)
- **Lack of night service** (3.2%)
- **Others:** arriving late, no lockers, no assistance for the elderly, need for more machines at the airport, lack of alerts for breakdowns, many breakdowns, no loudspeakers indicating destination, bicycles not allowed...

IBV

Noun (blue) · **Verb** (orange) · **Adjective** (green)

Timeline: 2017 | 2018 | 2019 | 2020 | 2021 | 2022

#Metro: "I enjoy walking any city I visit, but having a good metro is also useful.".

#City: "A subway that does not touch all the points of the city as in other similar structures in various European cities but which I seem to be able to define as excellent".

#Airport: "… and a very efficient way to get from the airport to the city.".

#Valencia: "Excellent way to move to Valencia".

#Center: "However punctual train and the center can be easily reached."

#Line: "lines 3 and 5 connect the airport with the city center in 15/20 minutes ….".

#Ticket: "… and also means you don't have to keep buying individual tickets.".

#Train: "Trains run frequently. They're fast, quiet, clean.".

#Card: "There is the possibility of making a card (24, 48 or 72 hours) to very interesting costs …".

#Time: "Trains on time and clean. Metro network is not very large and therefore easily manageable …".

#Minute: "…frequency should be increased because certain races expect 15 minutes but it is punctual."

#Subway: "In addition, the subway takes, many lines have half of the equal stops (absurd) and is somewhat expensive"

#Person: "It is not possible for a person to wait 1 hour. person to wait 1 hour".

#Use: "The metro itself is good and easy to use but to my cost, pickpockets operate.".

#Go: "buy a ticket on the platform and see the sights as you go.".

#Take: "They do not take into account the elderly or pregnant women who may need to use them".

#Buy: "Once you buy a card for 0.50 euro, keep it and re-charge it at the machines.".

#Get: "and all kinds of obstacles that prevent you from entering the data and when after wearing patience you get it, ".

#Move: "The metro is an excellent way to move in Valencia.".

#Make: "…or take the tram and make an uncomfortable transshipment… "

#Work: "The tram did not even stop at the bus stop, passed by me, what kind of work is this?"

#See: "Improve the schedules of the website please that it is seen that if I leave a stop at 8 in the morning it is seen that I get to my destination..

#Travel: "…the people traveling without a bil…"

#Allow: "and not what they allowed in the meter of 5.27 in the morning allowing what so many people would rise, seeing, smoking and without masks ...

#Clean: "…very clean and animals inside the carrier…".

#Easy: "This metro system is very clean, easy to understand& pretty cheap...".

#Good: "…It is a good connection with the airport but also to get to the part where the sea is…".

#Comfortable "The L10 of Alacant-Natzet has surprised me. It is a short, comfortable and very beautiful route".

#Efficient: "The metro in Valencia is really efficient".

#Great: "10 pack of tickets is a great buy.".

#Cheap: "No problem also the metro and the tram brings you down cheaply".

#Usefull: "Really useful, and pretty cheap, too".

#Bad: "Too bad that the service ends about 10 pm".

#Public: "They do not open on Sundays until seven and peak, a public service of Metro does not open Sundays until seven and peak"

#Fast: "It is clean, modern, fast and is usually quite punctual"

5.1.3. València (Spain). Netnography of Subway-Tram

Number of Reviews vs Rate (Subway/Tram - València)

Rate values (green line): 2012: 3,2 · 2013: 3,6 · 2014: 3,8 · 2015: 3,9 · 2016: 4,1 · 2017: 4,2 · 2018: 4,1 · 2019: 3,9 · 2020: 3,5 · 2021: 2,6 · 2022: 2,6

Number of reviews (orange line): 2012: 36 · 2013: 33 · 2014: 45 · 2015: 121 · 2016: 305 · 2017: 443 · 2018: 346 · 2019: 416 · 2020: 307 · 2021: 347 · 2022: 713

IMPROVEMENTS & MAINTAIN:

- **Good connections**: **airport and rest of the city**
- **Cleanliness and maintenance** (escalators, vending machines, etc.)
- **Comfortable**, functional and user-friendly
- **Increased frequency of service**
- Reliable and **accurate information** on screens, website
- Safe
- Adequate **air conditioning**
- Clear **rules of use and behavior** (supervision, communication campaigns, sanctions, etc.)
- Improved signage
- Increased **nighttime service**
- **Greater accessibility**
- Others: being able **to bring bikes** (even if they are not foldable, ...)

IBV

5.1.4. València (Spain). Netnography of <u>Taxi</u>

e. Taxi

45.1%	40.4%	10.3%	4.2%

- ● Positive
- ● Negative
- ● Mixed
- ● Neutral

POSITIVE
45.1%

- **Good/excellent service** (19.8%)
- **Quick to respond** (15.4%)
- **Driver's kindness and professionalism** (13.2%)
- **Punctual** (6.6%)
- **Efficient** (6.6%)
- Good, efficient and fast **telephone service** (6.6%)
- Useful, reliable **app** (timetables and accuracy) (5.5%)
- Takes the **shortest route** (without getting lost) (2.2%)
- **Easy payment** (all types of cards, etc.) (2.2%)
- **Accessible** and with seats for children (2.2%)
- **Professionals with** extensive **experience** (2.2%)
- Good value for money (2.2%)
- **Others**: comfort, cleanliness, safety, availability, eco-friendly, home pick-up service, lost and found service, ...
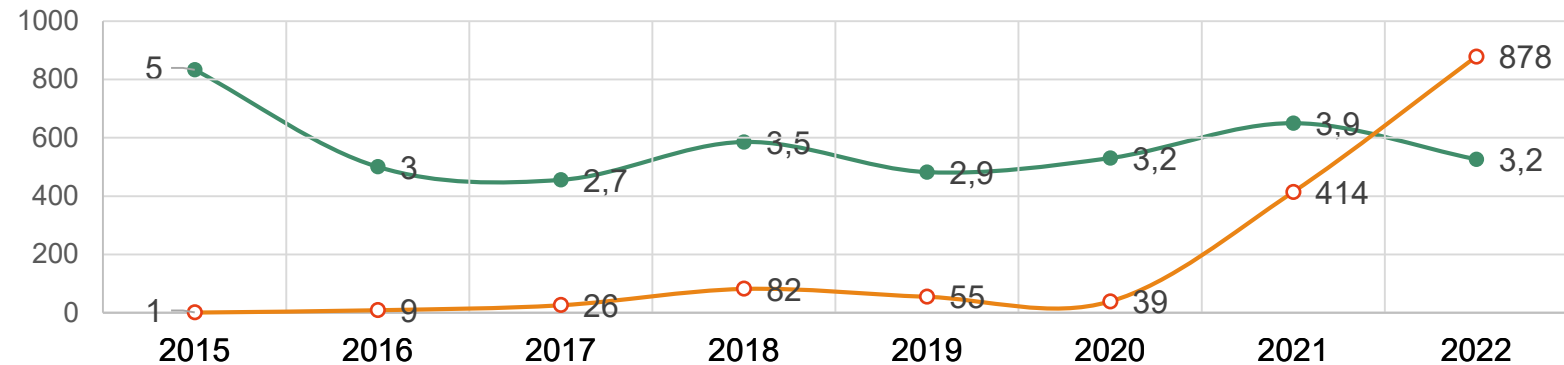
NEGATIVE
40.4%

- **Difficulty in contacting by phone** (they don't answer the phone, there's a recording, etc.) (19.8%)
- **Cancellation of service** without notice, the taxi doesn't show up, they don't provide service in a specific area (8.8%)
- **Poor telephone service**, rude operators (7.7%)
- **Slow to arrive**, takes too long (7.7%)
- **No taxis available** at night (6.6%)
- **Poor service** (6.6%)
- They **don't have a baby seat** or they don't carry it properly (facing forward) (2.2%)
- **Not enough taxis** (2.2%)
- **Unreliable** (2.2%)
- **Others**: lack of empathy, kindness of drivers, expensive payment of unspecified supplement (lack of transparency)

Legend: ● Noun ● Verb ● Adjective

Timeline: 2017 2018 2019 2020 2021 2022

#Taxi: "We spent 2 hours calling a taxi and it was impossible, they didn't take the phone.".

#Time: "They have neither called me nor have they passed through there because I was waiting all the time".

#Phone: "I was trying to contact on the phone to request a service and it was totally impossible".

#Service: "We have called from the Puig, they have told us that the service was not available".

#Driver: "Punctual, very kind the taxi driver."

#Hour: "SHIT SERVICE !!! I have been waiting for more than an hour !!!".

#Call: "I asked for a taxi two hours in advance because I needed two baby chairs, they call me 5 minutes to tell me it will be difficult.".

#City: "And I'm embarrassed. PATHETIC. Third City of Spain ... but for the tail in terms of taxi service".

#Person: "could give the option that a person directly attends you".

#Day: "Very good during the day but at night it doesn't work"

#Cabify: "Better to take cabify in Valencia, much better treatment, punctual, by the app you can see where they go, clean cars, neat employees. I took 2 airport cabify and much better experience.

#End: "in the end They send us the happy taxi after insisting and after again waiting again".

#Call: "He called them in the city of Valencia and fulfilled as professionals".

#take: "ay, March 16 at 5:00 p.m. I call Radio Taxi to ask for a taxi that takes some friends to the station to take a train. They have more than 10 min waiting.".

#Ask: "I call to ask for a taxi for 5 people. They tell me that they will return the call to confirm. They call me again and they tell me that it is worth, approx. about € 20".

#Tell: "Appalling. Numerous family with young children who calls to ask for a taxi with 5 seats and tell him of bad ways that there is no and that takes two or the bus".

#Arrive: "That I had a dog, so it has made me lose half an hour of my time waiting for two taxis and arrive late to my destiny".

#Go: "After reserving the day before a taxi to go to the airport at 6 in the morning warning that we had a 9 -month -old baby, they confirmed that there would be the taxi"

#Take: "Do not the phone take Saturday night (at 22:00) to book for the next day? Wow a bad service!"

#Make: "I was going with them a lot but they have begun to make mistakes with orders"

#Wait: "Much waiting in August ..."

#Good: "Good service and efficient".

#Bad: "After calling 5 times the canned voice insisted on giving me bad my direction I had to call another company".

#Fast: "Fast and kind".

#Punctual: "Punctual, fast and effective"

#Friendly: "Rapid. Super friendly. All very correct".

#Excellent: "Excellent and quality service".

#Long: "Long waits especially after 7pm"

#Great: "In addition, the Great app service, …"

#Other: "I resist resorting to other things but if this is repeated a lot I will have to consider ..."

#Lousy: "A lousy service"

#Same: "The previous day the same service at the same time charges me almost half"

Number of Reviews vs Rate (Taxi - València)

IMPROVEMENTS & MAINTAIN:

- Speed and efficiency in **telephone assistance**
- Quick **response** time
- Driver's **friendliness and professionalism**
- **Punctuality**
- **Reliability** (no errors, cancellations, etc.)
- More **nighttime service**
- **Accessories** such as car seats
- **Transparency**
- **Shorter routes**
- Useful, reliable and easy-to-use **app**
- **Payment** with all conveniences and **facilities**
- Other: comfort, cleanliness, safety, availability, eco-friendliness, home pick-up service, lost and found service, etc.

5.1.5. València (Spain). Netnography of <u>Shared LEV</u>

e.   Shared LEV

| 45.4% | 42.5% | 6.9% | 5.2% |

● Positive
● Negative
● Mixed
● Neutral

POSITIVE
45.4%

- **Good motorcycles**; reliable, new, comfortable, and attractive (25.0%)
- **Good service**; simple, straightforward, and fast (22.5%)
- Good and fast **customer service** (17.5%)
- **Essential service for** large **cities** (10.0%)
- With **discounts** (10.0%)
- **App** works well (5.0%)
- Two **helmets** available (5.0%)
- **Good price** (5.0%)
- **Others**: useful for short distances, without having to leave a deposit, always motorcycles nearby, ...

NEGATIVE
42.5%

- **System errors** (the motorcycle shuts down), improper charges (helmets, non-existent accidents) (37.5%)
- **Bad motorcycles**: poor maintenance and don't work well, lack of stability (25.0%)
- Poor **customer service** (15.0%)
- **Expensive** service (7.5%)
- **App** crashes (7.5%)
- **Dirty** motorcycles (5.0%)
- They ask for too **much personal information to use them** (5.0%)
- Cannot be driven with a US driver's license (5.0%)
- **Insurance not included**, you have to pay costs in case of an accident (5.0%)
- **Others**: motorcycles bother on sidewalks, few discounts, improve mirror design, few motorcycles,..

IBV

5.1.5. València (Spain). Netnography of Shared LEV

Legend: ● Noun ● Verb ● Adjective

Timeline: 2017 — 2018 — 2019 — 2020 — 2021 — 2022

#Motorcycle: "Very good motorcycle service, the motorcycles that I have caught in Valencia have worked perfectly".

#Service: "Without a doubt, the best electric scooter service in Valencia".

#Scooter: "Positive:? Finding everywhere in the city, a maximum of 5 minutes running until the next scooter?"

#Valencia: "At the time, they were pioneers in Valencia, but something happens with them…".

#Time: "The second time the same thing happens to me: I take a motorcycle, it works, but the direction and the front wheel are badly aligned ... a danger"

#Minute: "I have called for 30 minutes and have not taken the phone.".

#Customer: "Very bad customer service and very bad service"

#Problem: "After having a problem, I tried to contact them and after more than 24 hours there is still no response.."

#Helmet: "A motorcycle only had a helmet and we couldn't take it".

#App: "The application works terribly badly! He sticks, the minutes keep running even if you have already put "close route" (and they charge it, obviously), it does not let you close the motorcycle and tell you all those minutes".

#License: "they told me that my USA license (which I have rented in all parts of the world with that license) told me that I could not be accepted ".

#Phone:" Very poor that you do not have a 24 -hour service phone number to any problem"

#Price: "Good service, good motorcycles and good price."

#Take: "That allows you to start the trip, take the helmet and then the motorcycle does not start is not fair for the user.".

#Work: "I definitely discharge myself, 95% of the times I opt for your service does not work.".

#Use: "I used one (of the few that worked) will make a month, and it is still there, occupying a motorcycle parking space, practically at the door of my house, without appearing in the app ".

#Rent: "Of the last 5 rented motorcycles, 3 of them did not work".

#Charge: "charged me 50 € for allegedly stealing a helmet. ".

#Recommend: "I would only recommend that it be a little cheaper".

#Call: "The next day you call again and the same"

#Make: "Literally, I am on top of a muving and the map continues to make me that there is no motorcycle within my reach"

#Park: "constant changes of parking areas that once you call to complain and indicate the registration changed it ...".

#Go: I do not use these motorcycles because I go by bicycle,…"

#Good: "My experience is good, I have had problems with some motorcycles and if it is true that the customer service is disastrous".

#Bad: "it is the company by distributing them through the city who leaves them badly parked"

#All: "This Deplacement mode is ideal all the more since there is a lot of motorcycle space in Valencia"

#Lousy: "lousy customer service".

#Friendly: "Friendly staff, helped me to fix my backpack :)".

#Expensive: "Very good trade with an expensive treatment".

#Nice: "the motorcycle gives me new and they are super nice and pleasant, ".

#Abandoned: "There is an abandoned motorcycle for fate for more than 2 months on Victor Hino Architect Street in Valencia".

#Comfortable: "New and comfortable scooters that go a wonder, value for money to envy to many other Rent. "

 # Cheap: "Professionalism and truly cheap prices"

5.1.5. València (Spain). Netnography of <u>Shared LEV</u>

Number of Reviews vs Rate (Shared LEV - València)

IMPROVEMENTS & MAINTAIN:

- To minimize **system errors**
- To avoid **improper charges**
- To provide fast and adequate **customer service**
- To ensure that the motorcycles work well and are **properly maintained and cleaned**
- The **service** should be **usable**: simple, easy to understand, fast, agile, and satisfactory
- **Usable app** without flaws
- Agile and simple **payment and rental methods** (without having to pay a deposit and provide many personal details, etc.)
- Availability of motorcycles located in areas that **do not bother pedestrians**, etc.
- Service with **good affordable price** with discounts based on usage and user profiles
- With an attractive, comfortable, functional, and durable **design**
- **Insurance** that is managed with the rental and covers users
- **Compatibility** with driver's **licenses from other countries** such as the USA

f. Shared CAR

| 69.8% | 11.1% | 15.9% | 3.2% |
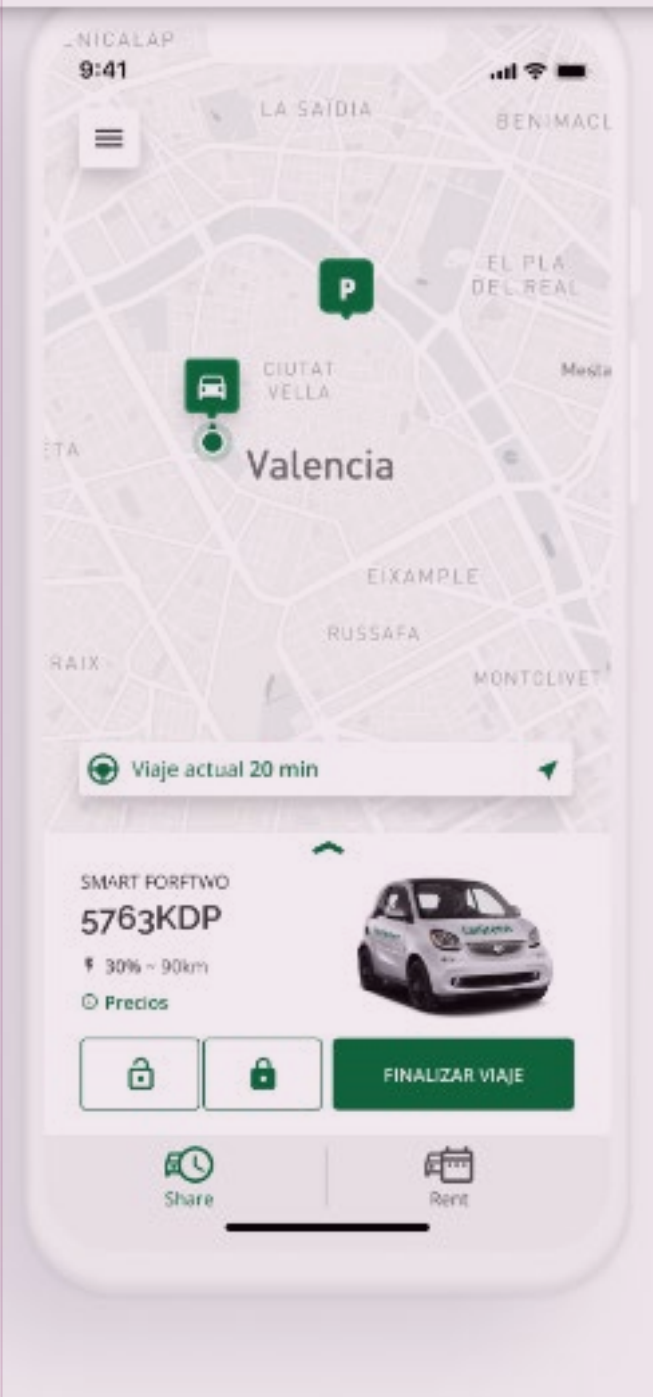
Legend:
- 🟢 Positive
- 🔴 Negative
- 🟠 Mixed
- ⚪ Neutral

POSITIVE 69.8%

- Great, innovative, and **necessary service** for people who do not have a car (43.3%)
- **Customer service**, professionalism, exceptional treatment (43.3%)
- **Cars work well**, easy to drive, comfortable, and automatic (30.0%)
- Easy-to-use **app** (26.6%)
- **Free parking** in blue zone (26.6%)
- **Fast** (4 minutes, immediate) **and simple service** (26.6%)
- **Practical** for moving around the city, going downtown, and also outside the city (23.3%)
- Electric, **environmentally friendly car** (16.6%)
- Competitive **price**, good value for money (13.3%)
- **Good experience**, recommendable (10.0%)
- **No signup fee** (6.6%)
- Others: reliable, ...

NEGATIVE 11.10%

- **Wrong charges** due to system/service failures (e.g. doors not closing and unable to end service) (10.0%)
- **Customer service** needs improvement and poorly managed refunds (10.0%)
- **Expensive** service (6.6%)
- Issues with the **app** or it doesn't work (6.6%)
- **Charging problems**: (6.6%)
  - Finding cars with less than 30% battery
  - Getting fined for leaving the car with less than 30% battery

Legend: ● Noun ● Verb ● Adjective
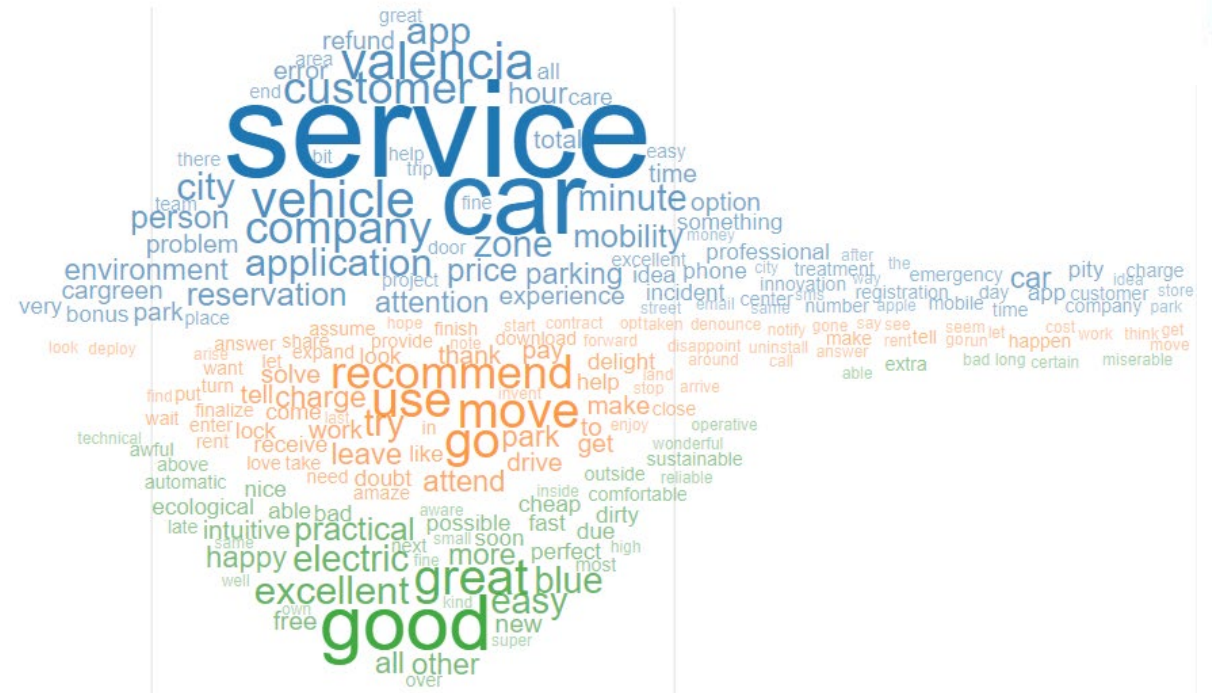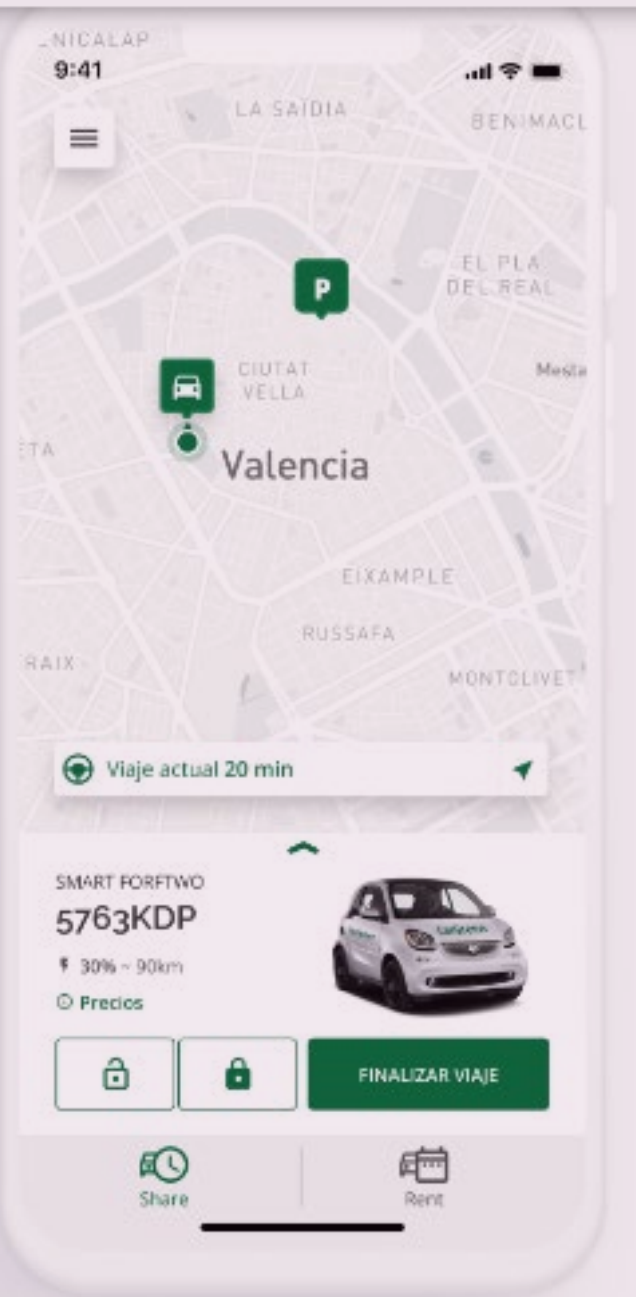
2019

- **#Car:** *"The cars go very well and the application is very easy to use,…"*
- **#Service:** *"Very good innovation soon your services will help us a lot!!"*
- **#Rental:** *"Great car rental company, what I like most about this service is the free parking in the blue zone, and the professionalism…"*
- **#Customer:** *"…good customer service if you have any doubts about being new, thank you.".*
- **#Enjoy:** *"I have finally been able to enjoy electric cars thanks to CarGreen, …"*
- **#Problem:** *"It should be noted that any problem that arises with them is solved immediately."*
- **#Time:** *"Very good service, like its professionals, who attend to you and resolve doubts, at any time and very good treatment".*
- **#App:** *"Intuitive application."*
- **#Euro:** *"A shame, they invented a fine for me and I had to pay 150 euros when the error was theirs because the car stopped working.."*
- **#Money:** *"Don't let a mediocre company steal your money"*
- **#Hour:** *"If everything works the same as the application, we're fine... an hour trying to enter (synchronizing data)"*
- **#Day:** *"After almost 15 days of someone telling me what happens with an extra charge that has been made to me and being impossible to contact by phone, I am going to denounce the company for that extra charge."*

2021

- **#Make:** *"This is amazing, you can move with total mobility around the city, cheap price and free parking in blue zones, which makes it even easier for you to park,…"*
- **#Take:** *"A pity but twice that I have taken the cars twice i've had problems."*
- **#Use:** *"After a reservation that I could not complete due to an error in the app (I was able to reserve but not access the vehicle), hours later I noticed that the application had assumed the use of the vehicle for several hours, ..."*
- **#Call:** *"I called several times during an incident for not being able to open the car, time kept running and no one answered there."*
- **#Try:** *"The project looks very good, and I'm looking forward to trying them".*
- **#Leave:** *"the bad thing is the people who leave it dirty after using it If you want more reviews and places to visit"*
- **#Park:** *"…when it came time to park I immediately found a space in the blue zone for free."*
- **#Charge:** *"First of all, in the bases and conditions in a middle paragraph they "warn" that if you leave the car with less than 15%, they will charge you a surcharge of €30. Even so, they let you get into the car with only 20% of the battery"*

2022

- **#Bad:** *"My experience with this company was very bad, I do not recommend it at all. There are cheaper options that provide much better care."*
- **#Free:** *"Great car rental company, what I like most about this service is the free parking in the blue zone,…"*
- **#Other:** *"Something very innovative, super different from the other displacement options"*
- **#All:** *"Perfect and wonderful all super practical"*
- **#Good:** *"Good quality of vehicles and good way to get around the city. ".*
- **#Rental:** *"Great car rental company."*
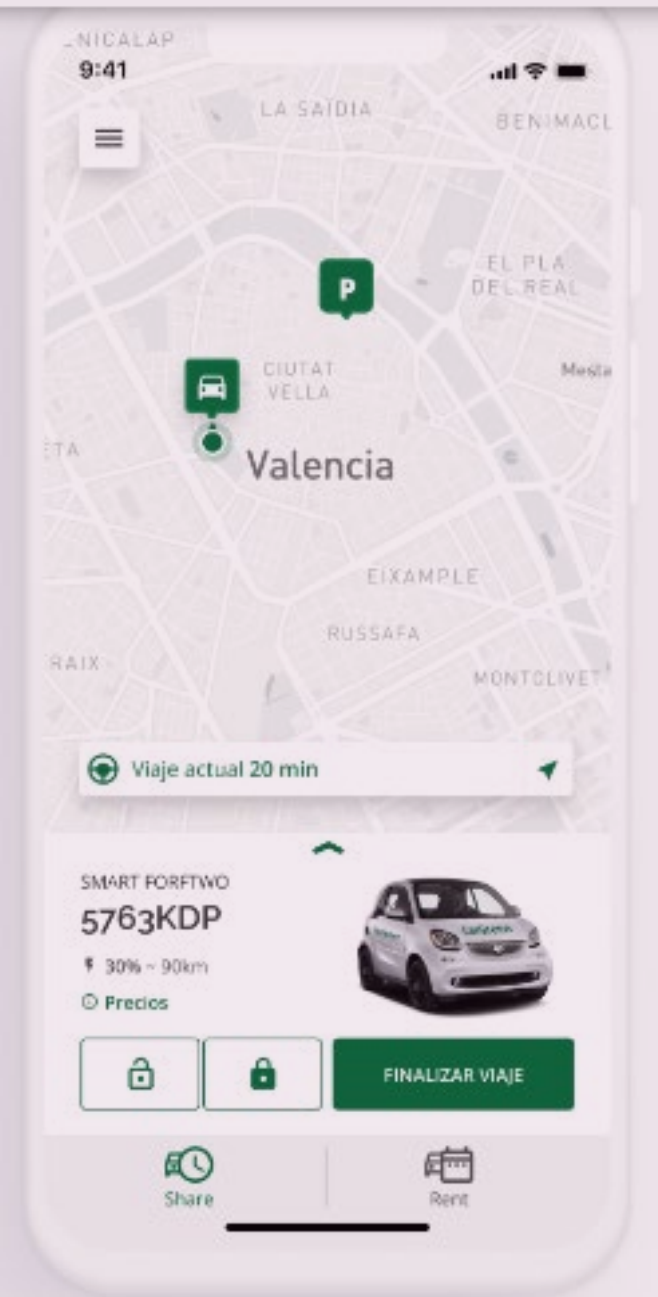- **#Recommended:** *"100% recommended!"*

5.1.6. València (Spain). Netnography of <u>Shared CAR</u>
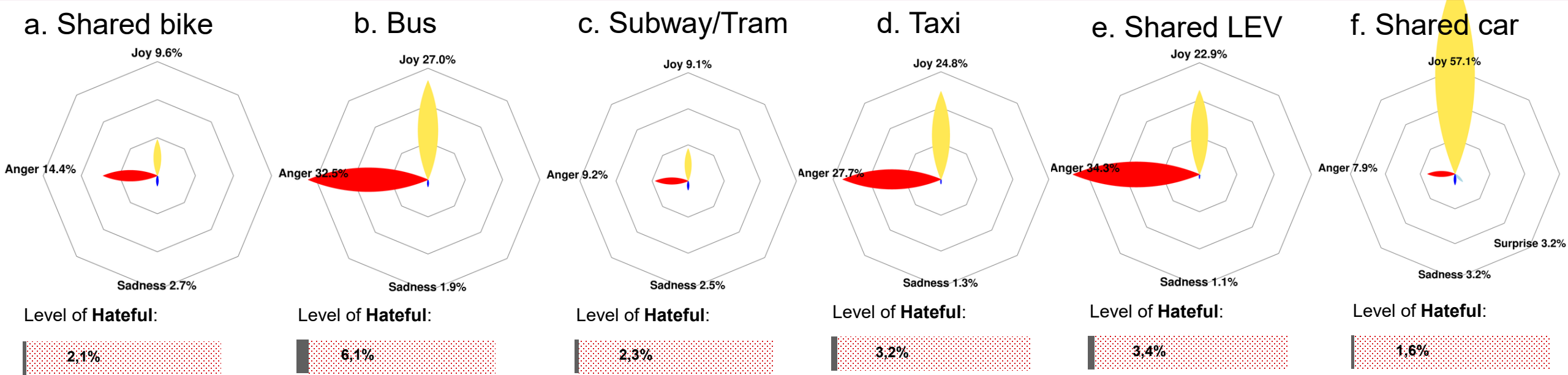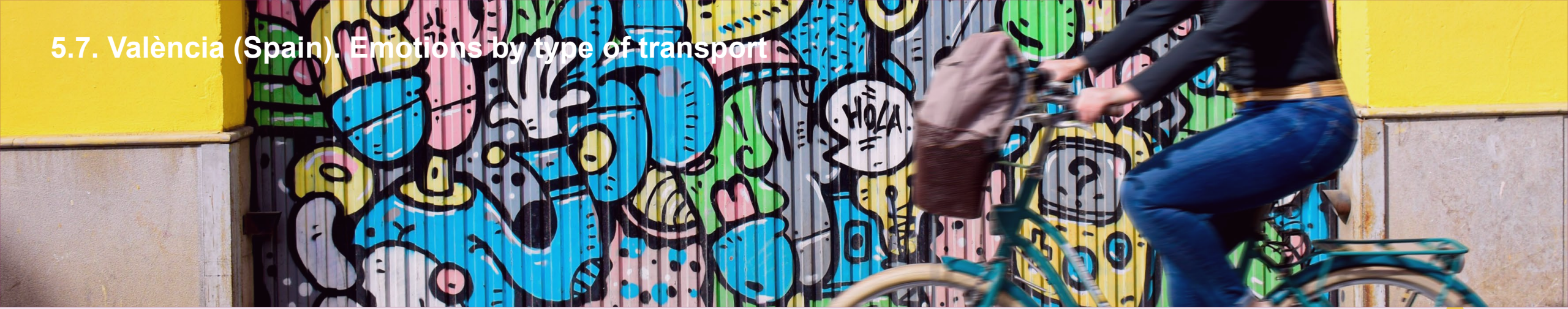
Number of Reviews vs Rate (Shared CAR - València)
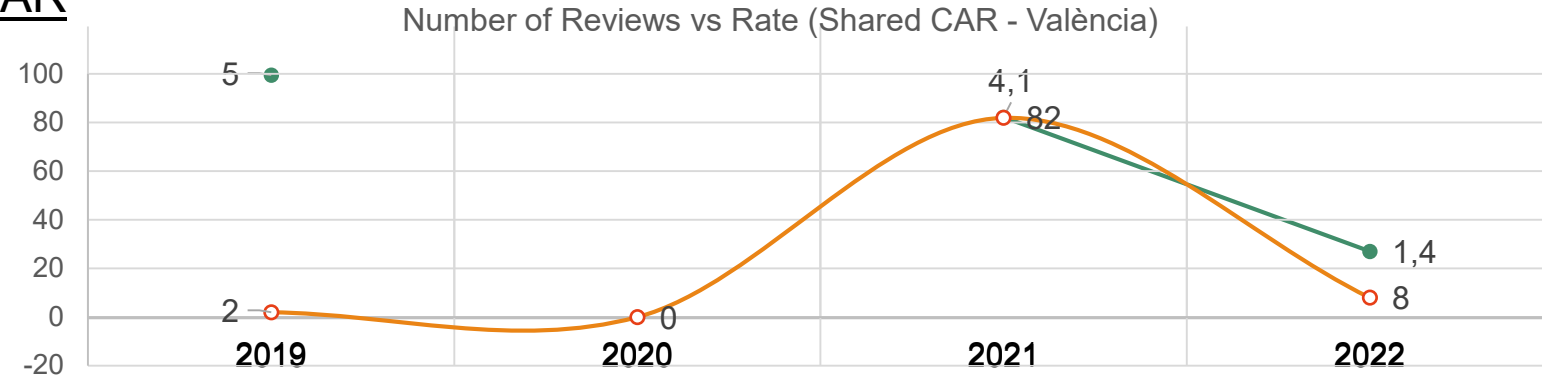
IMPROVEMENTS & MAINTAIN:

- **Good customer service**, professionalism, exceptional treatment
- Service necessary for people who do not have a car
- Easy-to-use app that works well
- Cars work well, are easy to drive, comfortable and automatic
- Facilities such as being able to park in blue zone for free
- Competitive price, good price-quality ratio and no registration fee
- Fast service (in 4 minutes, immediate), simple, easy to use and recommended
- Practical for moving around the city, going to the center and also outside the city
- Electric, eco-friendly car
- **To avoid errors**, charges for faults, greater reliability:
  - **Doors don't close** and you can't close the service
  - **Errors in app** or it doesn't work
- Problems with **charging**:
  - Finding the car with **less than 30% battery**
  - Being fined if the car is left with less than 30% battery

a. Shared bike

Joy 9.6%
Anger 14.4%
Sadness 2.7%

Level of **Hateful**:
2.1%

b. Bus

Joy 27.0%
Anger 32.5%
Sadness 1.9%

Level of **Hateful**:
6.1%

c. Subway/Tram

Joy 9.1%
Anger 9.2%
Sadness 2.5%

Level of **Hateful**:
2.3%

d. Taxi

Joy 24.8%
Anger 27.7%
Sadness 1.3%

Level of **Hateful**:
3.2%

e. Shared LEV

Joy 22.9%
Anger 34.3%
Sadness 1.1%

Level of **Hateful**:
3.4%

f. Shared car

Joy 57.1%
Anger 7.9%
Surprise 3.2%
Sadness 3.2%

Level of **Hateful**:
1.6%

- The **Bus** is the transportation mode that has the highest percentage of identified hate (6.1%), followed by Shared LEV (3.4%) and taxi (3.2%).
- **Shared Lev** is the transportation mode that has the highest ratio of anger to joy comments.
- **Shared Car** is the transportation mode that has the highest level of joy identified, 57.1% compared to 7.9% of anger, as well as the lowest level of hate.
- **Shared bike** and **Subway/tram** are similar with low percentages of joy, anger, and hate.
- **Shared car** is the only one that has a percentage of surprise (3.2%), perhaps due to the novelty of the service.

UPPER

IBV
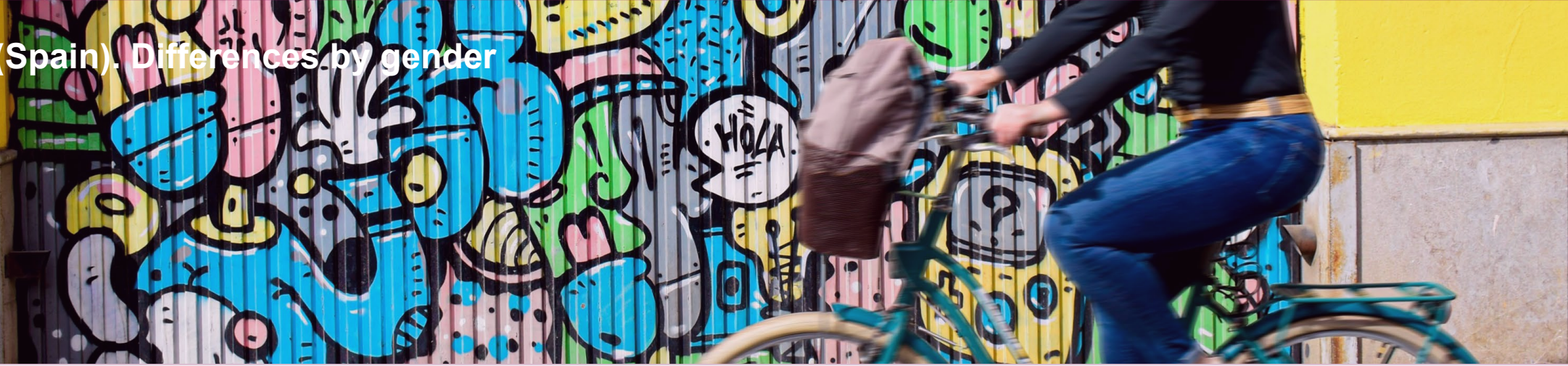
- If we analyze all the transports grouped, the most repeated words excluding Valencia are: **service**, **subwa**y, **taxi**, **city**, **time**, **bike**, **airport**, **minute** and **station.**

- The words that only men say are highlighted as: **center**, **price**, **lines**, **lot** and **easy.**

- The words that only women say are highlighted as: **waiting, punctual, called, people, friendly** and **train.**

phone
60 - 52

comfortable
23 - 32

fast
43 - 60

station
32 - 77

excellent
38 - 57

taxi
140 - 122

bus
29 - 43

driver
33 - 38

people
30 - 0

attention
36 - 54

service
151 - 289

card
39 - 51

friendly
28 - 0

punctual
33 - 0

train
25 - 0

min
72 - 63

subway
145 - 214

hour
43 - 49

valencia
107 - 196

waiting
35 - 0

lot
0 - 37

bike
58 - 112

price
0 - 41

called
31 - 0

transport
22 - 49

center
0 - 50

city
82 - 144

lines
0 - 38

day
39 - 66

time
75 - 106

bad
28 - 52

easy
0 - 37

clean
32 - 50

motorcycle
0 - 55

airport
58 - 97

ticket
25 - 61

● male

● female

5.9. València (Spain). <u>Conclusions</u>

- According to the number of reviews, Taxi and Subway seem to be the most used transports. According to this indicator, they are also the ones that have grown the most after the COVID pandemic.
- In Valencia, shared transports do not recover after the pandemic (even Shared Car disappears), unlike in other cities.
- There is a high and positive correlation between positive comments, a higher rate level (0.7), and lower levels of hate, and conversely, the lower the rate level, the higher the number of negative and hateful comments.
- The best-rated transports in Valencia are Shared Car and Subway, and the worst-rated is clearly the bus with a 6.1% level of hate, followed by Shared LEV and Taxi.
- 60% of the analyzed users are men, 33% are women, and the remaining 7% are unknown.
- Men use shared transport more, and women use taxi and bus more. There is a slight correlation between a higher percentage of men and a higher percentage of negative and mixed comments (men are more critical).
- 26% of the analyzed users are tourists, and the remaining 74% are residents.
- There is a slight correlation (-0.47) between a higher percentage of tourists and fewer negative comments (they are less critical), and conversely, a higher percentage of residents who give more negative comments (0.47). Tourists make more mixed and neutral comments.
- The higher the number of reviews (the more users of a service), the lower the ratings or satisfaction level (rate) (high correlation, 0.9).

Number of Reviews vs Rate (TOTAL - València)
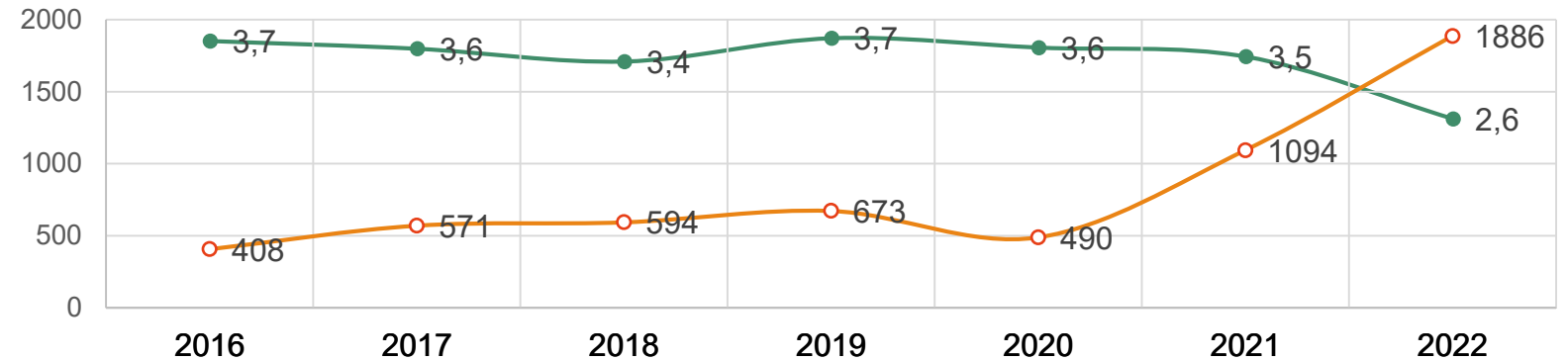
- There are no gender differences in the number of positive, negative, mixed or neutral comments:

♂ | 47.7% | 27.6% | 17.4% | 7.4%

♀ | 47.1% | 27.6% | 19.4% | 5.8%

- Positive
- Negative
- Mixed
- Neutral

5.9. València (Spain). <u>Conclusions</u>

The main highlights / most important aspects of each transport are:

- **Shared Bike:**
  - Good location of the station is the most important aspect for users.
  - Availability of bicycles at each station, adequate pricing, and 30 min free are also crucial factors.
  - Valencia's flat terrain, ample bike lanes, and good weather make it an ideal city for bike sharing.
  - Users value the simplicity, practicality, and usefulness of the service.
  - The biggest issues reported by users are related to customer service, system malfunctions, card incidents, bike quality, and unclear policies regarding the 30-minute free system.

- **Bus:**
  - Good service, bus and/or line that reaches everywhere
  - Low frequency of passage, there are no buses, waits of more than 20 minutes
  - Good bus frequency
  - Good customer service; resolution of incidents and procedures
  - App fails a lot

- **Subway /Tram:**
  - Well connected to the airport.
  - Clean and well-maintained
  - You can get to almost anywhere in the city, even to the beach
  - Punctual, precise with the minutes it says it will take
  - Functional, comfortable

- **Taxi:**
  - Good/excellent service
  - Quick to respond
  - Driver's kindness and professionalism
  - Difficulty in contacting by phone (they don't answer the phone, there's a recording, etc.)
  - Cancellation of service without notice, the taxi doesn't show up, they don't provide service in a specific area

- **Shared LEV:**
  - The main complaints are related to system errors such as the motorcycle shutting down, improper charges for helmets or non-accident insurance, bad motorcycles due to poor maintenance and lack of stability.
  - Good motorcycles are described as reliable, new, comfortable, and attractive.
  - The service itself is praised for being simple, straightforward, and fast.
  - Customer service is a mixed bag with some users experiencing good and fast service, while others complain about poor service.
  - The service is seen as an essential one for large cities and often comes with discounts.

- **Shared CAR:**
  - Great, innovative, and necessary service for people who do not have a car
  - Customer service, professionalism, exceptional treatment
  - Cars work well, easy to drive, comfortable, and automatic
  - Easy-to-use app
  - Free parking in blue zone
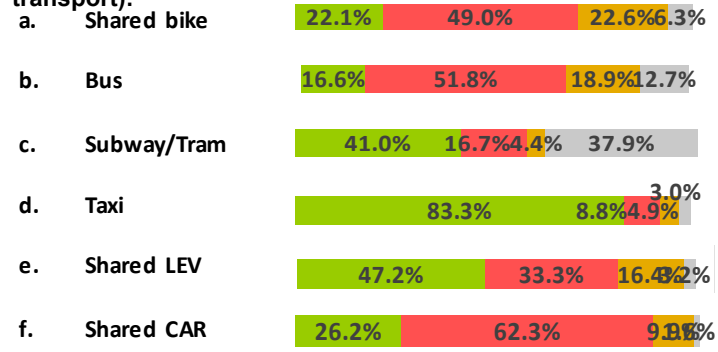
IdF: Netnography of transport

5.2. Ile de France (France). Netnography of **transport**

	SAMPLE:		USER PROFILE:					SOURCES:	
TYPE OF TRANSPORT:	Nº Reviews	Nº Comments	♂	♀	❓	Inhabitants	Tourist	Company	Web, social media, etc.
a. SHARED BIKE	1.194	1.049	49.0%	22.6%	21.8%	55.0%	45.0%	Velib' Métropole	Google Reviews / tripadvisor
b. BUS	952	512	64.3%	30.6%	5.0%	94.3%	5.7%	R.A.T.P.,…	Google Reviews
c. SUBWAY /TRAM	2.923	2.923	46.2%	26.5%	27.3%	11.0%	89.0%	Paris Metro	tripadvisor
d. TAXI	2.341	1.647	55.3%	40.6%	4.1%	92.8%	7.2%	ACTIFcab, Eurecab, VTC-TAXI, Paris Black Cars, Motofly, Motolead Prestige, TAXI PARISIEN,…	Google Reviews / tripadvisor
e. SHARED LEV	620	410	78.1%	19.7%	2.3%	97.5 %	2.5%	Cityscoot, COUP Paris, Troopy, ZEWAY, City Scooter Montparnasse,…	Google Reviews
f. SHARED CAR	237	191	52.7%	45.1%	2.1%	97.4%	2.6%	Ubeeqo, Getaround, SHARE NOW, Moovin Paris, …	Google Reviews
TOTAL:	**8.267**	**6.322**	58.3%	31.2%	10.4%	**74.7%**	25.3%		

UPPER

IBV

Sentiment- Polarity (total): 39.4% | 37.0% | 12.9% | 10.8%

POSITIVE | NEGATIVE | MIXED | NEUTRAL

Sentiment- Polarity (by type of transport):

a. **Shared bike** — 22.1% | 49.0% | 22.6% | 6.3%

b. **Bus** — 16.6% | 51.8% | 18.9% | 12.7%

c. **Subway/Tram** — 41.0% | 16.7% | 4.4% | 37.9%

d. **Taxi** — 83.3% | 8.8% | 4.9% | 3.0%

e. **Shared LEV** — 47.2% | 33.3% | 16.4% | 3.2%

f. **Shared CAR** — 26.2% | 62.3% | 9.1% | 1.5%

- 🟢 Positive
- 🔴 Negative
- 🟡 Mixed
- ⚪ Neutral

Level of Hateful:

10.7%

Sentiment –Emotions:

Joy 25.3%

Anger 21.5%

Sadness 4.6%

RATE (by type of transport):

a. SHARED BIKE 2.4
b. BUS 2.5
c. SUBWAY /TRAM 3.6
d. TAXI 3.5
e. SHARED LEV 3.6
f. SHARED CAR 2.2
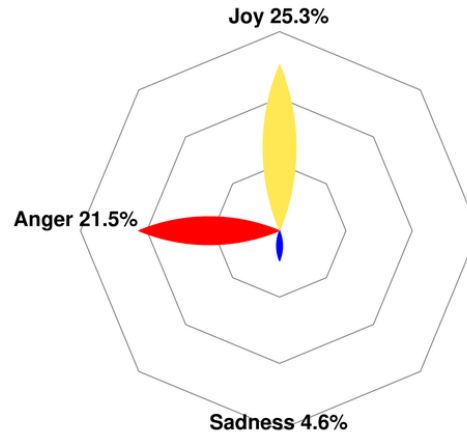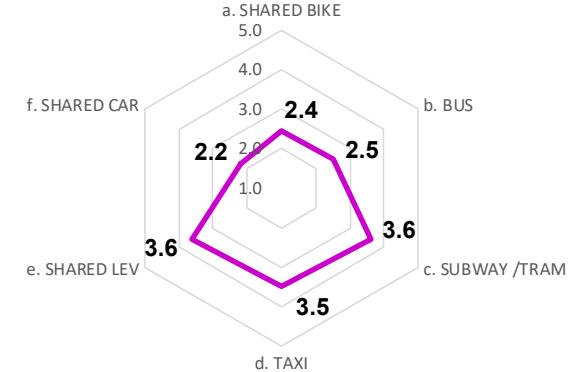
RATE (total):

3.0 ★★★☆☆

Number of reviews (by type of transport):

Taxi

Subway/Tram

Bus

Shared LEV

Shared Bike

Shared Car

UPPER

2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022

—— Shared bike —— Bus —— Subway / Tram —— Taxi —— Shared LEV —— Shared CAR

IBV
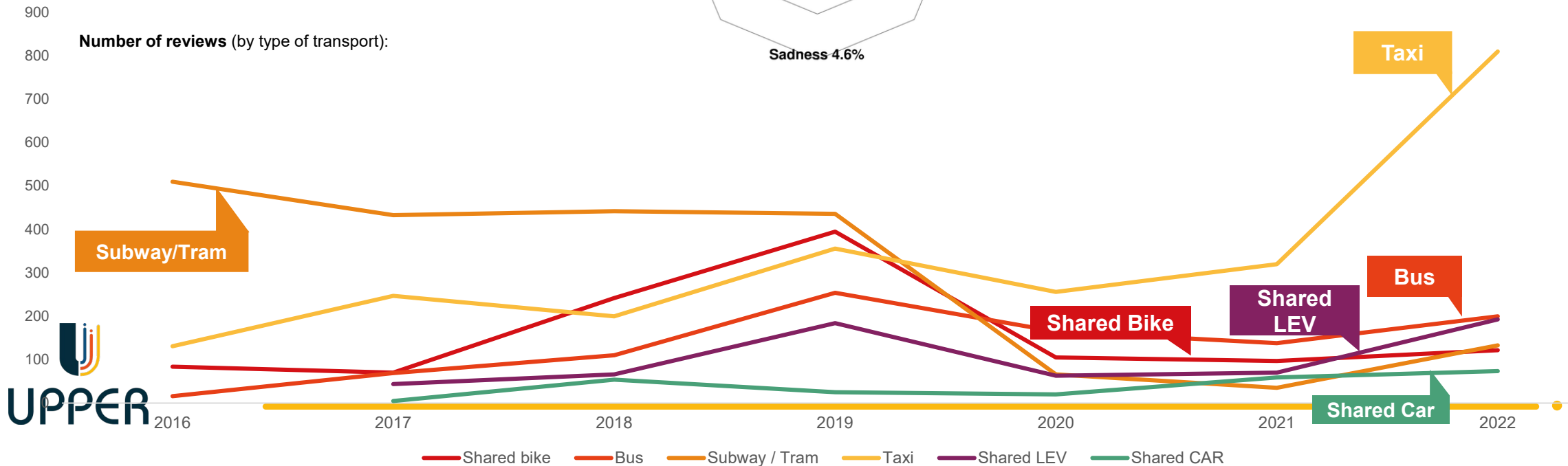
a. Shared Bike

| 22.1% | 49.0% | 22.6% | 6.3% |

● Positive
● Negative
● Mixed
● Neutral

POSITIVE
22.1%

- **Ideal for** sightseeing, **exploring the city** (8%)
- **Many stations** available (7%)
- Many **bike lanes** (5%)
- **Good price**, affordable (1 euro per half hour or less) (4%)
- Useful **app** (4%)
- Amount of **available bicycles** (4%)
- **Useful and practical** (4%)
- First **30 minutes free** (4%)
- **Good service**, operates well (4%)
- **Well-located stations** (3%)
- **24-hour ticket** for 5 euros (3%)
- **Easy to use** (3%)
- **Bikes work well**, both electric and non-electric are comfortable (3%)
- **Drivers** respect bikes and bike lanes (2%)
- **Deposit refunded** in a few days (2%)

NEGATIVE
49.0%

- **Bicycles don't work**, have poor maintenance, and are dirty. For example: they're broken, tires are flat, not charged (electric ones), the screen doesn't work, etc. (25%)
- Poor **customer service**: long wait times, ineffective, doesn't solve problems, unpleasant, only in French,... (22%)
- **System failures**, stations don't work (can't unlock bikes, codes don't work, etc.), problems when returning the bike (20%)
- **Unfair or unclear charges**, charges for system failure (malfunction, scam) (14%)
- Long wait times for **deposit refund** (high) (8%)
- **Poor service** and functionality in general (8%)
- **No bikes** available (7%)
- Only **a few bikes work** in each station (5%)
- A lot of time is wasted (5%)
- **Worsening of the service** with the new company (5%)
- Unusable **app**, malfunctions, errors (3%)
- **Others**: can't buy the 24h ticket at all terminals, bikes are heavy (non-electric), bike lane is difficult to recognize
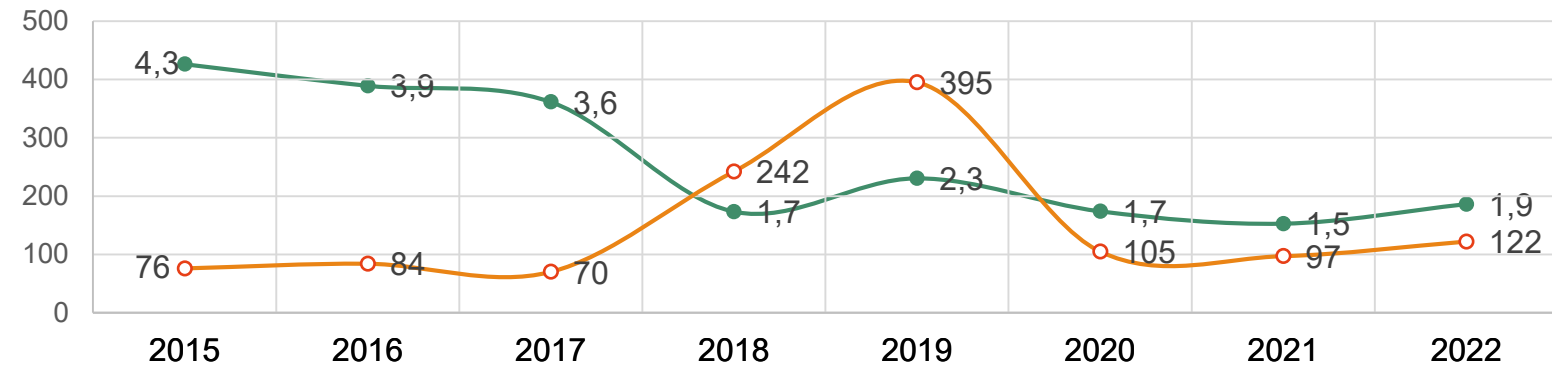
QUAI DES
ORFÈVRES

IBV

- Noun
- Verb
- Adjective

| 2017 | 2018 | 2019 | 2020 | 2021 | 2022 |

#Bike: *"Of the 10 bikes at the station there are only three that are not broken. ".*
#Velib: *"Good Velib station, well located and often with a choice of bikes".*
#Service: *"…They charge you and then you can't use them. Terrible service!".*
#Station: *"Station closed for more than 3 months."*
#Paris: *"Station closed for more than 3 months."*
#Day: *"We paid 7 days and we couldn't enjoy it once a day. Very bad".*
#Time: *"So a lot of time lost to find it and when you finally find it, it is misery to rest. ".*
#System: *"I think there is a new system called Mobike, which is being used most and does not work with stations rather you leave it anywhere in the city. ".*
#Problem: *"I highly recommend it, the only problem is the deposit of 150 euros per bicycle, for those who are in 6 (2 parents + 4 children) are 900 euros of deposit".*
#Acount: *"The money was not refunded to my account and they do not accept any responsibility for making this charge or for providing the refund.".*
#Minute: *"I broke 2 nails trying to pull it out for use when I stopped for a few minutes. Not cool when the majority of their users are women.".*
#Hour: *"Price for a week 8 Euro and if you take the bike in tranche half an hour is not spent anything more".*
#Customer: *"This is the most shocking me is the intransigence of the Velib employees of customer service"*

#Use: *"You can use paying only the daily rate".*
#Work: *"I am often forced to do 3 or 4 station To find 1 that works".*
#Take: *"I regularly use the Velib to go take the train because I don't have a metro nearby, but 2 times out of 3 I have a problem…".*
#Find: *"I lost my time to find a bike than to use them. I ended up taking public transport. In short it is a scam".*
#Get: *"Impossible to get clear information in English".*
#Pay: *"Sometimes it's impossible to return the bike and you end up paying hundreds of euros.".*
#Go: *"I have several times have problems with restitution of unregistered bikes, with invoices that can go up to more than 45 euros."*
#Call: *"I had to call them 10 times, always the same answer "Sorry, we don't know"".*
#Try: *"The first 2 times we used the bikes we ended up riding from station to station for at least 30 minutes trying to find empty docks to return the bikes to.*
#Return: *"We found two bikes which had just been returned that worked"*

#Good: *"At each station, for 1 bike in good condition, …".*
#Available: *"This afternoon for example, it is impossible to take Vélibs yet available: 8 trials on 3 stations, no possible taking,...".*
#Electric: *"Bycicles availability has improved a bit with the electric bikes, …".*
#Impossible: *"… electric bikes are the worst, it is impossible to find a correct one on several occasions".*
#Bad: *"Very bad maintenance of Velib, recurring brake problem, speed change, punctured tires, not enough Velib available. …"*
#Broken: *"Actually a lot of them are broken and you can not find bike on every station, but generally with 5-10 minutes walking it was possible to find bike.".*
#Many: *"Many defective bicycles, app not always accurate…"*

Number of Reviews vs Rate (Shared bike)

IMPROVEMENTS & MAINTAIN:

- Bicycles should work, be well **maintained and cleaned**, and be more durable.
- **Improved customer service**: quick, efficient, and friendly attention.
- Elimination of **system failures and errors** (issues when taking and returning the bike, etc.)
- More **transparency** in prices, avoiding charges for mistakes.
- **Lower deposit** amounts, especially for large families.
- Maximum **deposit refund time** of 24 hours.
- **Sufficient bicycles and stations** (rebalancing according to usage, real-time information).
- Useful and easy-to-use **app**, with real-time information.
- Service that **meets the needs** of residents and tourists.
- Well-located **stations**.
- Suitable, well-signposted, and safe **bike lanes**.
- **Respect** from all citizens for bike lanes and cyclists.

5.2.2. Ile de France (France). Netnography of Bus

b. Bus

| 16.6% | 51.8% | 18.9% | 12.7% |

- ● Positive
- ● Negative
- ● Mixed
- ● Neutral

POSITIVE
16.6%

- **Good service**, works well (8%)
- Friendly and professional **driver** (helps passengers) (7%)
- Good connection and good price to the **airport** (7%)
- **Well-located stop** with good access, pleasant (6%)
- **Simple, easy to use, practical** (5%)
- **Punctual** (4%)
- **Fast** (4%)
- Clean and well **maintained** (2%)
- Possibility to recover lost items (2%)
- **Others**: luggage space, peaceful trip, ease of payment, Navigo card is practical,...

NEGATIVE
51.8%

- **Low frequency** of buses, they take a long time to come (1 or 2 hours), little reliability, causing people to arrive late for work (21%)
- **Buses** often **don't stop** (because they are full) or don't come (18%)
- Schedules are not followed, **buses often arrive later** or earlier than indicated (**little reliability**) (16%)
- **Few buses** and they are full (9%)
- Dangerous driving by the **drivers** (9%)
- Incompetent company, **poor management** of a public service (8%)
- Unpleasant and unprofessional **drivers** (8%)
- Poor service, **service in decline** (5%)
- Difficulty in paying/reactivating **Navigo card** (3%)
- Standing on a moving bus is dangerous (2%)
- **Few lines** and therefore few alternatives (2%)
- Heat, **poor air conditioning**, thermal comfort (2%)
- Poor communication, **customer service** (2%)
- **Others**: no service at night, dirtiness, frequent reboots.

- **#Bus**: "Buses never on time,…".
- **#Driver**: "Drivers very often rude (not all fortunately), on their laptop by driving, with risky pipes for users (to try to catch up with many delays surely)…".
- **#Line**: "Line 02 it's been more than 2 hours that I don't expect a single bus frankly it's not serious".
- **#Hour**: "Buses go to an hour".
- **#Service**: "A mediocre service !!!!!!!!!!!!!! Jia missed my exam because of your buses, I was at a stop for 30 min any bus?".
- **#Time**: "Bus 91.11 does not stop at Camille Claudel to take the people waiting in the stop! This is the third time in the month that it happens to me! It is unacceptable.".
- **#Pm**: "… today 07/19/2022, bus n 8 from 5:46 pm has not passed…".
- **#Minute**: "Buses go up regularly 5 minutes ahead (without even time to stop!) Or late.".
- **#Person**: "There is accumulation of person etc. And this type of problem is very often encountered in 91.04 I do not pay my ticket, lack of respect and not professional at all this company.".
- **#Company**: "The problems have been recurrent without any improvement for 1 year scandalous for a company undergoing public service,…".
- **#Stop** "1 hour waiting in a stop when I had to wait theoretically 20min max. ".

- **#Wait**: "Do not wait in the cold for 1 hour because a driver was not able to do his job with professionalism !!!!".
- **#Go**: "If you are at 12:15, you can go to the time and stand early.".
- **#Take**: I had to take the bus at 9:24 p.m., having not been able to run with a sick leg to obtain a seat, …".
- **#Pass**: "And again, when he even passes 15 minutes late we consider himself happy because very often he simply does not pass. ".
- **#Stop**: "They stop at stops without saying why (10/15 minutes of waiting).".
- **#Arrive**: "Never on time especially in winter, you arrive you cannot even warm up, …".
- **#Come**: "Bus 91.11 either late or it does not come."
- **#Put**: "Why put schedules if your drivers do not respect them?".
- **#Make**: "Still late it happens but the worst it stays when it comes in advance it makes me crazy the bus is supposed to come at 7:59 am,…"
- **#Leave**: "…the driver had to leave around twenty people outside".

- **#Late** "They are still late and sometimes the buses do not even come. ".
- **#Bad**: "Very very bad service on this 9105 Massy Palaiseau-Evry Center bus line.".
- **#Other**: "The lines as worse as each other…"
- **#Good**: "More transport would be good for certain areas which are almost neglected by transport.".
- **#Dangerous**: "Some dangerous drivers (line 11 to 8:00 am)… ".
- **#All**: "they drive almost all bad and too fast and fail to drop certain passengers".
- **#Unacceptable**: "… , this lack of professionalism is unacceptable.".
- **#Many**: "Buses 9101 are never there on time, which makes us arrive late and miss the trains many times. ".

5.2.2. Ile de France (France). Netnography of <u>Bus</u>

Number of Reviews vs Rate (Bus)

Rate series (green): 2015 —, 2016 2,4, 2017 2,4, 2018 2,6, 2019 2,7, 2020 2,8 (165), 2021 2,8, 2022 2,1

Number of reviews series (orange): 2015 0, 2016 16, 2017 69, 2018 110, 2019 254, 2020 165, 2021 138, 2022 200

IMPROVEMENTS & MAINTAIN:

- **Increase frequency** of buses and more buses on the route
- Use buses with larger capacity and redesign interiors to make **better use of space**
- Improve **punctuality and reliability**
- Drivers should have a less abrupt, aggressive, and dangerous **driving style**
- Improve customer service and **friendliness from drivers**
- Good **connection to airport** at a reasonable price
- Service should be **easy to use**: easy payment, etc.
- **Faster** service
- Well-located and **accessible bus stops**
- Cleanliness and good **maintenance**
- Safety for standing passengers, redesign the **way to stand**, e.g. semi-sitting
- More bus lines, **more alternatives**
- Adequate **climate control**; neither too cold nor too hot
- More **night service**.

d. Subway / Tram

| 41.0% | 16.7% | 4.4% | 37.9% |

- ● Positive
- ● Negative
- ● Mixed
- ● Neutral

POSITIVE
41.0%

- **Easy to use** (21%)
- **Reaches everywhere** (20%)
- **Fast** (13%)
- **Efficient, punctual** (12%)
- **Variety of ticket** / card options (11%)
- Good **price** (11%)
- **Well signposted**: interior panels, etc. (9%)
- Reduced **wait times**, reduced frequency of passage (7%)
- **Clean** (7%)
- **Well connected** (5%)
- **Pleasant experience** (5%)
- Sufficient **lines** (5%)
- Suitable for **tourism** (5%)
- You **can't sneak** into the metro (5%)
- **Metro map** available (5%)
- The **best transportation** in the city (4%)
- **Safe** (3%)
- **Stops close** to each other (3%)
- **Live music** (3%)
- **Others**: Bakeries and other services, ticket valid for other transportation, ease of payment, connection to the airport, app, customer

NEGATIVE
16.7%

- **Insecure**, with many pickpockets, frequent robberies and scammers (26%)
- Excessive **fines for mistakes** (such as throwing away the ticket before exiting) (20%)
- Poor **customer service**, unpleasant and only in French (20%)
- **Dirty, old, poorly maintained** and with bad odor (16%)
- Poor **accessibility** (escalators, elevators) (8%)
- **Very crowded** (6%)
- **Not easy to board with children** (baby strollers) (3%)
- **Photo** required **for the Navigo** card (3%)
- **Noise** (2%)
- Heat, poor **thermal comfort** (2%)
- Doors close and catch you, **little time open** for people getting on and off (2%)
- **Expensive** (2%)
- **Others**: queues at the machine, outdated system, ...

IBV

Legend: ● Noun ● Verb ● Adjective

Timeline: 2017 2018 2019 2020 2021 2022

#Metro: "Paris is a huge city, yet with the metro you reach the opposite head of the city in a few minutes. ".

#Ticket: "It is very easy to take the train, and there are staff of the Metro company that help you buy the ticket.".

#Paris: Ideal for moving to Paris associated with an app that holds up and it's great.".

#Station: "Well, the metro is dirty, mind -blowing smells in stations".

#Train: "The trains run on time and it worked out better value for money to purchase the 7 day ..."

#Day: "We paid 22 € to use the seven days and use subway, RER and buses..".

#Line: "the Parisien metro transport system consist of 14 lines each identifiable by it's number and destination…"

#City: "The metro of Paris is very complete, with many lines, allowing access to any point of the city. "

#Subway: "Confused subway! We could only find ourselves after we downloaded an app that helped us a lot!"

#System: "compared to London's tube system, this is third world. ticket machines perennially not working, crazy queues every first of the month, Navigo passes completely not flexible and …".

#Person: "… the 10 trip ticket only serves a person. "

#Transport: "Not only does RATP not even allow tramway to be combined with another mode of transport on the same ticket"

#Get: "The Paris metro is excellent in that it's easy to get around and is all at a very affordable price…".

#Use: "We used the Metro as we had a daughter on crutches...the stairs in and out were a challenge".

#Go: "Fortunately it is very practical to go from point A to point B quickly.".

#Take: "The tracks are poorly indicated and sad without counting that it is necessary to take countless stairs while escalators would suit the elderly, people with strollers, disabled ...".

#Make: "The Mayor want to make the city Green by encouraging people to use transit. She needs to address accessibility. And what to the disabled citizens do? Stay in their apartments?"

#Buy: "Buy the carnet navigo (you need a photo) valid from Monday to Sunday for € 27. ".

#Pay: "This works very similar to the tube in London, except for the easy payment of contactless London has, Paris metro still uses the buying tickets method.".

#Tell: "Employees not in the ticket booths are hard to find and they don't wear uniforms like in London so it wasn't easy to tell if they worked for the transport or not.

#Travel: "This is definitely the way to travel if you want to get around Paris quickly and efficiently.

#Easy: "Once you figure out the routes, stops it's very easy way to get around the city.

#Good: "In Paris, metro stations are far from all clean, in good condition and above all decorated"

#Many: "They are friendly to use in many languages by touching the screen"

#All: "It is cheaper and you don't have to wait in line all the time."

#Other: "... controls equal to zero and incredibly rude staff and unable to speak any other language that is not French ".

#Cheap: "Trains are very frequent, relatively quiet, cheap, wide network. ".

#Bad: "The connections with the RER (train) were bad and difficult. ".

#Different: "Cora-lighter of the various stations are the artistic decorations on the walls, always different and original.".

#Same: "The color is the same as a bus running in the city, and the white -based green line looks fashionable. ".

#Great: "Great means of transport"

Number of Reviews vs Rate (Subway-Tram)

Rate values (green line): 3,9 · 4,0 · 3,9 · 4,0 · 3,9 · 3,8 · 3,3 · 3,1 · 2,9 · 2,2 · 2,2

Review counts (orange line): 26 · 193 · 226 · 423 · 510 · 433 · 442 · 436 · 66 · 35 · 133

Years: 2012 · 2013 · 2014 · 2015 · 2016 · 2017 · 2018 · 2019 · 2020 · 2021 · 2022

IMPROVEMENTS & MAINTAIN:

- **Improvement of security** against theft, etc.

- **Elimination of fines for mistakes** or lack of knowledge (tourists), such as throwing the ticket before exiting the metro.

- System that is **easy to use**.

- Being able to reach everywhere with **enough lines and stops**.

- Improvement of **customer service** (resolving doubts, incidents in a friendly manner in various languages)

- More **cleanliness and** better **maintenance**.

- **Fast and punctual**.

- **Variety of tickets** according to needs.

- Good **price**.

- **Well signposted**.

- **More frequent service**.

- **Improved accessibility** for elderly people, people with mobility problems, children in strollers (more elevators and escalators).

- **Others:** not requiring a photo for the Navigo card.

5.2.4. Ile de France (France). Netnography of Taxi

e. Taxi

Positive	Negative	Mixed	Neutral
83.3%	8.8%	4.9%	3.0%

POSITIVE
83.3%

- Kind and pleasant **driver** (28.3%)
- **Professional and efficient** driver/service (28.3%)
- **Recommendable** (28.3%)
- **Punctual** (26.6%)
- **Fast** (18.3%)
- **Safe service**: skilled driver and appropriate driving (15%)
- **Good price**, appropriate quality-price ratio (11.6%)
- Good **customer service** (6.6%)
- **Quality** service (5%)
- **Comfortable**, pleasant (5%)
- **Airport** service (3.3%)
- **Flexibility** (3.3%)
- **Others**: child seat, cleanliness, etc.

NEGATIVE
8.8%

- Charge for **service not provided** (11.6%)
- Cancellation of service without notice or too late (11.6%)
- Poor **customer service** (10%)
- Late **refund** (3.3%)
- **Non-transparent pricing** or pricing that varies depending on the day, gas prices, etc. (3.3%)
- **Others**: overcharging, bad driver...

Noun (blue)
Verb (orange)
Adjective (green)

2017	2018

#Driver: "A considerate driver, skillful on his motorcycle, who was able to react to an emergency in complete safety,…"

#Service: "Impeccable, serious service.".

#Taxi: "Punctual taxi and very competitive price.".

#Time: "I recommend: saving undeniable time and safety.".

#Price: "Super platform offering very competitive prices".

#Paris: "I made a request for transport from the station to the center of Paris….".

#Race: "Second race on the platform. Everything is perfect. speed of confirmation of the race.".

#Vehicle: "Comfortable and very clean vehicles.".

#Motorcycle: "I used to take the motorcycle taxi for my trips, ….".

#Airport: "We used the services of a taxi-VTC to accompany us at the end of August at Roissy CDG airport."

#Journey: "Top driver, a quality journey!.

#Driving: "Very kind driver and perfect driving. Thanks !".

#Car: "Little more: the car seats for children that were offered to us during the reservation."

#Eurecab: "Thank you to all of you and thank you Eurecab, in my opinion, the best of driver comparators"

2019	2020

#Recommend: "Super service, very professional despite a complex journey with several stops. I recommend !".

#Thank: "I highly recommend and will go through them for my next trips thank you.".

#Take: "You might as well take a taxi on site if you don't want to see your race canceled at the last minute and be stressed. ".

#Use: "This is the second time that I use Eurecab and I am satisfied: …".

#Make: "They make our safety a priority and are always accommodating. ".

#Arrive: "Excellent service, very reliable platform, great professionalism, punctual drivers (arrives before time), "

#Call: "I have called on Eurecab 3 times in recent months and the service has been perfect at more than reasonable prices. "

#Go: "Good taxi service with attractive prices, I ordered to go to CDG, everything was ok, thank you"

#Get: "I can't get you on the phone! I am not sure if your site is valid! I cancel everything."

2021	2022

#Punctual: "Reactive interlocutor, clear and very well respected quote, very clean and comfortable, punctual cars, very pleasant and friendly drivers. "

#Good: "I am very happy with their service. Very very good professional. I recommend to all worlds. ".

#Pleasant: "Very pleasant service, flexible driving and comfortable motorcycle,…"

#Nice: "Superb performance, punctuality, safety and nice drivers !!!".

#Perfect: "Perfect service for me when you want to reduce travel times in the Paris region.".

#Professional: "Secure, professional and punctual! ".

#Great: "Great journey, I recommend!"

#Fast: "Fast, efficient and pleasant."

#Excellent: "Hello I was lucky to have an excellent driver in the person of Christophe. Excellent service"

#Comfortable: "Punctual, welcome, comfortable vehicle, pleasant driving. Very satisfaying."

#Clean: "Perfect service, on time, very nice and very courteous driver, very clean vehicle, gently driving unlike certain taxi"

#Safe: "Punctuality, safety, comfort and …"

Number of Reviews (Taxi)

Green line (ratings): 4,8 — 4,8 — 4,7 — 4,4 — 4,5 — 4,7 — 4,6 — 4,6

Orange line (reviews): 20 — 131 — 247 — 200 — 356 — 256 — 320 — 810

Years: 2015 2016 2017 2018 2019 2020 2021 2022

IMPROVEMENTS & MAINTAIN:

- **Friendly, efficient, and professional drivers providing safe service with skilled driving and proper driving**
- **Punctuality**
- **Reliability**: services should not be cancelled without notifying the customer with sufficient time to seek alternatives
- **Speed**
- **Good customer service**; quick, flexible, and friendly
- **Clear pricing**, transparency, fixed price that does not vary
- **Quality service**
- **Comfortable** and pleasant service
- **Airport** service
- **Flexibility**
- **Automatic refunds**
- **Cleanliness**
- **Child** car **seat**

e. Shared LEV

| Positive 47.2% | Negative 33.3% | Mixed 16.4% | Neutral 3.2% |

- **Positive**
- **Negative**
- **Mixed**
- **Neutral**

POSITIVE 47.2%

- **Easy-to-use**, efficient, practical, and professional service (20%)
- Good **customer service** (18%)
- Scooters in **good condition**: good quality, new, and clean (18%)
- Mobility option that was missing in the city, revolutionizing the way of getting around, **practical for daily use** (18%)
- **Recommended** (10%)
- **Availability** (6%)
- **Fast**, faster than other modes of transportation (6%)
- **Good price**, good value for money (4%)
- Easy-to-use **app** (4%)
- **Eco-friendly** (4%)
- **Others**: Intuitive service, easy pickup, beautiful scooter, discounts, exchange stations everywhere, ..."

NEGATIVE 33.3%

- Service **failures**: unlocking and locking issues, server failures that don't connect or don't work (16%)
- Poor **customer service** (14%)
- Expensive and/or misleading **prices** (14%)
- **Refunds** are not processed automatically, take too long, or are not made at all (10%)
- **Unjustified fines and charges** due to system failures (10%)
- **Scooters** in poor condition, deterioration and poor maintenance of the service (6%)
- Insecure **app**, prone to hacking (4%)
- **Dirty** motorcycle and helmet (4%)
- **Others**: heavy scooters, slow app, charging time included in rental time, inadequate treatment of personal data, speed limited to 46 km/h, rarely fully charged, ...
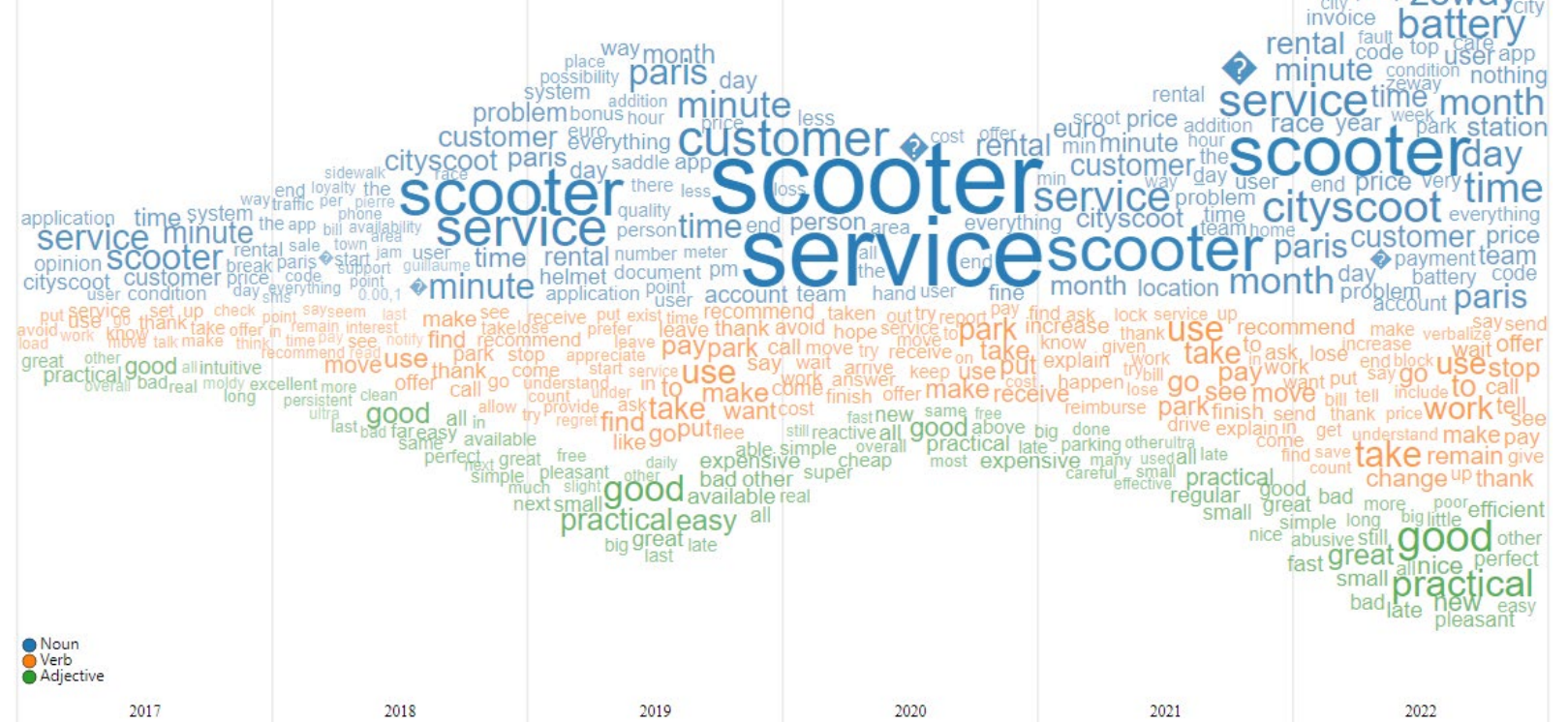
- **#Scooter:** "scooters are of better quality, the ignition system, end of rental is clear and very simple, .."
- **#Service:** "Deplorable customer service ...".
- **#Customer:** "Though the scooters are Great the Customer Service "Leave something to be desired" ."
- **#Motorcycle:** "I park the scooter properly in a place dedicated to motorcycles. Unfortunately, I receive an email telling me that the scooter had been removed and put in the pound because poorly parked (fine+pound). ".
- **#Cityscoot:** "we contacted the City Scoot service explaining this problem to them. The service was unpleasant on the phone".
- **#Minute:** "I was charged 10 minutes when I used only 7 minutes and that at almost every time. ".
- **#Time:** "The end of the rental is too problematic, 90% of the time you have to wait almost 5 minutes and obviously at your expense"
- **#Rental:** "Rentals always rounded above".
- **#Month:** "I have rented a Zeway scooter for 3 months and I find the scooter very pleasant to drive and the very excellent rental formula.."
- **#Paris:** "Very good alternative in Paris and its suburbs, professional and attentive team.".
- **#Problem:** "Each time I encounter problems to finish my rentals which makes me always pay much more than my race".
- **#Zeway:** "The Zeway team is very friendly and always responds quickly to requests. ".

- **#Use:** "Already that most invoices seem really high compared to the real use of the service".
- **#Take:** "The minutes rolled during the month of October were not taken into account for the calculation of the loyalty bonus.".
- **#Work:** "It works well, rather effective and not too expensive.".
- **#Park:** "ityscoot scooters are very hard to park with the central crutch...".
- **#Make:** "Perfect for the use I make of it, unbeatable price, ultra handy scooter"
- **#Find:** "This service saved my life in times of strike. Not always easy to find a scooter when everyone rushes Dessusus (thank you RATP) but it works well,…"
- **#Move:** "…very good way to move easily in Paris".
- **#Put:** "people can move the scooter it was put on the road I paid more than 250 €…"
- **#Pay:** "The price announces on the site is false and at the time of invoicing the tent rental company and wanted to make me pay twice written on the website. ".
- **#Put:** "I First problem: the helmet impossible to put in the trunk that does not work. ".

- **#Practical:** "Hyper practical to move quickly in Paris! "
- **#Good:** "Top scooters, very reactive in boost, comfortable, excellent braking and always in very good condition…".
- **#Easy:** "A great discovery, the grip of the scooter is fast and easy"
- **#Great:** "Very good team! Listening and top! The scooters are great.".
- **#Available:** "Perfect, easy to use, reactive customer service and a lot of scooters available.".
- **#All:** "You monopolize all the parking spaces near the Institut Curie in Saint Cloud, …".
- **#Nice:** "Good evening very nice young people, a great service, reachable at all times,… ".
- **#New:** "Excellent new scooters and boost. ".
- **#Expensive:** "In short, expensive for scooters that lock once in two, it's just a money pump. Buying a scooter will cost you much cheaper".
- **#Perfect:** "The service is perfect, the professionals are very nice and accommodating. "
- **#Pleasant:** "Super light scooter, pleasant driving, I recommend"

Number of Reviews vs Rate (Shared LEV)

	2017	2018	2019	2020	2021	2022
Rate	4,2	3,5	3,84	2,6	3,2	3,6
Reviews	44	66	184	63	70	193
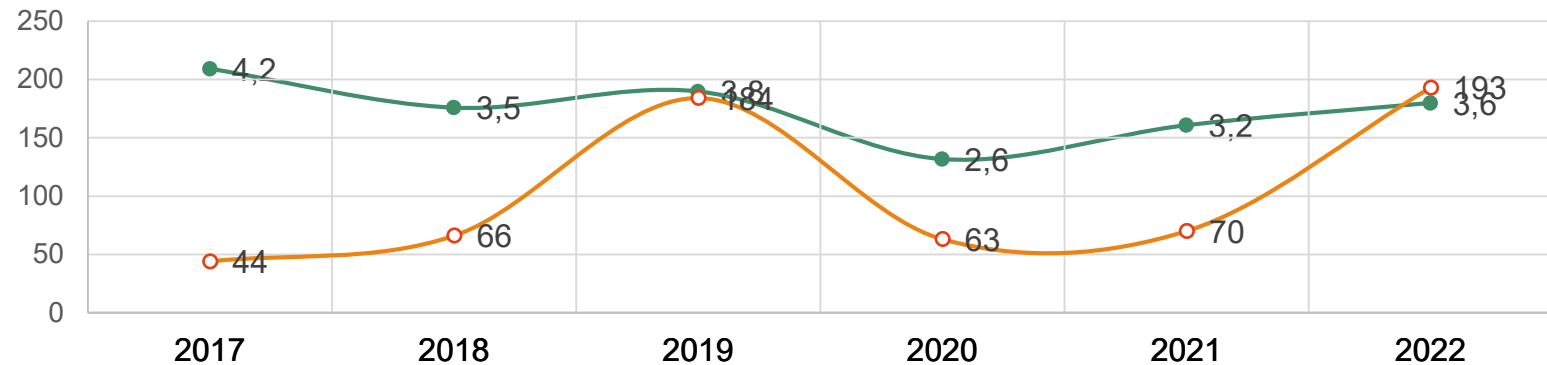
IMPROVEMENTS & MAINTAIN:

- Easy to use and **error-free service**
- Good **customer service**: efficient and friendly
- Scooters in good and clean **condition**
- Real alternative offer that **improves other transportation options**
- Appropriate and transparent **pricing**
- Automatic **refunds** (less than 24h)
- **Avoid charges/fines** due to system errors
- Security and good management of **personal data**
- **Availability** of scooters and parking space
- Easy-to-use **app**

f. Shared CAR

| 26.2% | 62.3% | 9.1% 1.6% |

- ● Positive
- ● Negative
- ● Mixed
- ● Neutral

POSITIVE
26.2%

- **Useful and necessary service**, good service (16.6%)
- **Good cars** and variety (8.3%)
- **Practical** (6.6%)
- Good **price** (6.6%)
- **Fast** (no queues) and simple (6.6%)
- Practical and fast **app** (5%)
- Good **customer service** (3.3%)
- **Recommendable** (3.3%)
- **Availability of cars** (1.6%)
- **Availability of spots** (1.6%)
- **Easy to use** (1.6%)
- **Clear and transparent rules** on usage (1.6%)
- **Quick refund** (1.6%)

NEGATIVE
62.3%

- Bad **customer service** (43.3%)
- **Fines**, charges for service/system failures (e.g. inability to park in areas due to lack of space) (33.3%)
- **Dirty cars** inside and out (6.6%)
- Little car **maintenance** (6.6%)
- **Problems** locking and unlocking cars (6.6%)
- Unreliable indicated **autonomy** (5%)
- **No refunds** (5%)
- Electric **cars discharged** (5%)
- **Dangerous**, cars in poor condition (3.3%)
- **Difficult to park**, no spaces available (3.3%)
- False, disproportionate **mileage** (3.3%)
- **No cable** in the car or it is broken (3.3%)
- Cars are not in the location indicated by the **app** (3.3%)
- **Expensive** (3.3%)
- **Others**:
  - o Service that has deteriorated over time
  - o Broken terminal
  - o Unstable app
  - o No invoice

Legend:
- Noun
- Verb
- Adjective

Timeline: 2018 | 2019 | 2020 | 2021 | 2022

2018–2019:

#Service: *"Very easy to use service allowing access to vehicles anywhere in Paris! "*

#Vehicle: *"Maintenance of terminals and vehicles should be the priority to enable a "just" usable service. "*

#Car: *"I took a car that was over 30% battery and ran out of fuel on the device after 40min. I had to pay 200€ for a tow truck"*

#Customer: *"Finally the customer service is incompetent, real thieves I invite everyone to boycott this company".*

#Rental: *"Disappointed with my last rental"*

#Time: *"I continued to use this service from time to time until day when I realized that I had just been scammed.".*

#Problem: *"Super service I recommend despite a small problem with the parking badge"*

#Day: *"He wants to make me pay a fine that arrived 3 days after the date of my rental, they are thieves."*

#Email: *"I have never had to deal with such incompetence on the part of customer service and a CEO who was touched by my email but who did not respond. I advise against ZITY 100%."*

#Experience: *"Second experience, almost 1 hour in the vehicle without having rolled 1 cm"*

#Acount: *"I gave you all my information to access my account, it is useless to send me back to your mailbox you never answered it.*

2020:

#Pay: *"They make you pay for repairs for damage that cannot be detected during the inventory. Definitely avoid."*

#Charge: *"I was charged 100 euros without any explanation. I asked for a call back, I'm still waiting... "*

#Rent: *"The damaged vehicle that is rented is inadmissible on the part of the company,…"*

#Recommend: *"Convenient and inexpensive service. I recommend"*

#Return: *"Six days apart everything could have happened on the car that I had already returned. Still no response from Getaround after 4 emails, and I notice that I was charged € 660, then € 60 3 days later"*

#Find: *"Difficult to find the car to take it, charged only at 60 percent, totally insufficient for the planned trip, not easy to recharge in Paris, and in the end after a breakdown during the recharge…"*

#Take: *"To flee don't take a car with them you will pay for more than 300€ in the end."*

#Make: *"The more time passes, the more the quality deteriorates, with a contact team that makes no effort to remedy a declared concern."*

#Flee: *"But they tell you: go see the general conditions, in short a scam! Only one recommendation from me: FLEE!!!!!"*

#Use: *"I will no longer use the service."*

2021–2022:

#Good: *"At first good service with lots of cars available… However, terrible customer service.".*

#Great: *"Great and helpful service that was missing in Paris!!"*

#Bad: *"Too bad we can't put 0.."*

#Other: *"To flee ! Other much more professional applications exist"*

#Late: *"And, the next day, 21/10, I was billed 36 euros for late return when I warned the owner"*

#Against: *"! I strongly advise against!! I was charged 100 euros without any explanation. I asked for a call back, I'm still waiting…"*

#All: *"Above all, do not book with them!!!!! A scam !!!! The vehicle I reserved was broken down,…"*

#Impossible: *"Terminal broken, impossible to restart because the reboutage button is faulty"*

#Dirty: *"Very dirty vehicle, crushed cigarettes, empty pocket filled with paper and cigarette ends, stained armchairs, greasy table of dried sodas, in short, a real trash can*

5.2.6. Ile de France (France). Netnography of Shared CAR

Number of Reviews vs Rate (Shared CAR)

IMPROVEMENTS & MAINTAIN:

- **Improvement in customer service** with automatic refund and without fines and charges for service/system failures, e.g.:
  - Inability to park in certain areas due to lack of space
  - Issues with locking and unlocking the cars
- **Service** should be **practical and easy** to use
- Clean and **well-maintained cars**
- **Cars** in good **condition** and safe
- Improvements in the car **charging system**:
  - Reliable autonomy indications
  - Charged electric cars
  - Available and functional cable
- Good **price**
- Good cars and **variety**
- Fast (no queues) and simple service
- Availability for **parking** with enough space

- Reliable and well-functioning **app**
- **Availability** of cars
- Clear and **transparent rules** of use
- **Service** should be **maintained** and improved.

5.2.7. Ile de France (France). Emotions by type of transport

a. Shared bike

- Joy 10.8%
- Anger 36.6%
- Sadness 8.5%

Level of Hateful: 6,7%

b. Bus

- Joy 7.8%
- Anger 34.4%
- Surprise 1.2%
- Sadness 3.9%

Level of Hateful: 5,7%

c. Subway/Tram

- Joy 11.4%
- Anger 20.0%
- Sadness 5.9%

Level of Hateful: 19,0%

d. Taxi

- Joy 64.1%
- Anger 5.2%

Level of Hateful: 1,9%

e. Shared LEV

- Joy 32.5%
- Anger 25.7%
- Sadness 3.2%

Level of Hateful: 2,4%

f. Shared car

- Joy 15.7%
- Anger 58.1%
- Sadness 3.7%

Level of Hateful: 13,6%
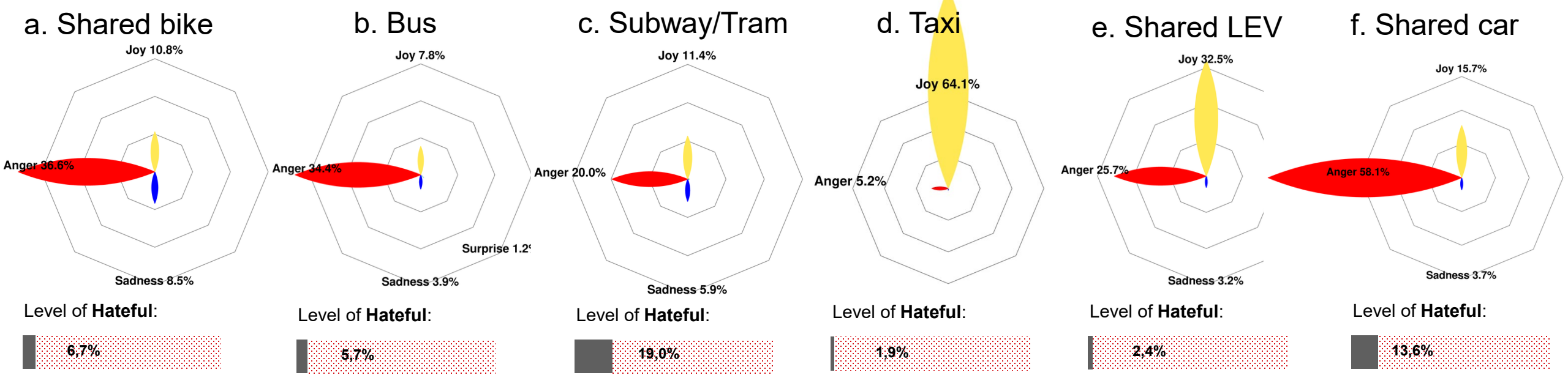
- The **Subway/Tram** is the transportation mode that has the highest percentage of comments identified as hate (19.0%), followed by **Shared Car** (13.6%) and **Shared Bike (**6.7%).
- Although getting the highest percentage of hate comments, **Subway/Tram** is the second transport generating lower level of anger.
- **Shared Car**, **Bus**, and **Shared Bike** are the transportation modes that have the highest ratio of anger to joy comments.
- **Taxi** is the transportation mode that has the highest level of identified joy, 64.1%, compared to only 5.2% of identified anger, as well as the lowest level of identified hate, at only 1.9%.
- **Shared Bike** and **Subway/Tram** are the transportation modes that have the highest percentage of comments identified as sadness

UPPER

IBV

- If we analyze all the transports grouped, the most repeated words excluding Paris are: **subwa**y, **service**, **time**, **driver**, **station**, **bicycle**, **ticket**, **day, professional** and **recommended.**
- The words that only men say are highlighted as: **scooter**, **customer**, **lot**, **efficient** and **velib.**
- The words that only women say are highlighted as: **punctual, lines, car, people** and **perfect.**

bicycle 207 - 362
ticket 223 - 303
experience 98 - 128
paris 517 - 945
bus 98 - 133
lines 70 - 0
people 64 - 0
punctual 77 - 0
time 265 - 408
pas 75 - 106
euro 70 - 118
profession 138 - 212
velib 0 - 111
customer 0 - 118
car 67 - 0
day 187 - 313
train 120 - 192
airport 98 - 118
efficient 0 - 111
perfect 61 - 0
minute 88 - 110
lot 0 - 111
scooter 0 - 120
trip 94 - 138
subway 483 - 846
transport 60 - 144
card 76 - 99
recommend 136 - 157
driver 279 - 335
taxi 117 - 143
service 378 - 691
excellent 69 - 138
easy 120 - 177
station 232 - 357
city 117 - 204

● male
● female

5.2.9. Ile de France (France). <u>Conclusions</u>

- Attending to the number of reviews, **Subway** and **Taxi** seem to be the most used transports. Considering the same indicator, **Taxi** is the only transportation that has recovered after the pandemic and significantly increased the number of reviews. **Bus, Shared LEV**, and **Shared Car** have returned to pre-pandemic figures. In contrast, the **Subway** (due to tourism) presents the lower recovery level.
- In Île-de-France, **shared transport** is recovering after the pandemic (except for **shared bikes**), just like in other cities.
- There is a high and positive correlation between positive comments, a higher rate level (0.7). There is no clear correlation (strong) between the percentage of negative comments and a high percentage of hate.
- The best-rated transport options in Ile de France are **Taxi** (due to the moto-taxi service) and **Shared LEV**, while the worst-rated options are clearly **Shared Car** and **Shared Bike**, with a 13.6% and 6.7% level of hate, respectively.
- 58% of the analyzed users are men, 31% are women, and the remaining 11% are unknown.
- Men use shared light electric vehicles (**LEV**) more often, while women use **shared cars** and **taxis** more often. There is a moderate correlation (0.5) between a higher percentage of men using shared LEVs and a higher percentage of mixed comments.
- 75% of the analyzed users are residents, and the remaining 25% are tourists.
- There is a weak correlation (0.4) between a higher percentage of residents and higher negative comments, indicating that residents tend to be more critical. On the other hand, tourists tend to make more neutral comments, with a higher correlation of 0.87.
- In the case of Île-de-France, there is no strong correlation (-0.3) between the higher number of reviews (the more users of a service) and lower ratings or satisfaction level (rate).

Number of Reviews vs Rate (TOTAL –ILE DE FRANCE)
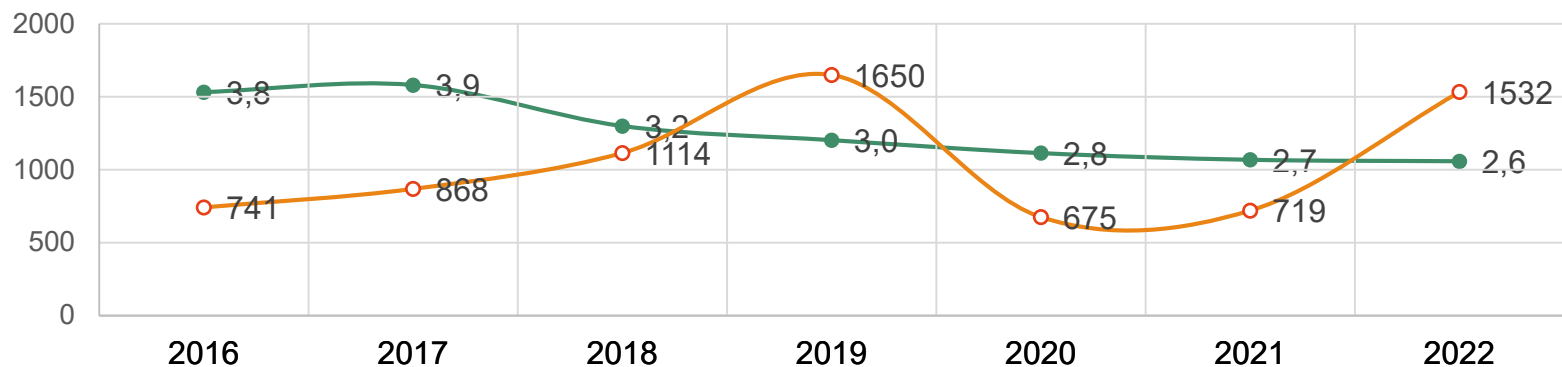
- In the case of Ile de France, men are slightly more critical, with a higher number of negative comments and a lower number of positive comments. Although the differences are not significant.

| ♂ | 48.2% | 25.4% | 21.8% | 4.6% |

| ♀ | 52.9% | 23.4% | 20.2% | 3.5% |

- 🟢 Positive
- 🔴 Negative
- 🟠 Mixed
- ⚪ Neutral
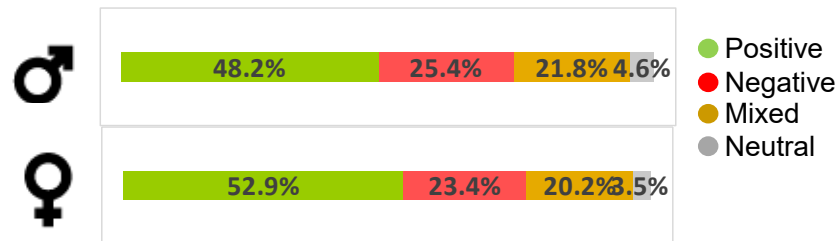
5.2.9. Ile de France (France). <u>Conclusions</u>

The main highlights / most important aspects of each transport are:

- **Shared Bike:**
    - Improving bike maintenance and cleanliness to ensure bikes are in good working condition.
    - Enhancing customer service to provide better support and faster issue resolution.
    - Fixing system failures and addressing station issues to improve the bike rental process.
    - Ensuring that charges are clear and transparent to avoid confusion and dissatisfaction.
    - Reducing wait times for deposit refunds to improve the overall customer experience.
- **Bus:**
    - To improve bus reliability by increasing the frequency of buses, improving adherence to schedules, and ensuring that buses stop at all designated stops.
    - To maintain and expand positive aspects of the service, such as good connections to important destinations, friendly and professional drivers, and convenient stop locations.
    - To address issues with bus overcrowding by adding more buses or increasing capacity on existing buses.
    - To address negative driver behavior by providing training and incentives for safe and professional driving, and enforcing standards for appropriate behavior towards passengers.
    - To address miscellaneous issues by improving payment and card reactivation processes, providing safe seating for all passengers, ensuring adequate air conditioning and temperature control, and improving communication with customers.
- **Subway /Tram:**
    - Improved security measures to reduce pickpocketing and prevent robberies and scams
    - Improved signage and information to make it even easier to use (e.g., clear maps, route information, and instructions).
    - Reduction of excessive fines for minor mistakes, such as accidentally discarding a ticket
    - Improved customer service with multi-lingual support and friendly and professional staff
    - Increased frequency of service to reduce wait times and ensure that the metro reaches all areas of the city.
- **Taxi:**
    - Kind and pleasant drivers are highly valued by customers.
    - Customers appreciate professional and efficient driver/service.
    - Punctuality is also important for customers.
    - Customers appreciate fast transportation.
    - Safe service with skilled drivers and appropriate driving is a factor that should not be overlooked.
- **Shared LEV:**
    - The service needs to maintain its ease of use, efficiency, practicality, and professionalism to ensure customer satisfaction.
    - The service has revolutionized the way people get around the city and is practical for daily use.
    - Good customer service is highly valued by customers, and the service should continue to provide prompt and effective support to maintain customer satisfaction.
    - Maintaining the quality, cleanliness, and condition of the scooters is essential to meet customer expectations.
    - Technical issues such as unlocking and locking problems and server failures need to be addressed to ensure smooth service operations and customer satisfaction.
- **Shared CAR:**
    - Poor customer service
    - Penalties and fees for service or system failures
    - The service is useful and necessary with good quality
    - Wide variety of good cars available
    - The service is practical, affordable, fast, and easy to use.

Rome: Netnography of transport

5.3. Rome (Italy). Netnography of **transport**

SAMPLE:

USER PROFILE:

SOURCES:

TYPE OF TRANSPORT:	Nº Reviews	Nº Comments	♂	♀	?	Inhabitants	Tourist	Company	Web, social media, etc.
a. SHARED BIKE	-	-				-	-		
b. BUS	1.087	835	59.7%	31.8%	8.5%	66.3%	33.7%	ATAC	Google Reviews
c. SUBWAY /TRAM	2.377	942	65.7%	29.1%	5.1%	78.1%	21.9%	Metropolitane di Roma	Google Reviews, tripadvisor
d. TAXI	2.126	829	55.1%	43.2%	1.7%	74.2%	25.8%	Cab Shuttle Taxi, Taxi Roma Samarcanda, Rome Airport Taxi, Cheap Taxi N.C.C. Rome, RIM-TAXI,…	Google Reviews
e. SHARED LEV	699	622	60.7%	21.2%	18.2%	33.4%	66.6%	Lime, Dott Cooltra, Zig Zag	Google Reviews, tripadvisor, Google Play
f. SHARED CAR	133	127	65.4%	30.8%	3.8%	89.0%	11.0%	Enjoy, SHARE NOW	Trustpilot, Google Reviews
TOTAL:	**6.422**	**3.355**	**61.3%**	**31.2%**	**7.5%**	**68.2%**	**31.8%**		

UPPER

IBV

Sentiment- Polarity (total): 38.9% 35.0% 15.6% 10.5%

POSITIVE NEGATIVE MIXED NEUTRAL
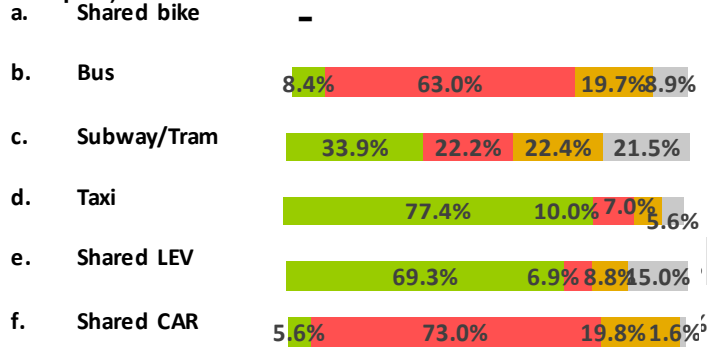
Sentiment- Polarity (by type of transport):

a. **Shared bike** —

b. **Bus** 8.4% 63.0% 19.7% 8.9%

c. **Subway/Tram** 33.9% 22.2% 22.4% 21.5%

d. **Taxi** 77.4% 10.0% 7.0% 5.6%

e. **Shared LEV** 69.3% 6.9% 8.8% 15.0%

f. **Shared CAR** 5.6% 73.0% 19.8% 1.6%

● Positive
● Negative
● Mixed
● Neutral

Level of **Hateful**:

9,0%

Sentiment –Emotions:

Joy 29.2%
Anger 20.9%
Sadness 4.0%

RATE (by type of transport):

a. SHARED BIKE
5.0
4.0
3.0
2.0
(-)
1.0
f. SHARED CAR 1.4
b. BUS 1.7
e. SHARED LEV 4.0
c. SUBWAY /TRAM 3.1
d. TAXI 4.5
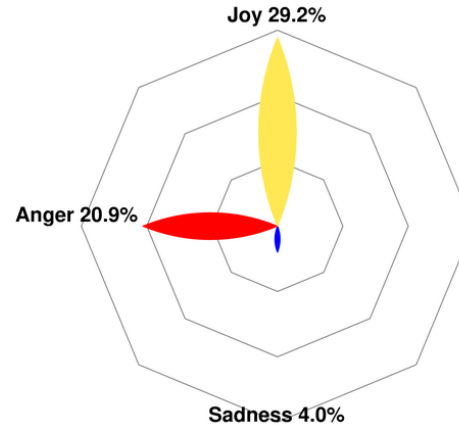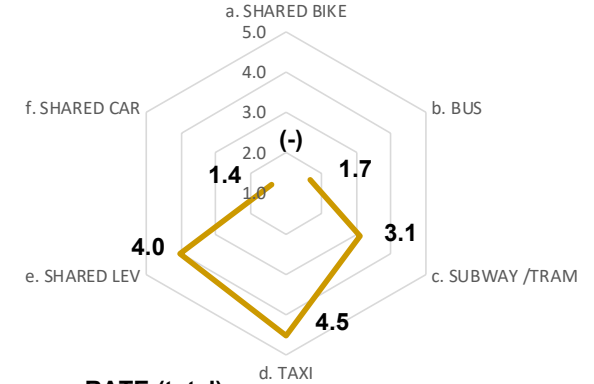
RATE (total):

2.9 ★★★☆☆

Number of reviews (by type of transport):

Taxi
Subway/Tram
Bus
Shared CAR
Shared LEV

Bus Subway / Tram Taxi Shared LEV Shared CAR

UPPER

IBV
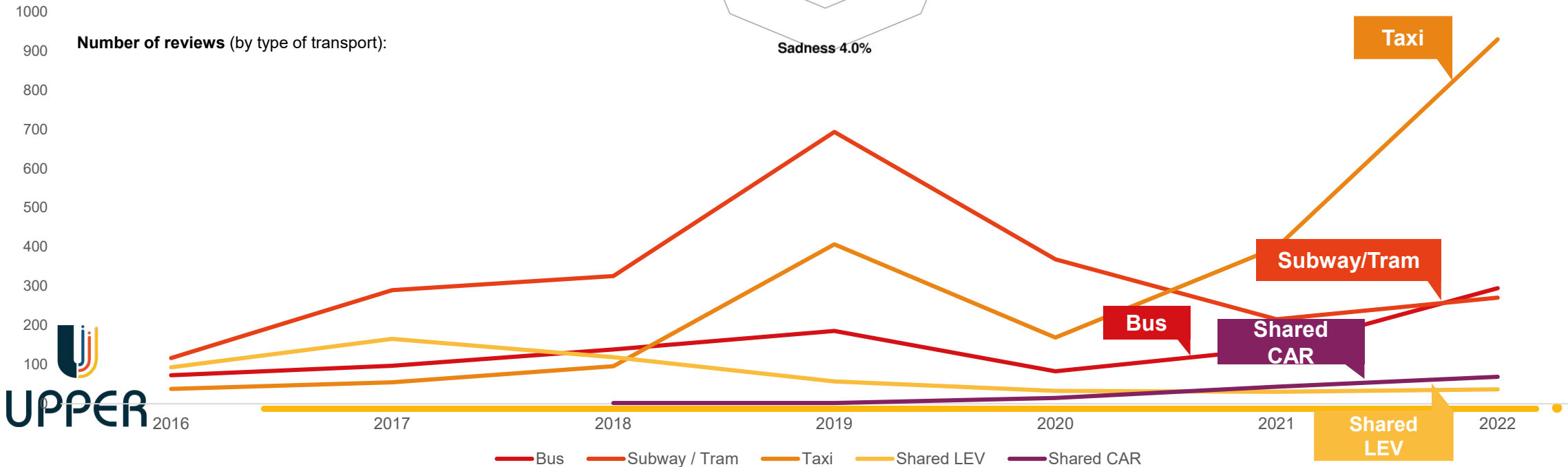
5.3.1. Rome (Italy). Netnography of <u>Bus</u>

b. Bus

8.4%	63.0%	19.7%	8.9%

- Positive
- Negative
- Mixed
- Neutral

POSITIVE 8.4%

- Good **customer service**: professional, friendly, lost and found management (6.25%)
- Intuitive, easy to use, well **signposted** (6.25%)
- **Frequency** of service (5%)
- **Good service:** Comfortable and functional (5%)
- **Improved** (3.75%): clean (3.75%) and renovated (2.5%)
- **Weekly ticket** available (2.5%)
- **Inexpensive** (2.5%)
- **Covers all areas**, sufficient stops (2.5%)
- Other positive aspects include **availability in multiple languages**, safety, and air conditioning. (…)

NEGATIVE 63.0%

- **Poor service**: degraded and chaotic (26.25%)
- **Obsolete**, not modernized, rustic (do not accept cards, cannot be renewed online), break down frequently, in poor condition (16.25%)
- Bad **customer service** (13.75%)
- **Long waiting** times (10%)
- **Dirty**, bad smell (8.75%)
- **Bad drivers**, don't provide information, dangerous driving, unpleasant (6.80%)
- **Unreliable** and not transparent (timetables) (6.80%)
- Buses **don't pass or stop** (6.25%)
- **Lack of punctuality** (5%)
- **Poor management** by the company and public administration (5%)
- **Lack of information** and signage (5%)
- **Rules/norms not respected**: Covid, etc. (5%)
- Always **overcrowded** (3.75%)
- **Tourists fined for system failures** or difficulty in understanding how it works (3.75%)
- **App** not very useful (3.75%)
- **Not very accessible** for elderly or disabled people (3.75%)
- **Unsafe**: pickpockets (2.5%)
- Other negative aspects include noise, slow speed, abandoned outskirts, discriminatory prices, poorly lit stops, and few ticket vending machines.

Noun
Verb
Adjective

2017 2018 2019 2020 2021 2022

#Bus: "Obsolete buses that are lost pieces from the ceiling with the risk of getting seriously hurt".

#Ticket: "The buses do not charge you and the drivers do not know how to help or where to buy the ticket.".

#Service: "A shame for the capital to have such a service".

#Rome: "Bad bus service in Rome.".

#Time: "Bad service, long waiting times".

#Transport: ". Bus transportation is very bad. Go on foot that arrives before. Hours of waiting…".

#ATAC: "Like a mirror of Italian society and its strengths and weaknesses, ATAC works very badly."

#City: "Shameful for a big city like Rome...".

#Minute: "160 in front of Villa Borghese an hour and 10 minutes is expected !!!? ".

#Driver: "Unfortunately, a star is a must to write the review but the very scarce preparation of the drivers does not even deserve that…".

#Day: "…one journey ticket, 1,2,3 or 7 day tickets are valid on buses, trams and metro…".

#Hour: "…in the top hours always loaded with travelers abundantly beyond the capacity limit."

#Stop: "jump the races despite the fact that there are people waiting for their bus number at the stop."

#Go: "but on Sunday who has to go to work, what does it do?".

#Pay: "If I have to pay for such a poor service, well ... we're really bad !!"

#Wait: "…, only one bus after 40min we were waiting for.".

#Take: "I take line 764 every morning, punctually the buttons do not work to book the stops, notify the driver and he responds with very arrogant and rude tones ????. Bader, negative experience.".

#Know: "This is not an urban service !!! in any city in the western world I do not know that it is so badly organized !"

#Make: "Impossible to make a subscription. On average there is a 1 hour wait."

#Get: "Public transport is usually a disaster. If you get in, it is advisable to keep your wallet well."

#Work: "Controllers make fines for good people who go to work every day and give a contribution in society"

#Tell: "…, for example today I had the 69 that started from Piazzale Clodio at 10:49, I arrive at 10:49 and another driver tells me he was Already started,…"

#Pass: "Worse than the worst, full buses that never pass, close the doors in front of the nose despite you were there to enter.

#Bad: "Very very bad service on this 9105 Massy Palaiseau-Evry Center bus line.".

#Public: "If you want to turn Rome by public transport you need a lot of patience and good legs because in the end it is better to go on foot !!!

#Good: "More transport would be good for certain areas which are almost neglected by transport.".

#Dirty: "The vehicles are in the breakthrough: dirty both outside and inside and if you do not find a place to sit large risks for tosing."

#Rude: "Bus conductor 441 was really rude. "

#Late: "Once we took the bus, which was probably a lot late. Also, it was full and the air conditioning didn't play properly.. ".

#Many: ", he has many cars Vetuste who still circulate by generating delays (when they pass), …".

#Most: "I think it is the most ridiculous company that exists"

Number of Reviews vs Rate (Bus - Rome)
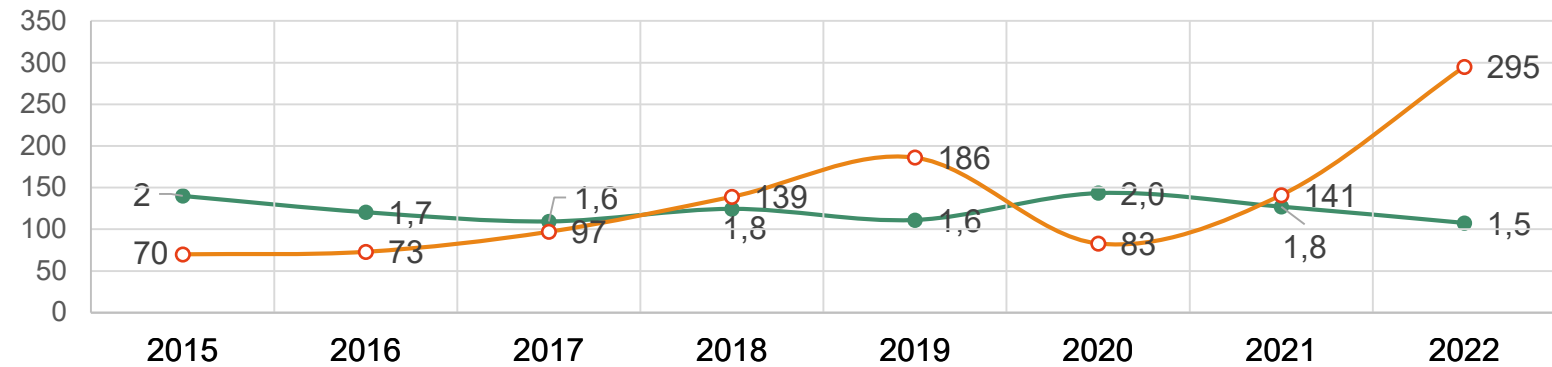
IMPROVEMENTS & MAINTAIN:

- Adequate **maintenance of the service**, improvements, and modernization
- **Customer service**: quick resolution, 24-hour service, etc.
- Intuitive, easy-to-use, and well-signposted **service**.
- **Innovation, modernization, and improvements** are being implemented to enhance the public transportation system. Specifically, improvements to the buses include modernization and the redesign of space.
- **Increased frequency** of service, more buses
- Proper **cleaning and maintenance**
- **Good price** and variety of ticket options
- Safe driving and **friendly service**
- Punctuality and **reliability**
- Compliance with **rules** on the bus (rules of coexistence, etc.)
- **Avoiding fines** due to lack of knowledge, poorly explained service, difficult to understand, etc.

- Useful and reliable **app**
- **Accessibility** and lighting of stops
- Improved **security** (theft, etc.)
- Adequate **air conditioning**.

d. Subway / Tram

33.9%	22.2%	22.4%	21.5%

- ● Positive
- ● Negative
- ● Mixed
- ● Neutral

POSITIVE 33.9%

- Clean, new, beautiful **stations** with museums and services (shops, vending machines) (30%)
- Intuitive, **easy to use** (10%)
- **Reaches** important **places** (monuments, center) (9%)
- **Well connected** with the central station of Termini (6%)
- Good **price** (4%)
- **Interconnected** with other public transports, good connections (4%)
- **Works well**, practical, useful (4%)
- **Punctual** and fast (3%)
- **Well-located stations** (3%)
- **Efficient**, short waiting time, availability (3%)
- Supervised, **safe** (2%)
- Machines **in English** (2%)
- **Good attention** (2%)
- **Well-signposted**, informative panels (2%)
- **Different ticket options** (2%)
- **Accessible**: stairs and elevators (2%)
- **Others**: ventilated, etc.

NEGATIVE 22.2%

- **Dirtiness** (stations and trains), even more in suburbs (13%)
- **Limited accessibility** for wheelchairs and strollers, lack of elevators, broken escalators (12%)
- **Technical problems and breakdowns**: ticket machines swallowing money, not returning change, train malfunctions, slow problem resolution (7%)
- **Degraded**, neglected, old trains, lack of maintenance, outdated, not modern (7%)
- **Insecurity**: pickpockets, homeless, little police presence (6%)
- **Small, incomplete, few lines**, stations and connections (6%) Very crowded (3%) Low frequency of trains (3%)
- **Poorly signposted**, lack of information (2%)
- Unpleasant **staff** (2%)
- Do **not accept bills** or cards (2%)
- **Others**: bad smell, closed bathrooms, no air conditioning, slow, no service on Christmas, expensive, uncomfortable, ...

- **Noun**
- **Verb**
- **Adjective**

2017　　2018　　2019　　2020　　2021　　2022

#Station: *"Very useful station to get to Roma Termini through Piazza di Spagna".*
#Metro: *"Metro station, trains are often on time ".*
#Rome: *"Beautiful! A real museum in the new metropolitan station C in Rome,…"*
#Ticket: *"Metro tickets € 1.50 purchased with contactless or with cash on the machine.".*
#Subway: *"…but careful transport in Rome work regularly, my first day in Rome and a strike, closed subway, last train at 8:30 and did not open until 5:00 p.m."*
#Stop: *"Metro stop like all the other dirty and without staff in charge"*
#Train: *"The metro service is always crowded and trains should be overhauled."*
#Line: *"Line B line station is not very used except by the boys from the three schools nearby".*
#Time: *"The meter sucks and dirty does not work lift and mobile stairs have been stopped for a long time. "*
#City: *"An old station in the city center …".*
#Day: *"Often busy and full of tourists during the day.".*
#Hour: *"Biblical times, few trains, overcrowding in the top hours, almost daily disservices, lack of staff in the stations, "*

- **#Find:** *"…and I am sorry to find it in a not exactly excellent condition, but this because of those who use it…"*
- **#Go:** *"The other day a lady with the wheelchair did not know how to go up and those to the cage that did not move in the least to help her. A shame!".*
- **#Take:** *"…, so be careful to which it takes because then once the ticket is stamped there is no possibility to choose...".*
- **#Use:** *"I am forced to use the private car, congratulations !!".*
- **#Work:** *"For a while it has become a "work" to get out of the metro…"*
- **#Get:** *"We should get it all over and make it aesthetically the same as the line C side".*
- **#See:** *"As an Italian I am ashamed when tourists see those very dirty and smelly means and improper delays !!!"*
- **#Buy:** *"There's plenty of signage, regular trains and a one-way fare is 1.50 EUR but you can buy a seven-day pass for 24 EUR.".*
- **#Pay:** *"easy accessibility to paying the ticket (good subscription conventions for tourists), trains with good frequency . ".*
- **#Say:** *"I can't say anything about punctuality and service because when I entered the elevator to get off from the Spanish square to the metro, seeing dirt and degradation I went out and preferred more means…"*

- **#Good:** *"We rode the metro several times during our 4 days in Rome. It's a good way to get around town."*
- **#Beautiful:** *"Rome deserves much more above all because it is one of the most beautiful cities in the world and among the most visited by tourists from all over the world and the image we offer is not the best"*
- **#Many:** *"I have been to Rome many times, but every time I take the metro I get goosebumps."*
- **#Dirty:** *"… but the orange one that leads to San Pietro was very dirty and not suitable for such an important city as Rome. Certainly it can be improved."*
- **#Clean:** *"Stations without particular architectural embellishments very simple and often not always very clean ... "*
- **#Crowded:** *"Always crowded but it works well"*
- **#All:** *"…don't understand all is arrogance but have you seen the prices you have?."*
- **#Easy:** *"Clean, and easy to travel".*

Number of Reviews vs Rate (Subway / Tram - Rome)

IMPROVEMENTS & MAINTAIN:

- Trains and stations that are **clean** and have basic services
- Intuitive, easy-to-use, and well-signposted **service**
- Improvement of **maintenance and cleanliness** in the suburbs
- **Improved accessibility** for people with reduced mobility, strollers, etc.
- **Communication** with other transports and important stations (e.g. Termini)
- Sufficient lines and stops that cover the **needs of the entire city**
- **To solve** train breakdowns, and to minimize problems/errors with ticket vending machines (ticket issuance, etc.)
- **Maintenance** and renewal of trains
- More **security** (robberies, etc.)
- More frequent train service to prevent **overcrowding**
- Punctuality, **reliability**, and speed
- **Friendly staff**
- Facilitation of diverse **payment methods**
- Availability of various **types of tickets**

- **Extended** daytime and nighttime **schedule**
- Good **air conditioning** and ventilation

e. Taxi

77.4%	10.0% 7.0% 5.6%

- ● Positive
- ● Negative
- ● Mixed
- ● Neutral

POSITIVE
77.4%

- Kind and professional **driver** (30%)
- **Good service**, efficient (20%)
- **Punctual**, precise, and reliable (20%)
- **Immediate response**, easy to book (4.4%)
- **Recommended** service (11.11%)
- **Good value for money** (7.7%)
- **Accurate** and detailed information about the city, etc. (6.6%)
- **Clean** and tidy (5.5%)
- **Easy to book**, simple, and quick (4.4%)
- **Fast** (4.4%)
- Adapt to changes, **flexibility** (3.3%)
- **Comfortable** (2.2%)
- Saves time (2.2%)
- **Well-equipped** (2.2%)
- **Others**: pleasant journey, time-saving compared to other transports, help with luggage, cash payment accepted, etc.

NEGATIVE
10.0%

- After booking, **the taxi does not show up**, cancellation of service without notice (11.1%)
- They **don't answer the phone**, long waiting times for calls (10%)
- **Scams** to customers (higher prices than they should, not using the meter, questionable route) (8.9%)
- Poor **customer service**: complaints, etc. (4.4%)
- Unpleasant, rude **driver** (3.3%)
- **Bad service**, not practical (3.3%)
- **Only accept cash** payments (3.3%)
- Lack of **punctuality** (3.3%)
- **Expensive** (2.2%)
- **Unprofessional** (2.2%)
- **Others**: air conditioning not working, no taxis available, no car seats for children or in poor condition,...

IBV

Noun
Verb
Adjective

2017   2018   2019   2020   2021   2022

- **#Service:** *"Fantastic service, punctuality and immediate availability ."*
- **#Driver:** *"The driver's service attitude is very good, the car is clean and tidy, very comfortable"*
- **#Taxi:** *"Quick and precise, dear like all taxis in Rome but a good service".*
- **#Rome:** *"Every time I go to Rome and for work I will often, they are my first contact".*
- **#Time:** *"Perfect service. Respected times, discreet staff but ready to respond, impeccable service, cool water ".*
- **#Car:** *"Impeccable, punctual service and the clean car."*
- **#Price:** *"The prices are really democratic".*
- **#Punctuality:** *"Precision, punctuality and accuracy of the logistical details characterized the service. ".*
- **#Professionalism:** *"When you are looking for professionalism and also find kindness and sympathy. An excellent service. I recommend it to everybody".*
- **#Courtesy:** *"Perfectly combined courtesy and professionalism"*
- **#Kindness:** *"I found every time maximum punctuality, kindness and an impeccable service."*

- **#Recommend:** *"A very kind, nice driver, a very high level, professional in his work. I recommend everyone!".*
- **#Thank:** *"The excellent service is a very nice conductor a trip from Rome to Sutri exceptional. Thanks for everything and best wishes".*
- **#Take:** *"It was a pleasure to take advantage of your services !! Punctuality and courtesy by the driver".*
- **#Arrive:** *"thanks to the taxi driver Super kind and human I arrived in time"*
- **#Make:** *"I have holiday homes and for my guests I always make use of their services, they all remain very satisfied. Gentile drivers and impeccable machines.".*
- **#Book:** *"quick response switchboard, pity that taxi cannot be booked for the next day"*
- **#Call:** *"e driver Fausto was very kind so much that we left a bag in the taxi and we called and after 5 minutes they returned to us again."*
- **#Answer:** *"Huge wait without answers"*
- **#Find:** *"Our family remained incredibly surprised, we had never happened to find such a good person in what he does, service of ten and honors."*
- **#Go:** *"I took advantage of the service to go to the center.."*

- **#Excellent:** *"excellent service. Excellent price. I asked to approve a shuttle almost from the moment, during the night, a courteous driver provided with an excellent vehicle."*
- **#Punctual:** *"Very good service! Punctual, clean car and great price.".*
- **#Good:** *"Super effective. Good service. Reliable. Recommendable"*
- **#Kind:** *"The best service in all of Rome. Professionalism, punctuality, kindness and availability.".*
- **#Helpful:** *"Super kind and helpful staff.".*
- **#Professional:** *"Professional and honest"*
- **#Nice:** *"Excellent service, very nice gentleman and the van looks like a limousine"*
- **#Great:** *"Excellent service and great punctuality. Guaranteed"*

IBV

Number of Reviews vs Rate (Taxi - Rome)

IMPROVEMENTS & MAINTAIN:

- Amiable and professional **drivers** (using faster routes) who are flexible and can adapt to changes
- **Reliable** and efficient service
- **Punctuality** and accuracy
- **Quick response** time and ease of booking
- **Transparency** in prices and fares
- Reasonable **prices**
- Clean and **comfortable cars**.
- Various **forms of payment** accepted
- **Availability** of taxis

e. Shared LEV

69.3%	**6.9%**	**8.8%**	**15.0%**

● Positive
● Negative
● Mixed
● Neutral

POSITIVE
69.3%

- **Good service**; excellent, impeccable (28.3%)
- Available and friendly **customer service** (18.3%)
- **Saves time**, facilitates mobility, especially for short trips (10%)
- Good, reliable and **easy-to-drive scooters** (10%)
- **Reliable service**, works well (10%)
- **Improvement of mobility**, without waiting or having to look for parking space (8.3%)
- Competitive **prices** (8.3%)
- **Recommended service** (6.6%)
- **Helmet, insurance**, etc. included (5%)
- **Comfortable**, useful, practical and effective (3.3%)
- Managed through an **app** (3.3%)
- **Discounts** (3.3%)
- **Fast** (3.3%)
- **Easy to use** (3.3%)
- **Others**: clean, replacement service, repairs, complete offer, economic savings, for daily use, ...

NEGATIVE
6.9%

- Poor c**ustomer service** (slow and inefficient) (21.6%)
- Outdated, inefficient, non-functional **app** with frequent errors (11.6%)
- Scooters **not functioning properly** (e.g. broken brakes) (8.3%)
- **Poorly maintained** and dirty scooters (6.6%) Incorrect charges due to system failures (booking start and end) (8.3%)
- **Bad service** (6.6%)
- **No delivery of invoices** (lack of transparency/legal compliance) (5%)
- **Limited coverage area** (doesn't cover university area) (3.3%)
- **Other**: missing second helmet, expensive service, ...

IBV

- Noun
- Verb
- Adjective

2014 · 2015 · 2016 · 2017 · 2018 · 2019 · 2020 · 2021 · 2022
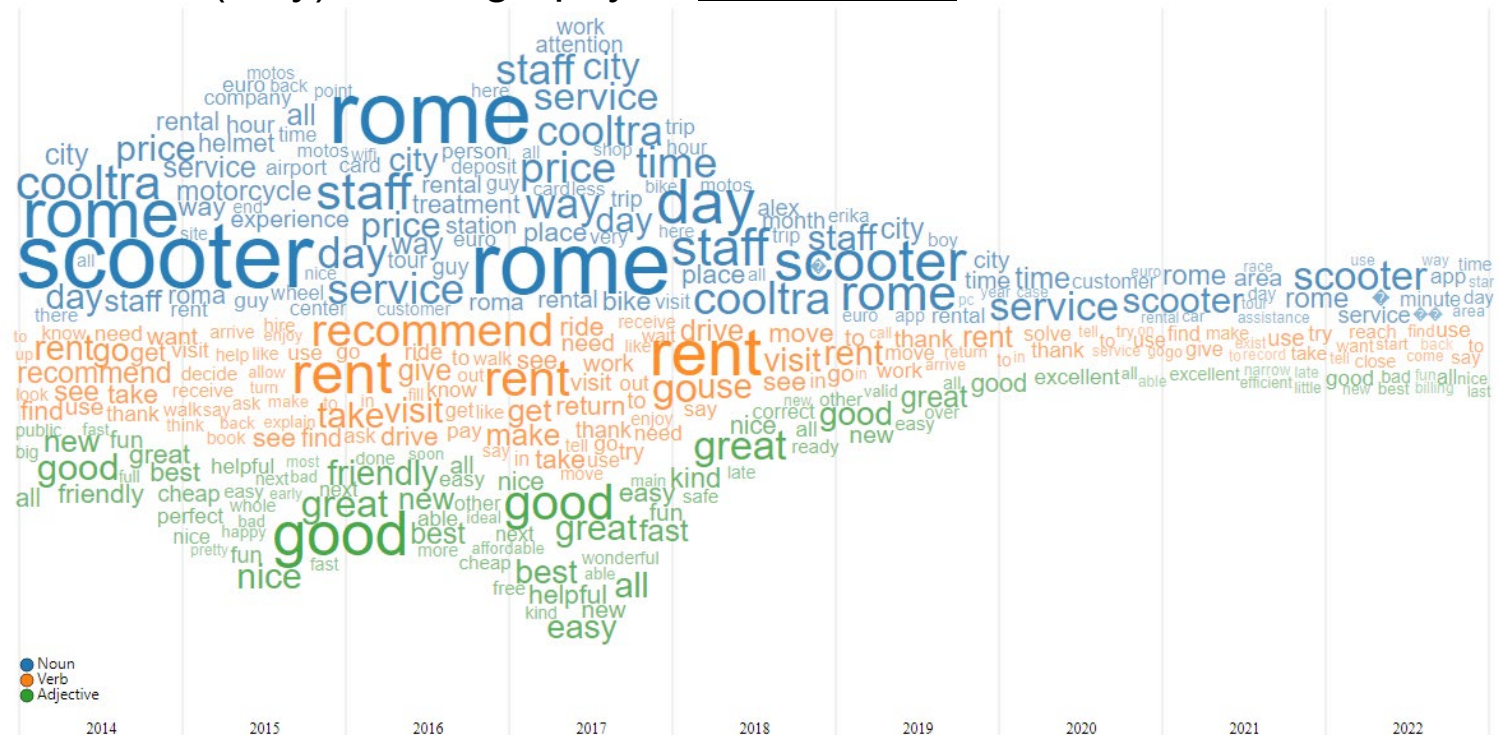
#Scooter: "Not very advice, never take their scooters if you don't want to run into these problems"

#Rome: "Definitely the best on Rome, never had problems"

#Service: "Excellent electric scooter sharing service".

#Staff: "Excellent service used during my trip to Rome. always courteous staff"

#Motorcycle: "Motorcycles in perfect condition".

#Cooltra: "I decided 2 check Cooltra Motos because their scooters looked well maintained".

#Price: "Magnificent service especially at a good price if you leave with Booking code. Immediate availability and very good state of motorcycles".

#Day: "Staff was very kind and helpfull. We rented scooter for a day and everything was excellent"

#City: "you will move very fast through the city but also it takes time park them".

#Time: "Due to the short time I've had in Rome, they made it possible to take a short trip on their scooter which I've rent! They're helpful, good enghlis knowledge and flexible attention! "

#Experience: "Bad experience: reached their destination, the top box did not close. After half an hour of rehearsal I look for a phone: nobody answers on the phone…".

#Rental: "Our stay in Rome thanks to this rental was even more magnificent. Easy of movement, speed, etc".

#Helmet: "good conditions and nice helmets.".

#Way: "A scooter is also the ideal way to explore Rome"

#App: "All motorcycles carry two helmets and with the application you can book them until you reach them"

#Rent: "My boyfriend and I rent a motorcycle to meet Rome. The first day we did most of the taxi and walking routes (because the Rome subway is very small and only has two lines), and after being another 4 days visiting everything with a motorcycle we can say that it is the best way to know.".

#Recommend: "it is really a recommendation to go along Cooltra Motos Roma if you want to explore Rome in a fun and fast way!".

#Visit: "The best to visit Rome. Great motorcycles and at a very good price. "

#Go: "Take a scooter and go wherever you want.".

#Take: "on a handy scooter to take you there while you explore more in less time"

#Use: "I recommend to everyone to use the two wheels as a means of transport"

#Get: "A fabulous way to get to know Rome and its surroundings".

#Give: "The freedom a scooter gives you explains the number of those vehicles in Rome."

#Drive: "Driving scooter in Rome is an absolute must !!!!".

#Find: "A race with a loaded scooter and in perfect condition that did not work and went to one per hour, which I had to load to me to find a possible parking lot.".

#Good: "Very good the scooters, good speed, made me save me a lot of money in Rome, better it was impossible".

#Great: "Very easy to use, great service"

#Friendly: "Good prices and very friendly and helpful people! "

#Helpful: "Staff was very kind and helpfull."

#Excellent: "It was really amazing, excellent service courtesy".

#Perfect: "The perfect motorcycle and I could park in many places without problems"

#All: "The staff tell you all you need both to get around nicely and safely and ride pleasurably.".

#Best: "A little scooter experience is the best!".

#Nice "Very nice equipment and very nice people."

#Easy: "It was easy to book.".

#Available: "The hotline is immediately available."

#Cheap: "Everything was nice. Good scooters. Cheap price."

IBV

Number of Reviews vs Rate (Shared LEV - Rome)
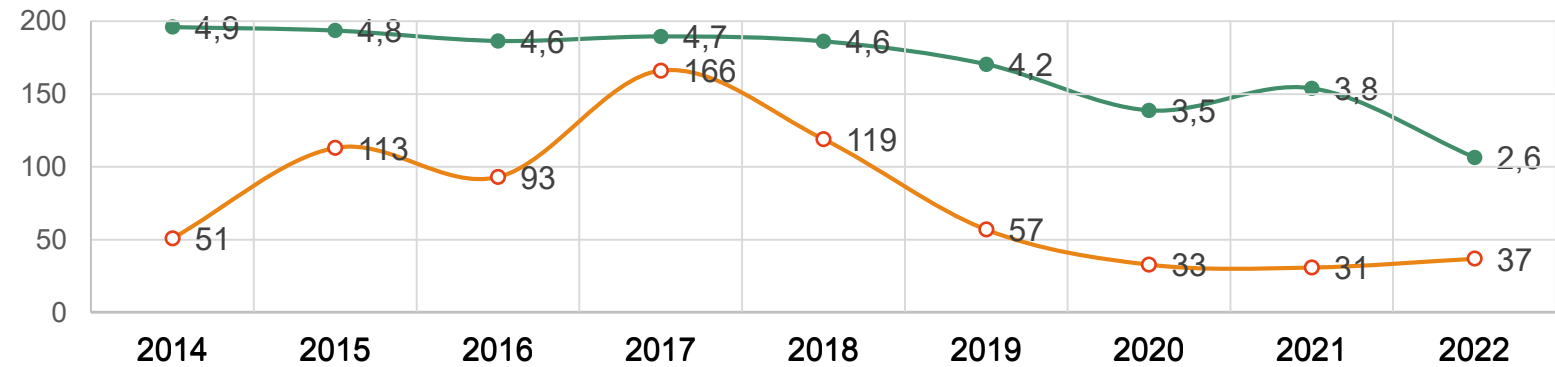
IMPROVEMENTS & MAINTAIN:

- Improved **customer service**: availability 24/7, friendliness, etc.
- High-quality and **reliable service**
- **Reliable**, easy-to-drive, well-maintained and clean scooters
- Functional and useful **app**
- Elimination of **charges due to system failures**
- Expansion of **service radius** (universities)

5.3.5. Rome (Italy). Netnography of <u>Shared CAR</u>

f. Shared CAR

| 5.6% | 73.0% | 19.8% | 1.6% |

Legend:
- ● Positive
- ● Negative
- ● Mixed
- ● Neutral

POSITIVE
5.6%

- Comfortable, **innovative**, and interesting **service** (15%)
- **Clean** cars (10%)
- Clarity and simplicity in the **rental process** (5%)
- Low **rates** (5%)
- **Quick deposit refund** (3-4 days) (5%)
- **Alternative to owning a car**, convenient for commuting (5%)

NEGATIVE
73.0%

- Poor **customer service** (long wait times on the phone) (40%)
- **Issues** with starting/unlocking the car (app, etc.) (30%)
- **Cars not functioning properly** (20%): Bluetooth not working, issues with handbrake, battery, oil, engine, deflated tires, low autonomy
- **Limited parking** space (10%)
- Unclear usage instructions (10%)
- **Issues** when closing the service, returning the car (10%)
- No invoice provided (10%)
- **Excessive costs** and high penalties (10%)
- **No GPS** navigation
- **App** shows also rented cars
- Very **limited** usage **area**
- **Dirty** and not disinfected (e.g. vomit)
- **Cars parked incorrectly**, in private spots
- **Occupying spaces** needed for residents
- **Unreliable**
- **Service** has worsened
- **Issues when renewing** the service.

Legend: ● Noun (blue) ● Verb (orange) ● Adjective (green)

2020

#Car: *"I recommend, for those like me who use the car sharing frequently not to use Enjoy."*

#Service: *"Finally, always for the lack of clarity in the terms also of the rental service, their electric cars have limited autonomy and it is not allowed to leave them except in areas close to the rental point"*

#Rental: *"But each rental becomes unnerving"*

#Customer: *"I call customer service that tells me that this is the only way to conclude the procedure, and if it doesn't work "it is strange .." It will be the fault of my phone (Google Pixel4a, with native Android)…".*

#Enjoy: *"Car rental Enjoy for 10 minutes and I find myself held back for 3 days € 69 for their line problem"*

#Problem: *"If the problem was due to the app, please solve!"*

#Time: *"The cars visible most of the time are already booked, or there are problems with the beginning and the rental end".*

#App: *"I do not recommend the use of this app ."*

#Euro: *"Very bad experience. 1 time subtracted 70 euros for no reason, now a mistake with a charge of 500 euro."*

#Money: *"Always dirty and damaged machines and they charged me more money than the duration of the rental. Not very not recommended!"*

#Hour: *"An unclear service charge you the rate at the hours even if you have chosen the rate for € 39 in promotion until January 8ᵗʰ"*

#Day: *"Terrible experience, i got a fine while i was with their rental, i got notified after 53 days from notification which means i did not get the 30% discount on the fine,…"*

2021

#Make: *"the very approximate geolocation makes you do kilometers to find the selected car"*

#Take: *"I strongly advise against, far better to take a taxi, extreme disappointment, bad, not recommended."*

#Use: *"I have repeatedly used the Enjoy Car Sharing service in Rome and I found myself really well. Machines in order and clean, clarity and simplicity of the beginning and end of the rental ."*

#Call: *"I have called the toll -free number many times to make them re -credited by asking why they hold my pre -order money even after I finished the rental"*

#Try: *"I try to call, the same thing that repeats itself. I try to look for an email, without outcome. I try to leave a message to the contact us, that too does not work."*

#Find: *"…find this totally appalling, especially considering that I have been a customer for many years and my documents are fully compliant with the Ministry of Transport's requirements, …"*

#Leave: *"their electric cars have limited autonomy and it is not allowed to leave them except in areas close to the rental point."*

#Book: *"I booked the car that was left in a private road in via Frati Bigi. I couldn't use it because it takes the key to entering"*

2022

#Bad: *"bad experience,…A night spent at the tel. to contact non -existent customer service because of a problem."*

#Free: *"I have called the toll -free number many times to make them re -credited by asking why they hold my pre -order money even after I finished the rental…"*

#Many: *"Many margins of improvement.*

#Other: *"As soon as I tried to book the Doblò but like many other times I have not been able to do anything"*

#All: *"They are beautiful and good scammers I highly recommend not to register a company that is not at all correct that steals almost 20 euros without warning takes the money only after you have inserted the card.*

#Daily: *"bad experience and the request for assistance refused to solve the problem by inventing that the car had been clear on the instructions making me lose the daily rental"*

#Shameful: *"Shameful. Non -existent customer service. The worst rental of my life.*

#Good: *"The service seems good but then they take away the money from the card € 25 …."*

5.3.5. Rome (Italy). Netnography of <u>Shared CAR</u>

Number of Reviews vs Rate (Shared CAR - Rome)

IMPROVEMENTS & MAINTAIN:

- Better **customer service** with reduced wait times

- Improved functionality of the **app** for starting and unlocking cars

- Better **maintenance of cars** to ensure they function properly

- More **parking spaces** allocated for car sharing

- Clearer and more detailed usage **instructions for customers**

- **Improved process** for closing and returning the car

- Provision of **invoices** for each rental

- **Fairer pricing** with reduced costs and penalties

- Addition of **GPS navigation** to the cars

- Increased **cleaning and disinfection** measures for the cars to ensure they are in a hygienic condition.
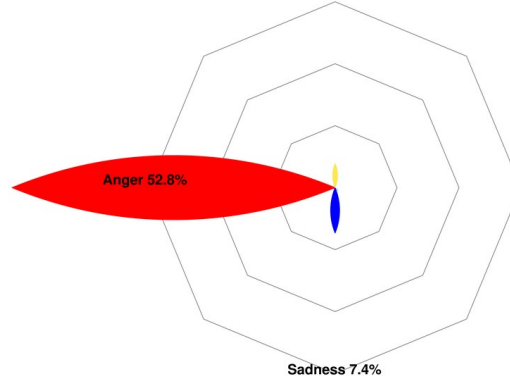
b. Bus

Joy 4.0%

Anger 52.8%

Sadness 7.4%

Level of **Hateful**:

23.2%

c. Subway/Tram

Joy 18.5%
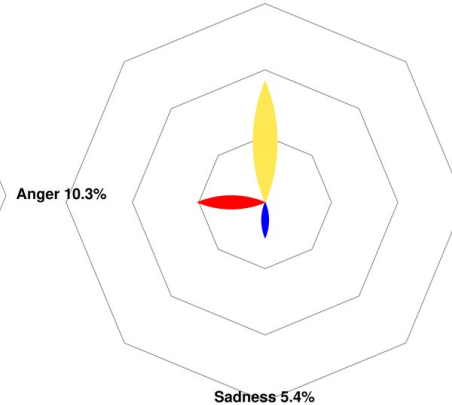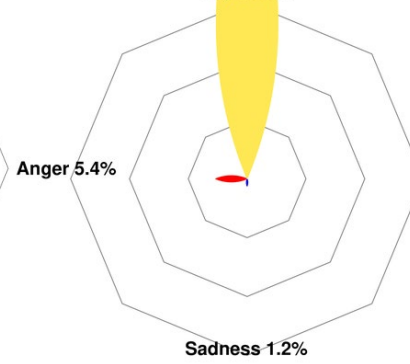
Anger 10.3%

Sadness 5.4%

Level of **Hateful**:

7.1%

d. Taxi

Joy 53.4%

Anger 5.4%

Sadness 1.2%

Level of **Hateful**:

1.8%

e. Shared LEV

Joy 50.2%
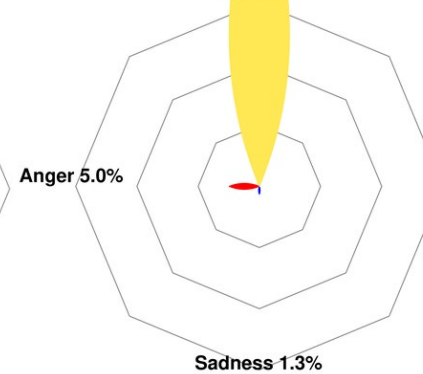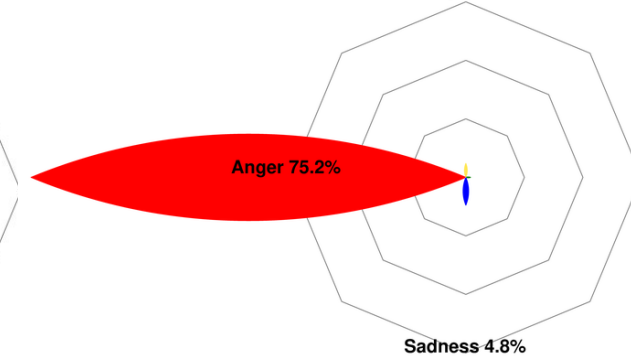
Anger 5.0%

Sadness 1.3%

Level of **Hateful**:

2.4%

f. Shared car

Joy 2.4%

Anger 75.2%

Sadness 4.8%

Level of **Hateful**:

11.2%

- The **Bus** is the transportation mode that has the highest percentage of comments identified as hate (23.2%), followed by **Shared Car** (11.2%) and **Subway/Tram** (7.1%).
- **Shared Car** and **Bus** are the transportation modes that have the highest ratio of anger comments.
- **Taxi** is the transportation mode that has the highest level of identified joy, 53.4%, compared to only 5.4% of identified anger, as well as the lowest level of identified hate, at only 1.8%.
- Second **Shared LEV** is the transportation mode with the highest percentage of Joy (50.2%) compared to 5.0% of Anger. As well as the second lowest level of hatred (2.4).

UPPER

IBV

- If we analyze all the transports grouped, the most repeated words excluding Rome are:
service, subway, **excellent**, **time**, **station**, **bus, taxi,** and **driver.**

- The words that only men say are highlighted as: **public**, **company**, **ATAC**, **rent**, **motorcycle** and **dirty.**

- The words that only women say are highlighted as: **punctual, hour, waiting, recommend, perfect** and clean.

day 49 - 90
bus 74 - 142
minute 0 - 70
ticket 38 - 84
transport 31 - 93
bad 49 - 67
friendly 51 - 67
beautiful 30 - 77
station 71 - 150
city 36 - 88
car 25 - 48
experience 30 - 50
service 201 - 337
time 74 - 149
motorcycle 0 - 46
public 0 - 70
clean 23 - 0
meter 23 - 0
waiting 28 - 0
hour 35 - 0
punctual 49 - 0
perfect 23 - 0
recommend 26 - 0
subway 93 - 196
people 24 - 49
dirty 0 - 42
rent 0 - 47
atac 0 - 47
scooter 33 - 117
driver 69 - 68
staff 26 - 43
taxi 65 - 78
excellent 86 - 139
company 0 - 56
price 22 - 39
professional 27 - 43
rome 142 - 343

● male
● female

5.3.8. Rome (Italy). <u>Conclusions</u>

- Considering the number of reviews, it seems that **Subway**, **Taxi**, and **Bus** are the most commonly used forms of transportation. Following the pandemic, only **Taxi**, **Bus**, and **Shared Car** have shown signs of recovery. The number of reviews for **Taxi** has significantly increased, while **Bus** and **Shared car** usage has returned to pre-pandemic levels. However, due to decreased tourism, the **Subway** has shown the slowest recovery and remains the least used form of transportation.
- There is a high and positive correlation between positive comments, a higher rate level (0.9), and lower levels of hate, and conversely, the lower the rate level, the higher the number of negative and hateful comments.
- The best-rated transport options in Rome are **Taxi** (due to the **moto-taxi service**) and **Shared LEV**, while the worst-rated options are clearly **Bus** and **Shared Car**, with a 23.2% and 11.2% level of hatred, respectively.
- Out of the analyzed users, 61% are men, 31% are women, and the remaining 8% are unknown. It is noteworthy that men have provided more feedback on all forms of public transportation. Additionally, men have demonstrated a higher usage of **Shared Car**, **Subway**, and **Shared Bikes**, whereas women have shown a preference for taxis, buses, and shared light electric vehicles, although still using them less frequently than men.
- 68% of the analyzed users are residents, and the remaining 32% are tourists.

Number of Reviews vs Rate (TOTAL –Rome)
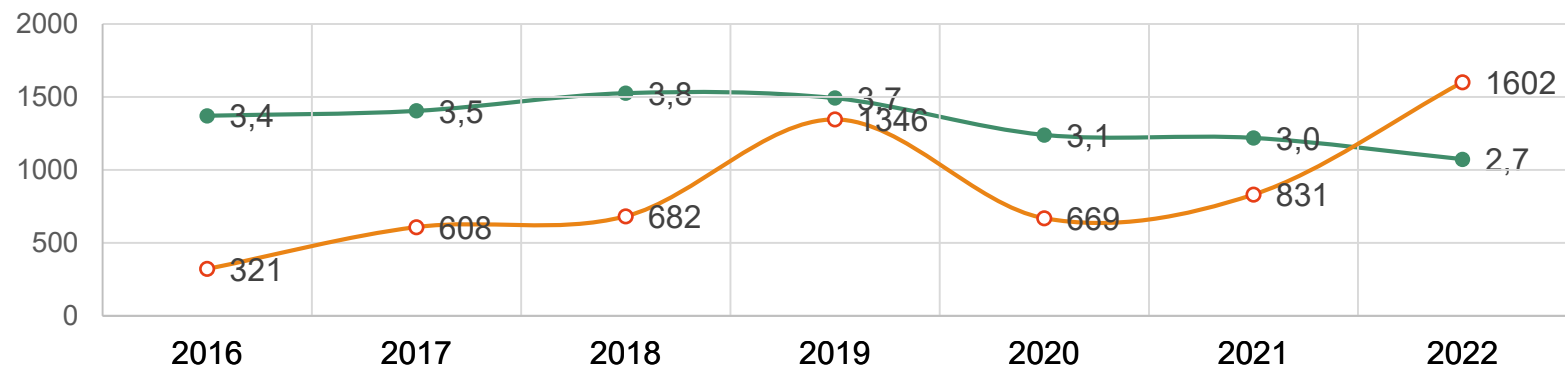
- If we analyze separately the comments made by men and women, we see that men are more critical with a lower number of positive comments (18.6%) compared to 42.1% made by women. The percentage of negative comments is higher, 42.1% compared to 28.5%.
- Men make more mixed comments (containing positive and negative aspects) than women. 33.8% compared to 15.0%.

♂ | 18.6% | 42.1% | 33.8% | 5.6%

● Positive
● Negative
● Mixed
● Neutral

♀ | 42.5% | 28.5% | 15.0% | 14.0%
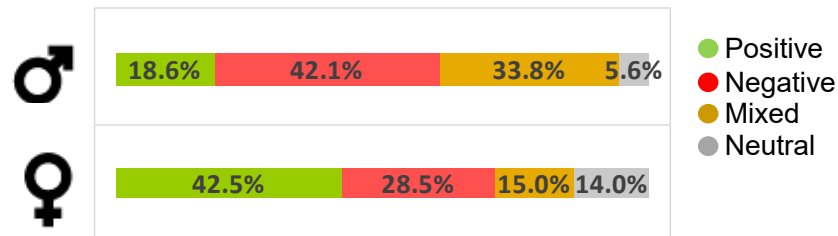
5.3.8. Rome (Italy). <u>Conclusions</u>

The main highlights / most important aspects of each transport are:

- **Bus:**
    - Poor service: disorganized and confusing
    - Outdated and unimproved: unable to accept cards or renew online, frequent breakdowns, and poor condition
    - Unacceptable customer service
    - Excessive waiting times
    - Unhygienic and unpleasant odor
- **Subway /Tram:**
    - Clean, modern, and aesthetically pleasing stations that offer additional services such as museums and shops
    - Dirtiness and lack of maintenance in both stations and trains, particularly in suburban areas
    - Limited accessibility for people with disabilities, due to broken escalators, lack of elevators, and other obstacles
    - Technical issues such as malfunctioning ticket machines, slow problem resolution, and other breakdowns
    - Degraded, neglected, and outdated trains that lack maintenance and modernization
- **Taxi:**
    - Kind and professional drivers
    - Good and efficient service
    - Punctual, precise, and reliable
    - No-show or cancellation without notice after booking
    - Long waiting times for phone calls or no answer at all
- **Shared LEV:**
    - Excellent and impeccable service.
    - Friendly and available customer service.
    - Slow and inefficient customer service.
    - Non-functional, outdated and inefficient app with frequent errors.
    - Malfunctioning scooters with issues like broken brakes.
- **Shared Car**
    - Improve customer service by reducing wait times on the phone and increasing responsiveness to customer inquiries.
    - Address technical issues related to starting and unlocking the cars through the app to provide a seamless rental experience.
    - Conduct regular maintenance checks to ensure that all cars are functioning properly and address any issues promptly.
    - Review and adjust pricing and penalties to ensure they are fair and reasonable for customers.
    - Improve overall user experience by providing clear usage instructions, simplifying the process of closing the service, and ensuring that invoices are provided to customers. Additionally, consider expanding parking availability to provide more convenient options for renters.

Oslo: Netnography of transport

5.4. Oslo (Norway). Netnography of **transport**

TYPE OF TRANSPORT:	SAMPLE: Nº Reviews	Nº Comments	USER PROFILE: ♂	♀	?	Inhabitants	Tourist	SOURCES: Company	Web, social media, etc.
a. SHARED BIKE	49	49	63.3%%	14.3%	22.4%	30.0%	70.0%	Oslo City Bike	tripadvisor, yelp, Google Play
b. BUS	251	140	65.3%	25.9%	8.8%	86.4%	13.6%	Ruter	Google Reviews, Trustpilot
c. SUBWAY /TRAM	459	336	56.8%	21.2%	22.1%	25.3%	74.7%	Sporveien T-Banen	Google Reviews, tripadvisor
d. TAXI	1.251	662	70.2%	26.4%	3.4%	86.7%	13.3%	Oslo Taxi, Sentrum Taxi, City Taxi 2, Oslo Varetaxi, Norgestaxi, Christiania Taxi, Bytaxi AS, Bogstadveien	Google Reviews, tripadvisor
e. SHARED LEV	85	75	60.0%	20.0%	20.0%	77.8%	22.2%	Voi Technology Norway AS,	Google Reviews, Trustpilot
f. SHARED CAR	608	371	73.2%	24.3%	2.5%	94.7%	5.3%	Hyre, Vybil, Getaround Norge (ex-Nabobil), Bilkollektivet SA, Fleks, Move About	Google Reviews
TOTAL:	**2.703**	**1.633**	**64.8%**	**22.0%**	**13.2%**	**66.8%**	**33.2%**		

UPPER

IBV

Sentiment- Polarity (total):

POSITIVE	NEGATIVE	MIXED	NEUTRAL
34.1%	38.5%	20.6%	6.8%

Sentiment- Polaritty (per type of transport):

a) **Shared bike** — 26.7% Positive, 33.3% Negative, 33.3% Mixed, 6.7% Neutral

b) **Bus** — 12.9% Positive, 60.7% Negative, 17.1% Mixed, 9.3% Neutral

c) **Subway/Tram** — 65.2% Positive, 4.8% Negative, 20.5% Mixed, 9.5% Neutral

d) **Taxi** — 19.9% Positive, 51.8% Negative, 19.2% Mixed, 9.1% Neutral

e) **Shared LEV** — 28.0% Positive, 49.3% Negative, 20.0% Mixed, 2.7% Neutral

f) **Shared CAR** — 51.9% Positive, 31.1% Negative, 13.3% Mixed, 3.6% Neutral

- Positive
- Negative
- Mixed
- Neutral

Level of Hateful: 5.7%

Sentiment –Emotions:

- Joy 16.2%
- Anger 23.1%
- Sadness 2.5%

RATE (by type of transport):

- a. SHARED BIKE — 2.5
- b. BUS — 1.8
- c. SUBWAY /TRAM — 3.9
- d. TAXI — 1.9
- e. SHARED LEV — 2.6
- f. SHARED CAR — 3.7

RATE (total):

2.8 ★★★☆☆

Number of reviews (by type of transport):

Legend: Shared bike, Bus, Subway / Tram, Taxi, Shared LEV, Shared CAR

UPPER

IBV

5.4.1. Oslo (Norway). Netnography of <u>Shared bike</u>

a. Shared Bike

Positive	Negative	Mixed	Neutral
12.9%	60.7%	17.1%	9.3%

POSITIVE
12.9%

- The **app** works well: easy to download, useful, shows stations, number of available bikes and spaces (20%)
- Suitable **price** (20%)
- **Perfect mode** of transportation for the city (15%)
- **Day pass** (24h) (15%)
- **45 minutes free** (15%)
- **Sufficient stations** (15%)
- Availability of **bikes** and **spaces** to leave them, good redistribution between stations (10%)
- **Other**: you can place your mobile phone (elastic band) (5%)

NEGATIVE
60.7%

- **Penalties** for system anchoring failures (service closure) (30%)
- **Missing bikes or spots**, poorly balanced or redistributed stations (20%)
- Bikes in **poor condition**, damaged (deflated tires, blocked pedals, dirty, etc.) (20%)
- **Service** has not evolved, rather it has **degraded** (10%)
- Poor **customer service**: no response, only via chat (10%)
- **Easy to use**: ease of registration, clear instructions (10%)
- **Others**: Mechanical bike without electric assistance in a city with a lot of elevation (5%)
    - Some bikes with larger wheels and others with smaller ones (5%)
    - Price not appropriate (5%)
    - Inadequate infrastructure (5%)
    - Service not suitable for tourist needs (5%)
    - Bikes not suitable for people with a lot of weight (5%)

IBV

Word cloud legend:
- Noun
- Verb
- Adjective

Timeline: 2017 — 2018 — 2019 — 2020 — 2021 — 2022
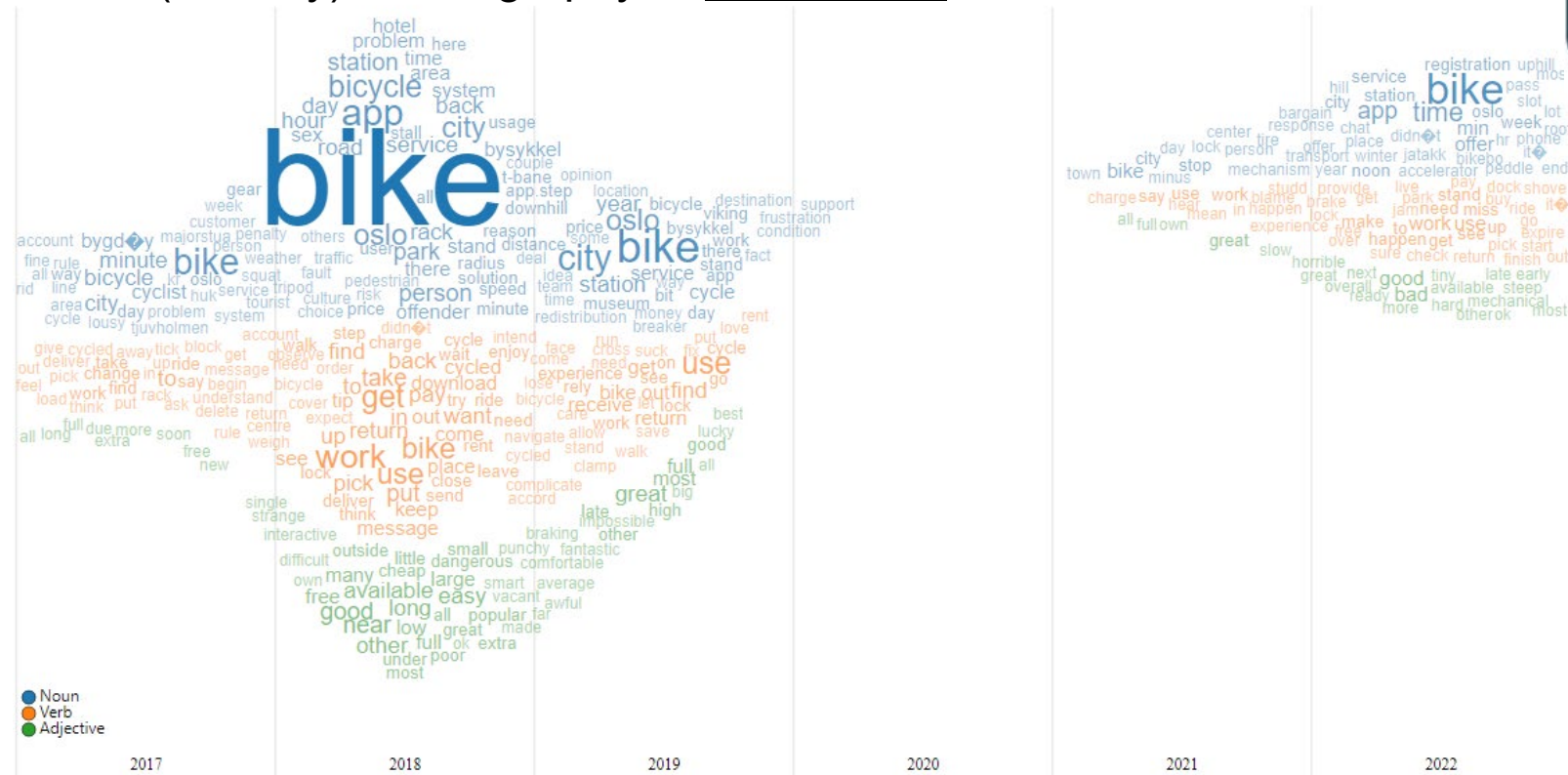
#Bike /bycicle: "We picked up bicycles that worked well at Majorstua and cycled to Bygdøy where we had to change bicycles due to the 45-minute rule.".

#App: "According to Oslo bysykkels we did not return 1 of our bikes. Absurd!!!! We didn't lock to biKe properly????? Strange because we received By app a Message.".

#City: "A ride may take a maximum of 45 minutes, which is easy to do in this city. "

#Oslo: "We were visiting Oslo as tourists, and used the day pass option, and found the system fun and useful, and at a very reasonable 49kr for the day."

#Station: "Most of the stations have 0 or 1 bikes. Most of the bikes need a repair. ".

#Year: "Either the stands are completely full or empty. Therefore it is impossible to rely on. This will be my last year.".

#Person: "First, the bikes are not comfortable to ride anymore, probably come to the person and physique.".

#Service: "Support team doesn't care about the users. Fingers crossed they fix this and this could be a great service for everyone!".

#Park: "There is no option to park the bike when there is no free at the stand.".

#System: "1hour before we received for the other biKe a conformation that we did return our biKe??? Does the system work.?????".

#Day: "For 98 NOK (10 euros) I was allowed to use the Citybikes for 3 days.".

#Minute: "Cons: not the best bikes and you have to return/ pick a new bike every 45 minute. This said, you find bike parkings all over the City."

#Use: "Either completely full or empty stands. For that it is impossible to use and rely on!".

#Work: "They blamed me for their own lock mechanism not working and charged me $40 ".

#Get: "The only minus is that the bike does not always lock, but gets a quick response to the chat.".

#Take: "Then it is very boring to have only a chat feature that sometimes takes too long to get answers when you are in a hurry".

#Bike: "I am a big fan of city bikes when they work. ".

#To: "Good offer, and it is a joy to cycle. However, this only applies if the bike works. :)."

#Return: "returned the bike to one of the station in Spikersuppa but I cannot register that I returned the bike."".

#Up: "The app is reset up to several times during the week and so it can't be. ".

#Cycled: "Had to cycle all the way to Tjuvholmen before we found a tripod to get rid of the bikes ...."

#Pay: "Step 2: Pay for 24 hours rent via creditcard. ".

#Available: "f you go over you pay more @ 15-min increments. The bikes were readily available. The app worked really well.".

#Long: "Then it is very boring to have only a chat feature that sometimes takes too long to get answers when you are in a hurry.".

#Electric: "The cost is a bit high. After the introduction of electric scooters in streets of Oslo, the cycle is less preferred…".

#Impossible: "his makes it impossible to depend on the bikes and is completely unjustifiable when you look at how good the apps are for other offers out there. ".

#Bad: "…, sometimes experiencing bad brakes and slow provides"

#Broken: "My friend had a broken saddle mechanism and cannot restore the bike and pack a new one.".

#Many: "thee cycles stations are not at all available in all parts of the city and many of the stations are always empty."

5.4.1. Oslo (Norway). Netnography of <u>shared bike</u>

Number of Reviews vs Rate (Shared Bike - Oslo)

Year	Values
2015	0, 0
2016	3, 0
2017	2,3 ; 4
2018	2,1 ; 15
2019	2 ; 12
2020	0
2021	3,4 ; 5
2022	2,9 ; 9
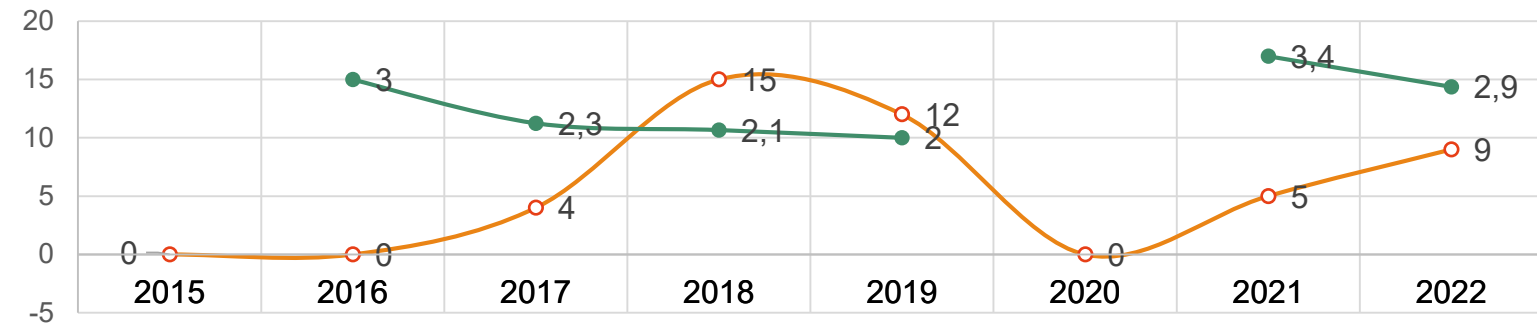
IMPROVEMENTS & MAINTAIN:

- The **app** functions well: easy to download, useful, shows available bikes and parking spaces at stations
- Different vouchers/**tickets available** for different needs: 24 hours, weekly, etc.
- Reasonable **pricing**
- **Bikes** are in good condition and properly maintained
- First 45 minutes **free**
- **Stations** are appropriately sized based on usage
- Bike **redistribution** according **to demand**
- Good **customer service**
- Continual **improvement of the service** to meet evolving needs (service has remained the same since its creation and needs to evolve)
- Availability of **accessories**, such as phone holders
- **Other improvements** include electrification, infrastructure upgrades (bike lanes), bikes adapted to different weight ranges and ages, and a service that caters to the needs of tourists.

5.4.2. Oslo (Norway). Netnography of <u>Bus</u>

b. Bus

| 12.9% | 60.7% | 17.1% | 9.3% |

- ● Positive
- ● Negative
- ● Mixed
- ● Neutral

POSITIVE
12.9%

- Good **customer service** (friendly, etc.) (8%)
- **Friendly**, attentive driver who assists passengers (8%)
- **Good public transportation**, good service (6%)
- **Others**:
  - You can usually find a seat
  - Runs smoothly
  - Tickets of different types
  - Good, appropriate routes
  - Adequate information about routes and during service
  - User-friendly and clear app.

NEGATIVE
60.7%

- **Poor management** of public transportation, no competition, etc. (16%)
- **Long waits**, infrequent bus schedules (14%)
- Unreliable for commuting, **frequent delays** (12%)
- **Aggressive**, dangerous, and unpleasant driving by the drivers (12%)
- Poor **customer service** (8%)
- High **prices** (8%)
- **Drivers** not stopping (8%)
- **Poorly designed routes** and schedules (6%)
- Difficulty **purchasing tickets** (one by one and with different cards) (6%)
- **Penalties** for system/service failures (e.g. app failure) (4%)
- **Inaccurate**, slow app with ticket purchase failures (4%)
- **Others**:
  - Strikes
  - Poorly visible stops
  - Stops under direct sunlight
  - Inadequate climate control.

Noun
Verb
Adjective

2017 | 2018 | 2019 | 2020 | 2021 | 2022

#Bus: "Depending how long you stay it is probably better to purchase an Oslo card which also allows the use of the boats and buses".

#App: "You can also buy tickets online, app and in kiosks."

#Ticket: "Nice with the opportunity to buy a ticket on the app or via travel card".

#Route: "Funny thing is the line to Holmenkollen (line 1) takes you there on such a route that it more looks like a mountain railway instead of metro, very nice route.".

#Time: "Good service, clean, on time. We used this public transport service many times during our 6-day stay ".

#Driver: "Clean .Very friendly drivers. Ok information and not to expensive.".

#Person: "In my opinion the best T-Bahn in the northern countries. Cheap if you take a 24-hour ticket. We were two people and you can only pay with a card. For each person you can only pay on one card."

#Stop: "... destinations and stops are clearly marked at stations and on trains. And the RUTUR app is pretty good."

#Service: "The Oslo subway is an excellent, efficient and punctual service that connects the city center with all areas to the forest and the ski resorts of Nordmarka.".

#Transport: "The subway is fast and stable transport in Oslo. It has high operating stability and effectively transports you where you are going. ".

#Get: "The subway in Oslo ("T-Banen") is the fastest and cheapest way to get around in Oslo and the surroundings."

#Drive: "Neat and nice drive".

#Stop: "Info over the speakers there will be unexpected stops or lower speeds. Great. Good trip!."

#Run: "All trains run either East or West and the stations have good signs"

#Go: "Download the RUTER app for tickets!! To figure out wherer to go, and wich train to take Download the RUTER app for tickets!! To figure out wherer to go, and wich train to take"

#Work: "It works very well and serves important parts of the city.."

#Buy: "The only negative thing was buying you pass at the automatic machines...not very user friendly"

#Pay: "We were two people and you can only pay with a card. For each person you can only pay on one card. I was lucky with me two cards"

#Late: "I travel with T-banen everyday for work and also on my free time - it is seldom delays (at least lately ;)." "Trains are very rarely late.".

#Bad: "Very bad experience. It is embarrassing to claim that the train arrives in 2 minutes and actually take more than 20! Not only once, almost every day in stations in periods when there are works.".

#All: "Almost all areas are served by this efficient system of 6 metropolitan lines, which climbs up to the Marka woods, in spectacular natural oases not far from the center."

#Expensive: "Even though it's not that fast and rather expensive it's a good choice for moving around in Oslo.."

#Right: "…maps and better information are missing at the station to choose the right output."

#Good: "Nice and good. T The track towards the center stops very high above the platform but other than it quite nice".

#Many: "We used the public transportation many times"

Number of Reviews vs rate (Bus - Oslo)

Data points (green line, rate):
- 2015: 3,7
- 2016: 3,1
- 2017: 2,9
- 2018: 2,5
- 2019: 3,8
- 2020: 2,8
- 2021: 1,4
- 2022: 1,5

Data points (orange line, number of reviews):
- 2015: 6
- 2016: 11
- 2017: 22
- 2018: 33
- 2019: 38
- 2020: 22
- 2021: 38
- 2022: 81
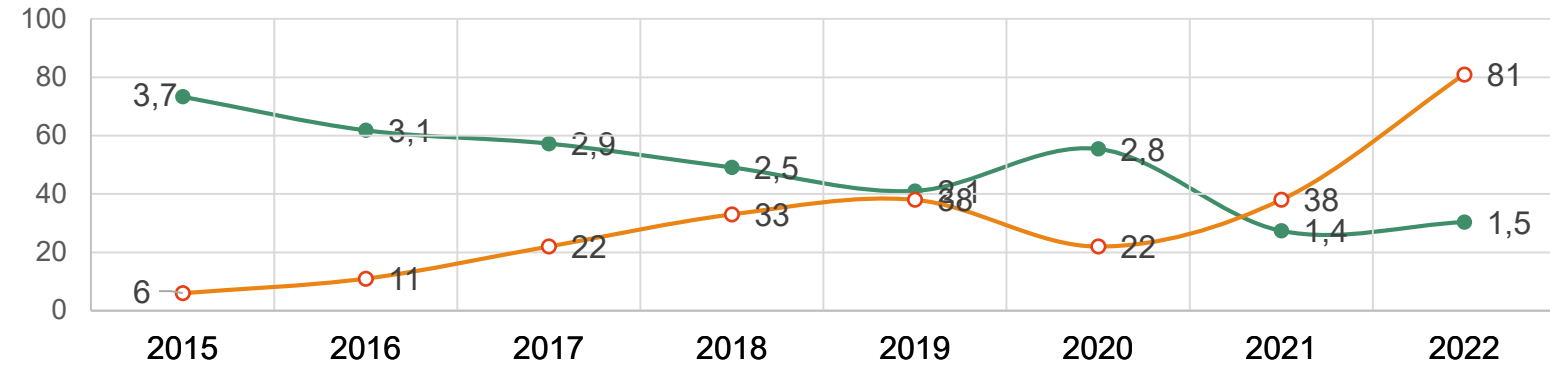
IMPROVEMENTS & MAINTAIN:

- Good **customer service**
- Adequate **management**
- Increased **frequency of buses**
- **Punctuality**, reliability (no delays)
- Safe **driving**
- Reasonable **prices** and different types of tickets
- Friendly and helpful **drivers**, professionals (e.g. always stop at the designated stops)
- Well-designed **routes** and schedules
- Easy ticket **purchasing process**
- Accurate, user-friendly, and stable **app** (no crashes)
- **Avoid penalties** for service failures
- Comfortable **stops** (covered, seating available, easily visible, etc.)
- Adequate **information about routes** and always available during the trip
- Proper **climate control**

5.4.3. Oslo (Norway). Netnography of Subway/Tram

d. Subway / Tram

| 65.2% | 4.8% | 20.5% | 9.5% |

Legend:
- 🟢 Positive
- 🔴 Negative
- 🟠 Mixed
- ⚫ Neutral

POSITIVE
65.2%

- **Reaches** the outskirts: mountains, nature, ski resorts (metro lines 1 and 5) (26%)
- **Punctual** (22%)
- Day, week or month **tickets** available (20%)
- **Clean** (18%)
- **Efficient** (18%)
- **Best transport** in Oslo (12%)
- **Sufficient stops**, takes you to important places, good network (10%)
- **Comfortable**, pleasant (e.g. lines at the same level) (10%)
- Good **price** (e.g. lines at the same level) (10%)
- Fast (10%)
- Good **frequency** (8%)
- **Useful**, the most suitable/easy way to get around Oslo (8%)
- **Easy to use**, understand and simple (8%)
- **Safe** (8%)
- **Central station** in the city where all lines connect (6%)
- Good **signage**, adequate **information** (4%)
- Useful **app**, helps to purchase tickets and use it easily (4%)
- Inspectors and **guards** (4%)
- **Others**: quiet, accessible, not too crowded, friendly staff, some stations have free 24-hour parking

NEGATIVE
4.8%

- **Insecure** (pickpockets, homeless people, etc.) (8%)
- **Delays**, lack of precision, not punctual (8%)
- **Expensive** (8%)
- **Dirty**, no toilets and bad odor (8%)
- **Crowded** (6%)
- **Not accessible** for wheelchairs and baby carriages (4%)
- **Lack of information** on screens, incorrect or incomplete (4%)
- **Others**: basic rules of coexistence not respected, low frequency, heat in summer, no adequate emergency plan, slow, etc.

- Noun
- Verb
- Adjective

2017 | 2018 | 2019 | 2020 | 2021 | 2022

#Oslo: "The T-banen (know changed its name to the Metro) is running to many different places inside Oslo.".

#Ticket: "A little downturn that the ticket only lasts 1 hour.".

#Subway: "Oslo subway. Nothing special. Modern, well organized, respects the traffic schedule, clean. It circulates both underground and on the surface, on very long sections."

#Train: "Trains come one after another don't need to wait much. Make sure to validate ticket, Although I was never checked."

#Station: "I found the station's clean and the services very reliable and smooth".

#Metro: "I found the Oslo metro really reliable and very punctual as was all the public transport ".

#Way: "The public transit system in and around Oslo is efficient, easy to figure out and get you anywhere quickly and in a cost-effective way"

#App: "The app made it SO EASY to get around."

#Hour: "In my opinion the best T-Bahn in the northern countries. Cheap if you take a 24-hour ticket. "

#City: "Taking the " trikk " as some Norwegian still call it can be an excellent way of getting around the city especially when you are pushed for time.".

#Time: "It is convenient to use the subway as the waiting times are not long. "

#Get: "Comfortably get around Oslo like the locals!...".

#Take: I love taking public transit. Oslo's metro is very modern, clean and efficient.".

#Use: "For sure don't use the old stations like the National Theatre station. That is the worst.".

#Buy: ". If you buy an Oslo pass, you should definitely go to the Okolin Bow sculpture park, the Munch Museum, etc.".

#Go: "This train walking is very beautiful. Do not stop going! For the whole family and age! Great views of the city!".

#Around: "great way to get around Oslo."

#Find: "There is no link between the route finder app (RuteReise) and the ticketing app (RuterBillett), so you cannot find a route and then click/tap to buy the ticket"

#Need: "you will need to check your start and finish zones before ordering a ticket."

#Make: "Public transportation is excellent and makes it easy to get around in Oslo."

#Visit: "We used it numerous times during our splendid visit to the city."

#Out: "Easy to figure out, reliable, clean and very safe methods of public transportation. "

#Work: "Fine and reliable in terms of access to and from work".

#Good: "...departures are frequent and connections between t-bane and bus/trains/trams are good. "

#Public:

#Many: "Trains and metro system are linked in many places, trams and busses connect the whole thing.."

#Clean: "Affordable, clean wagons, safe and trains that kept the timetable."

#Easy: "you are sure that connections with the heart of the city are easy and probably without bad surprises".

#Great: "Took the subway from the city center up to Ullevål Stadium from the city center, great way to get ahead.2

#Nice: "A good, fast, nice way to get around in Oslo."

#Efficient: "They are clean, efficient and much quieter than transportation in other countries."

#All: "…When in Oslo, get Oslo Card at the Airport. gives unlimited accsess to all transport. 1, 2 or 3 days pass."

#Over: "With a day card you swipe over a lot in one day."

Number of Reviews vs Rate (Subwa / Tram) - Oslo

IMPROVEMENTS & MAINTAIN:

- **Efficiency**, usefulness, ease of use, best way to get around
- **Punctuality**, reliability, accuracy; service in all parts of the city, e.g. reaches the mountains, etc.
- Variety of **ticket types** (e.g. day, week, or month tickets)
- **Cleanliness**
- Reasonable **price**
- **Safety**
- **More space** and good **frequency** are necessary to avoid overcrowding.
- Sufficient **stops**, takes you to important places, good network
- **Comfort** (e.g. level boarding)
- **Speed**
- **Accessibility** for wheelchairs and strollers
- Available, complete, and reliable **information**
- **Others**: respect for basic rules of coexistence, adequate climate control

e. Taxi

| 19.9% | 51.8% | 19.2% | 9.1% |

● Positive
● Negative
● Mixed
● Neutral

POSITIVE
19.9%

- **Recommended**, reliable, punctual, and serious (10%)
- **Pleasant**, polite, helpful (8.3%)
- Good **drivers**, safe and professional (8.3%)
- Good service, **quality** (6.6%)
- Good **price**, cheap (5%)
- Good **customer service** (3.3%)
- **Safe**, no deception (3.3%)
- **Other**: comfortable car, driver does not talk much, ...

NEGATIVE
51.8%

- Deception by **taking longer routes** and charging more than what should be or what is stipulated in the fares (21.6%)
- Poor **customer service** (11.6%)
- Taxi does **not arrive** and/or no notification is given (10%)
- **Unprofessional** service (8.3%)
- **Long waits**, queues (8.3%)
- **Expensive** (8.3%)
- Unpleasant, unstable, unprofessional **driver** (6.6%)
- **Slow to answer** or pick up calls (6.6%)
- **Few accessible cars** and/or cars with suitable **child seats** (5%)
- Cannot retrieve **lost items** (3.3%)
- **Other**:
    - Charges for mistakes
    - Better with Uber
    - Bad smell
    - Arrives earlier
    - Do not speak
    - Norwegian
    - Do not want to go to a specific destination (e.g. Gardermoen)

IBV

Noun (blue)
Verb (orange)
Adjective (green)

2017 | 2018 | 2019 | 2020 | 2021 | 2022

- **#Taxi:** "Had pre-ordered taxi on app. Got tel 10 min before that they could not get a car. Unreliable.".
- **#Driver:** "The driver spoke very drefit Norwegian"
- **#Oslo:** "Only alternative in Oslo. Besides Uber"
- **#Price:** "simply the most unknowable drivers in the city, but with one of the most expensive prices ".
- **#Company:** "More than double price of max price in the app on tel! The roof team counted at a sick speed, it cannot possibly be legal. Never more this company!"
- **#Service:** "Do not call their customer service if you lost something in one of their cars.".
- **#Trip:** "The driver drove big detours and we had to end the trip. "
- **#Time:** "Did not find the address and came 12 hours before the agreed time.".
- **#Car:** "The car did not come and we were not told that they did not have a car for us. "
- **#Minute:** "After 45 minutes there was a taxi who claimed he had been assigned 15 minutes before coming."
- **#Customer:** "Drit -expensive and rotten customer service!"
- **#Phone:** "The driver who answered the phone was very rude and not accommodating."

- **#Take:** "A taxi that would take 10 min to get to the pick -up site took 40. Not very nice in the cold. . ".
- **#Come:** "Order Taxi at 1 pm, comes at 14. Giant service"
- **#Get:** "It took 1.5 hours to get the whole group transported !! They are not to be trusted!"
- **#Drive:** "Seems like none of them actually manages to drive the right way ever ...."
- **#Pay:** "Coming 25 minutes late to have to pay full price even though I discuss with the driver."
- **#Go:** "We were going from Vippetangen to Oslo S, but the driver from Norgestaxi refused to drive us and waved himself only behind even though he was in the queue first."
- **#Use:** "Don't use this company!"
- **#Order:** "ordered a maxi taxi at 4.30 at night to Gardemoen (to reach one flight). Taxi never came…".
- **#Call:** "Terrible service, the taxi called 1 hour before departure, the driver got lost on the road, waisted for half an hour and waited for him to show up, ...".
- **#Say:** "They have a fixed price it says on websites but then you have to call the call center. "

- **#Expensive:** "Too expensive ... steer clear of this company."
- **#Bad:** "Watery bad service! Have just got off the phone where I have been scolded after incredibly poor follow -up
- **#Good:** "I am very happy with their service. Very very good professional. I recommend to all worlds".
- **#Nice:** "Incredibly nice and safe driver, made us effective, was informative, not least zero nonsense with payment."
- **#Long:** "The driver also chose to take a longer way than necessary."
- **#Other:** "No other taxi company should be used. Oslo Taxi is serious 👍"
- **#Same:** "Twice as expensive as Oslo Taxi for the same stretch in the Oslo center"
- **#Best:** "Best in Norway on passenger transport."
- **#Late:** "They can arrive 10 minutes early or up to one quarter later."
- **#Fixed:** "use ONLY OSLO TAXI and ask for the fixed fare, otherwise the price can easily double!"
- **#New:** "About the quality of the taxi in Oslo are new and good maintenance!"

Number of Reviews vs Rate (Taxi- Oslo)

IMPROVEMENTS & MAINTAIN:

- **Professionalism**, seriousness: no deception by taking longer routes
- **Reliability**, punctuality: the taxi arrives and in case it doesn't, they notify
- **Pleasant**, polite, helpful treatment
- Good **price**
- Good **customer service**
- Good **drivers**, safe and professional
- **Prompt attention**, when picking up the call
- Good service, **quality**
- **Few accessible cars** and/or cars with suitable child seats.
- Cannot retrieve **lost items**
- **Other**: safe, comfortable car, driver does not talk much, good smell, speak languages, can go wherever you want ...

5.4.5. Oslo (Norway). Netnography of Shared LEV

e. Shared LEV

28.0%	49.3%	20.0% 2.7%

● Positive
● Negative
● Mixed
● Neutral

POSITIVE
28.0%

- **Good scooters**; they drive well, have power, speed and stability (20%)
- Good **customer service and fast** (17.5%)
- **Good service**, recommended and a good way to get around (7.5%)
- **Fun and nice** (7.5%)
- **Easy to use**
- **Cheap**
- Good **app**

NEGATIVE
49.3%

- Bad **customer service** (15.0%)
- **Charges for failures** or because the service is not clear (7.5%)
- Impossible to **close the service** (park the scooter) (7.5%)
- The scooters bother are messy on the floor (they prevent passage and cause accidents) (7.5%)
- **Failures at the** time of service **start** (5%)
- **No availability** of scooters
- **Expensive**
- You cannot **cancel the service** (failure that causes the customer to be charged without using the service)
- Motorcycle **degradation** and service
- There **could be more bonuses**
- **Limited area** of use
- **Cannot be used at night**

Legend:
- Noun
- Verb
- Adjective

2020

#VOI: "She tripped, fell and broke her neck because of Voi's business in Oslo - Shame on you!". "I scan the QR code on are "inaccessible", even though it lights up green. This has happened 2 days in a row. Will never use VOI again, for some rubbish!"

#Scooter: "The scooters are some of the most high quality scooters, they are fast,..."

#Bike: "...But they keep sending me emails saying they are going to remove a wrongly parked bike on my property..."

#Service: "Steals money from the card, charges the card for days you have not used Voi. No response to customer service.".

#App: "Very simple app, get help when you need it via support."

#Day: "I spent Voi Skuter two days and you pulled a lot of money from the account, want you to send your money back".

#Time: "Nice rental voi scooter, but bad breaks 2 times.".

#Trip: "Had a complaint about the shooter. They took it further to take a closer look at about fixing it. Plus I got the money back for the trip without asking about it ?? ".

#Phone: "I started a trip in Oslo, put my phone in their phone hilder and made sure it was secure. Little did I know that their phone holders don't cope with vibration at all and it sent my phone flying onto the ground not even 2 minutes into starting."

#Customer: "It's not possible. When you go to the website, customer service does not exist in Norway even if you click on Norwegian. ".

#Problem: "other problems is with the app it self, if you are unlucky the app wont even open after u have started the ride...."

#Money: "I tried to get my money back but the customer support is impossible to work with..."

2021

#Use: "I bought 24 hours and had to use it for 3 hours so stopped it"

#Get: "... it is impossible to get back to the frontpage of the App... ".

#Take: "Very bad service....they have taken money for whole day but I couldn't start any of their scooter."

#Work: "Works fine, but I had wanted more powerful engine in the uphill slopes"

#Say: "I wrote them a complaint and the help I got was a trip refund and a note saying «u use our phone holders at ur own risk»"

#Start: "I want to start of by saying that i really liked Voi when they first started. The quality was great, always a scooter around and the pricing was reasonable."

#See: "It is difficult to see how much time you have left when you subscribe."

#Go: "So I'm not going to use Voi again, as it hasn't happened to my competitors.".

#Try: "Bought day cards. Starts by getting a error message in the app every time I try to start. The voi just stops.".

2022

#Good: "A good way to get around the city".

#All: "I need an explanation and overview of all my payment from Voi Customer Service.".

#Bad: "But I unfortunately can't recommend the service because their support team could not offer me compensation for my phone breaking because of bad design for the phone holder"

#Impossible: "Why am I being charged and why is it impossible to report the problem?"

#Many: "many times I cant lock the scooter in a parking zone, but the worst part is the customer support."

#Private: "Voi does not respect that it is forbidden to park on other people's private property."

#Electric: "Bibi Vance is 83 years old and visually impaired. She did not see the electric scooter lying on the ground in front of the entrance to Møllhausen square on Skøyen. "

#Same: "Piece of trash service, impossible to park even remotely close to a tier and Ryde parking the same place"

Number of Reviews (Shared LEV)

	2020	2021	2022
(orange)	2	39	44
(green)	1	2,3	3,1

IMPROVEMENTS & MAINTAIN:

- Good **customer service**; fast and that responds to service failures.

- The motorcycles must have an **adequate design** according to the needs of the city.

- That there are no failures when starting the service, canceling it or closing the **service**.

- Avoid **unfair charges** for service failures.

- Control of **where the motorcycles are left**, prevent them from being left in places that hinder the passage, private squares or in places where they can cause accidents

- **Availability** of motorcycles in a suitable area

- Reasonable **price**, not extortionate

- **Good maintenance** of the motorcycles and the service, avoiding degradation.

f. Shared CAR

51.9%	**31.1%**	**13.5%**	**3.5%**

- 🟢 Positive
- 🔴 Negative
- 🟡 Mixed
- ⚪ Neutral

POSITIVE 51.9%

- **Easy to use**, simple and straightforward **service** (22.9%)
- Good **customer service** (15.7%)
- Easy-to-use **app**, accessible and easy to make reservations through it (14.3%)
- Good, new, modern, and practical **cars** (12.9%)
- Useful and practical **service**, recommendable (11.5%)
- **Availability of cars**, accessibility, and proximity (11.5%)
- Good **price** (10%)
- Fun, **good experience** (7.1%)
- **Others**: Flexible service Sustainable Easy to move around All-inclusive Clear and transparent pricing

NEGATIVE 31.1%

- Unauthorized charges due to **system/service errors** (cars not rented, returned but not registered, etc.) (18.6%)
- Poor **customer service** (unpleasant, unresponsive, etc.) (12.9%)
- **Poor service**, bad company, lack of professionalism (8.6%)
- Cars in **bad condition** (mechanical issues, etc.) and dirty (7.1%)
- **App** errors, not user-friendly or useful, etc. (5.7%)
- **Expensive** service (4.3%)
- **Uncharged** cars (4.3%)
- **Not recommended** service (4.3%)
- **Non-transparent pricing (**2.9%)
- **Others:**
  - Difficult to unlock and lock
  - Difficulty finding parking spots
  - Car's autonomy is not as indicated
  - Costs money to retrieve forgotten items, as one needs to pay to unlock the car

IBV

Noun
Verb
Adjective

2017 2018 2019 2020 2021 2022

- **#Car:** *"So simple and easy that it is fun to rent a car :-)"*
- **#Customer:** *"Absolutely miserable customer experience. Were charged for their own technical errors.".*
- **#App:** *"Very easy to use the app and reserve a car. Unproblematic to pick up and use the car and deliver again. Can be recommended."*
- **#Service:** *"Very happy with the cars, the app, customer service and everything with hire"*
- **#Hyre:** *"Top to rent a car at Hyre. Recommended. We will do that again."*
- **#Price:** *"Flexible and practical service, great customer service and good price"*
- explaining this problem to them. The service was unpleasant on the phone".
- **#Time:** *"Cars in many locations and accessibility are better than in a long time.".*
- **#Money:** *"I got the money that was drawn to the app, but the money for fuel that I paid too much I did not get back"*
- **#Rental:** *"Over 2 weeks ago rental and no response or payment from neighboring cars. Neighbile has become insolvent !!!!"*
- **#Tenant:** *"Very good. Could have been cleaned somewhat better from the previous tenant. Easy price."*
- **#Company:** *"Practical and affordable rental car company. Very clear via the app, which is also key."*

- **#Rent:** *"Is a very simple and nice way to rent a car."*
- **#Get:** *"I borrowed a car to get lots of stuff to the West Kanttorets market and did not find parking nearby after off".*
- **#Use:** *"Expensive! It will never be worthwhile to use flex! You want to get better out of it leasing a car."*
- **#Take:** *"Customer service shows zero willingness to cooperate or understanding. Take a taxi. Or Limmo for that matter. It will potentially be cheaper."*
- **#Work:** *"but customer service was easily accessible on chat and phone and got switched to a car in the same place that worked. And then it was all super simple."*
- **#Pay:** *"Had to pay $ 12,000 for an injury I was not responsible for. Picture Certificate did not hold ....."*
- **#Up:** *"The one I picked up was a delicious automatic car (Seat Leon Stv 2018). Natural extra costs such as toll passes and fuel can occur. "*
- **#To:** *"Easy parking, with plenty of space. Pretty central. Short distance to public transport."*
- **#Recommend:** *"Had it been possible to give zero stars, they would have received this. Rude customer service and long answer time. Do not recommend using their services"*

- **#Good**: *"Fantastic concept Good selection of cars, good prices and super service".*
- **#Simple:** *"Simple app, good selection and great services."*
- **#Many:** *"Will use many times in the future!"*
- **#Recommended:** *"Quick on answering, and easy to use. Recommended!"*
- **#Nice:** *"Was very nice car to drive, but struggled to lock and unlock the car …"*
- **#Bad:** *"Is not recommended. If you choose to rent anyway: Take very good pictures and movies of the car, before and after. Inside and outside. In bad lighting conditions, do not tire the car."*
- **#Expensive:** *"Had a slight injury was very expensive so there is something pulling down"*
- **#Cheap:** *"Easy to book and cheap car hire."*
- **#Accesible:** *"So light, fine priced and accessible when you need an extra car quickly.".*
- **#Great:** *"Very simple, great modern car and a good experience. . "*
- **#Clear:** *"Incredibly simple and clear. Lots of cars available. A little too much seat cars…"*

5.4.6. Oslo (Norway). Netnography of <u>Shared CAR</u>

Number of Reviews vs Rate (Shared CAR - Oslo)

	2017	2018	2019	2020	2021	2022
Rate	3,4	3,8	3,6	2,7	3,1	4,0
Reviews	8	24	70	68	77	359

IMPROVEMENTS & MAINTAIN:

- Adequate **customer service** (pleasant, quick to respond, etc.)
- **Easy-to-use**, simple, flexible and straightforward service
- Unauthorized charges due to **system/service errors** (cars that are not rented, returned but not registered, It's difficult to unlock and lock ...)
- User-friendly **app**, accessible and easy to make reservations through
- Good, new, modern and practical **cars**
- Good **price**
- **Availability** of cars, accessibility and proximity
- **Poor service**, bad company, lack of professionalism
- Fun, enjoyable **experience**
- **Cars** in poor **condition** (malfunctioning, etc.) and dirty
- App errors, low **usability**, usefulness, etc.
- **Cars not charged** or the car's autonomy is not what it indicates
- All-inclusive and the **price** should be clear and transparent
- **Sustainable**
- Difficulty finding **parking spots**

5.4.7. Oslo (Norway). Emotions by type of transport
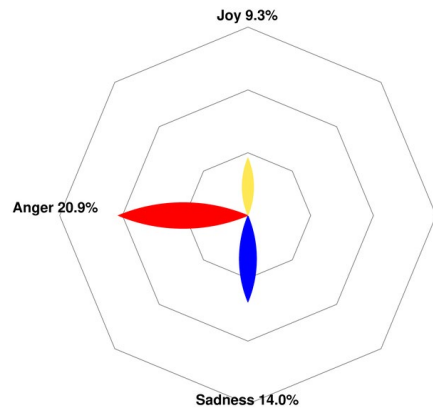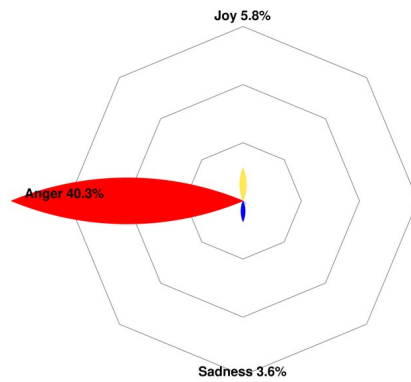
a. Shared bike

Joy 9.3%
Anger 20.9%
Sadness 14.0%

Level of **Hateful**:
2,3%

b. Bus

Joy 5.8%
Anger 40.3%
Sadness 3.6%

Level of **Hateful**:
12,5%

c. Subway/Tram

Joy 7.8%
Anger 2.7%

Level of **Hateful**:
1,2%

d. Taxi

Joy 11.2%
Anger 36.2%
Sadness 2.6%

Level of **Hateful**:
8,6%

e. Shared LEV

Joy 13.5%
Anger 32.4%
Sadness 2.7%

Level of **Hateful**:
0,0%

f. Shared car

Joy 30.0%
Anger 23.3%
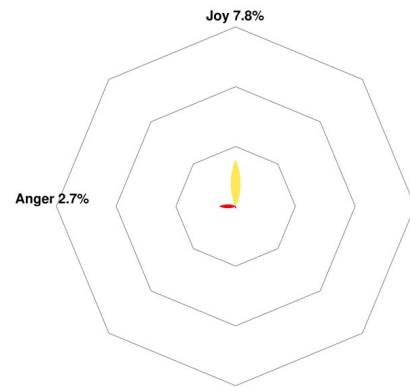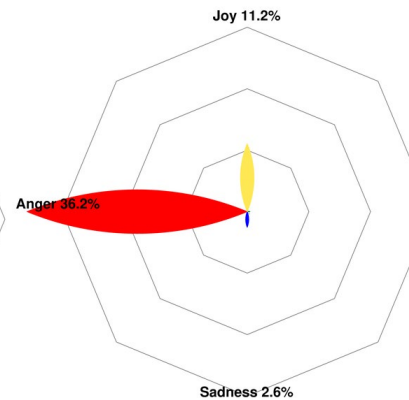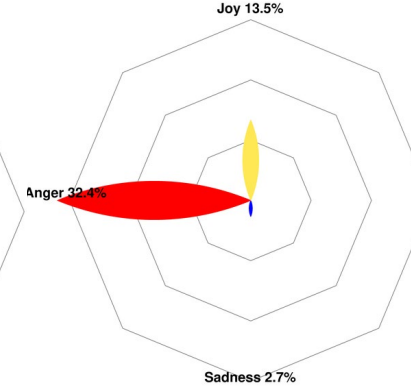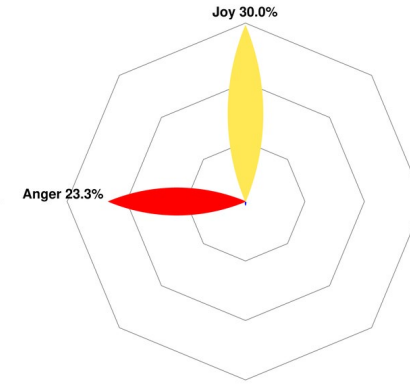
Level of **Hateful**:
1,3%

- In **Oslo**, it stands out that the level of joy in all types of transport is lower than in the rest of the cities studied.
- The **Bus** is the transportation mode that has the highest percentage of identified hate (12.5%), followed by **Taxi** (3.4%).
- **Bus** is the transportation mode that has the highest ratio of anger to joy comments.
- **Shared Car** is the transportation mode that has the highest level of joy identified, 30.0% compared to 23.3% of anger.
- **Subway/tram** are similar with low percentages of joy, anger, and hate.

UPPER

5.4.8. Oslo (Norway). Differences by gender

- If we analyze all the transports grouped, the most repeated words excluding Oslo are: **taxi**, **car**, **service**, **driver**, **time**, **customer** and **application.**

- The words that only men say are highlighted as: **transport, center**, **excellent**, **rental** and **star.**

- The words that only women say are highlighted as: **pleasant, hyre, credible, worst** and **arrived.**

driver 54 - 114
ticket 11 - 44
service 53 - 134
price 23 - 63
company 24 - 69
experience 13 - 30
minute 24 - 51
subway 14 - 21
trip 43 - 43
oslo 55 - 174
easy 29 - 46
hyre 12 - 0
incredibly 12 - 0
worst 11 - 0
day 18 - 39
bus 22 - 29
rental 0 - 24
customer 29 - 73
pay 11 - 22
expensive 16 - 42
pleasant 15 - 0
arrived 11 - 0
simple 13 - 27
center 0 - 30
star 0 - 24
excellent 0 - 29
bad 24 - 23
time 48 - 92
bicycle 10 - 40
application 37 - 60
taxi 103 - 190
transport 0 - 36
rent 17 - 23
car 78 - 188
city 16 - 43

● male
● female

5.4.9. Oslo (Norway). <u>Conclusions</u>

- According to the number of reviews, **Taxi**, **Shared Car**, and **Subway/Tram** appear to be the most used modes of transportation **Taxi** and **Shared Car** are the ones that have grown significantly after the pandemic. **Bus** and **Shared Lev** have grown less, **Shared Bike** remain stable, and lastly, the **Subway** has not recovered.
- In Oslo, shared transportation does recover after the pandemic (except for **Shared Bike**), as in most other cities.
- There is a high and positive correlation between positive comments, a higher rate level (0.9), and lower levels of hate, and conversely, the lower the rate level, the higher the number of negative and hateful comments.
- The highest-rated modes of transportation in Oslo are the **Subway** and **Shared Car**, while the lowest-rated is clearly the **Bus**, with a 12.5% level of *hate*, followed by **Taxi**, with an 8.6% level of *hate*.
- 65% of the analyzed users are men, 22% are women, and the remaining 13% are unknown.
- Men use shared transport (shared car) more, and women use **Taxi** and **Bus** more.
- 33% of the analyzed users are tourists, and the remaining 67% are residents.
- There is a medium-high correlation (-0.7) between a higher percentage of tourists and fewer negative comments (they are less critical), and conversely, a higher percentage of residents who give more negative comments (0.7). Tourists make more mixed comments.
- There is no correlation between usage (number of reviews) and satisfaction (rate).

Number of Reviews vs Rate (TOTAL - Oslo)
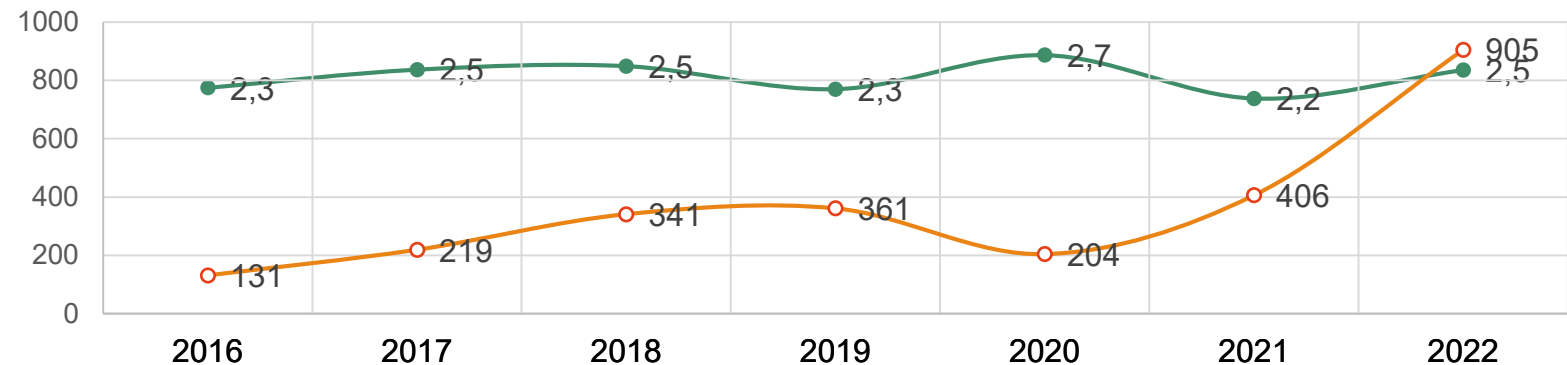
- If we analyze separately the comments made by men and women, we see that men are more critical with a lower number of positive comments (13.7%) compared to 34.6% made by women. The percentage of negative comments is higher, 50.3% compared to 39.0%.
- Men make more mixed comments (containing positive and negative aspects) than women. 32.5% compared to 18.1%.

♂ | 13.7% | 50.3% | 32.5% | 3.5%

♀ | 34.6% | 39.0% | 18.1% | 8.3%

- Positive
- Negative
- Mixed
- Neutral
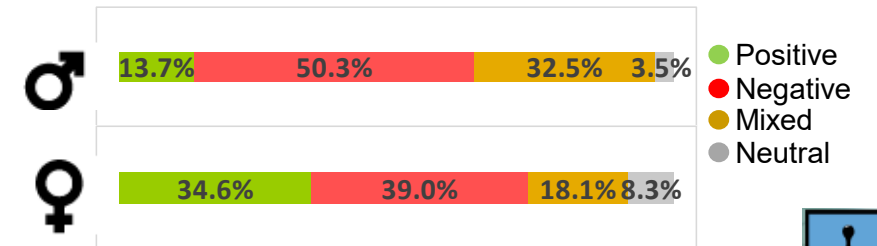
5.4.9. Oslo (Norway). <u>Conclusions</u>

The main highlights / most important aspects of each transport are:

- **Shared Bike:**
  - The app performs well; it is easy to download, useful, and displays information on available bikes and parking spaces at
  - There are various vouchers/tickets available to meet different needs, including 24-hour and weekly options.
  - The pricing is reasonable.
  - The bikes are in good condition and are properly maintained.
  - The first 45 minutes of usage are free.
- **Bus:**
  - Users demand excellent customer service
  - Effective management
  - Increased frequency of bus service
  - Punctuality and reliability (no delays)
  - Safe and reliable driving
- **Subway /Tram:**
  - Efficiency, usefulness, and ease of use are essential factors in determining the best way to get around.
  - Punctuality, reliability, and accuracy are critical elements that define excellent service throughout the city, even in remote areas such as the mountains.
  - A variety of ticket types, including day, week, or month tickets, provides flexibility and convenience for passengers.
  - Cleanliness is also an important aspect of a top-notch transportation system.
  - Finally, a reasonable price is a crucial consideration for many people when choosing their mode of transportation.
- **Taxi:**
  - Professionalism and honesty: no deceptive tactics such as taking longer routes
  - Dependability and punctuality: the taxi arrives on time and if there are any delays, customers are promptly notified
  - Friendly, polite, and helpful demeanor
  - Competitive pricing
  - Users demand excellent customer service
- **Shared LEV:**
  - Users expect prompt and responsive customer service that is excellent in addressing any service failures.
  - Motorcycles must have a design suitable for the city's specific needs.
  - No glitches or malfunctions when starting, canceling, or terminating the service.
  - Fair and transparent policies to avoid any unjustified charges for service failures.
  - Proper monitoring and control of where motorcycles are parked or left.
- **Shared CAR:**
  - Users demand customer service that is not only excellent but also friendly, prompt, and efficient
  - User-friendly, simple, flexible, and straightforward service
  - Resolution of unauthorized charges resulting from system/service errors (e.g., cars that were not rented, returned but not registered, difficult to unlock and lock, etc.)
  - Accessible and easy-to-use app for making reservations
  - Availability of high-quality, new, modern, and practical cars

Mannheim: Netnography of transport

5.5. Mannheim (Germany). Netnography of __transport__

TYPE OF TRANSPORT:	SAMPLE: Nº Reviews	Nº Comments	USER PROFILE: ♂	♀	?	Inhabitants	Tourist	SOURCES: Company	Web, social media, etc.
a. SHARED BIKE	32	19	87.5%	12.5%	0.0%	87.5%	12.5%	VRNnextbike Mannheim	Google Reviews
b. BUS	44	18	77.3%	20.5%	2.3%	93.7%	6.3%	RNV bus	Google Reviews
c. SUBWAY /TRAM	187	101	75.4%	22.5%	2.1%	91.9%	8.1%	RNV Tram	Google Reviews
d. TAXI	2.095	1.036	79.6%	15.8%	4.7%	96.6%	3.6%	Mannheim Taxi, Taxi Mannheim, taxi Mannheim-City, Tesla Taxi Mannheim, XXL taxi Mannheim	Google Reviews
e. SHARED LEV	105	105	78.1%	17.1%	4.8%	7.6%	92.4%	Lime	Trustpilot, Google Play
f. SHARED CAR	109	105	77.3%	17.3%	5.5%	96.4%	3.6%	Stadtmobil, mobileeee – Carsharing, FRANKLIN Mobil	Google Reviews
TOTAL:	**2.572**	**1.384**	79.2%	17.6%	3.2%	79.0%	21.0%		

5.5. Mannheim (Germany). Netnography of **transport**

Sentiment- Polarity (total):

POSITIVE	NEGATIVE	MIXED	NEUTRAL
41.5%	14.7%	20.9%	22.9%

Sentiment- Polaritty (per type of transport):

		POSITIVE	NEGATIVE	MIXED	NEUTRAL
a)	Shared bike	31.6%	0.0%	47.4%	21.1%
b)	Bus	22.2%	27.8%	27.8%	22.2%
c)	Subway/Tram	36.6%	20.8%	20.8%	21.8%
d)	Taxi	83.3%	7.1%	3.6%	6.0%
e)	Shared LEV	15.1%	14.2%	7.5%	63.2%
f)	Shared CAR	60.0%	18.3%	18.3%	3.3%

- 🟢 Positive
- 🔴 Negative
- 🟠 Mixed
- ⚪ Neutral

Level of Hateful: 1.7%

Sentiment –Emotions:

- Joy 55.5%
- Anger 5.3%
- Sadness 1.7%
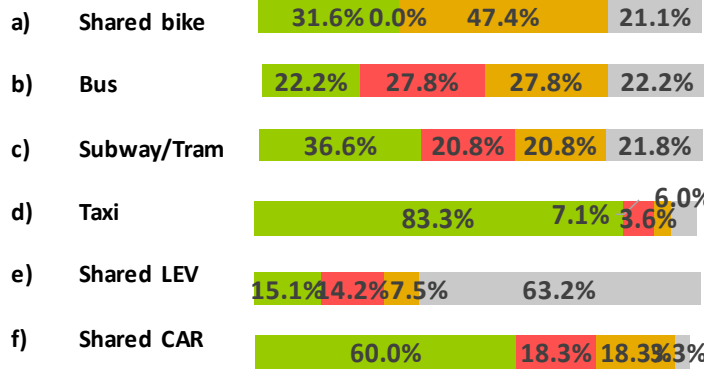
RATE (by type of transport):

- a. SHARED BIKE: 3.7
- b. BUS: 3.2
- c. SUBWAY /TRAM: 3.7
- d. TAXI: 4.7
- e. SHARED LEV: 4.0
- f. SHARED CAR: 4.1
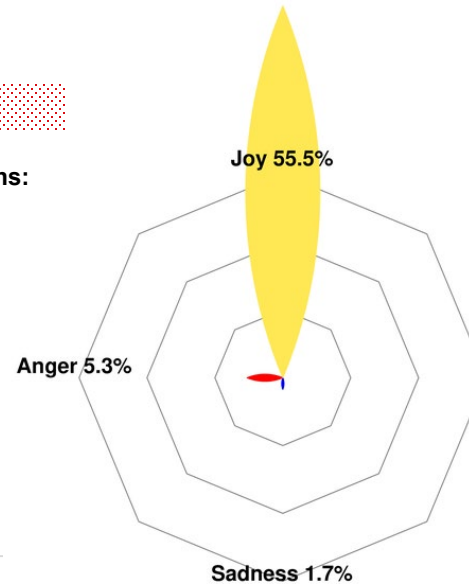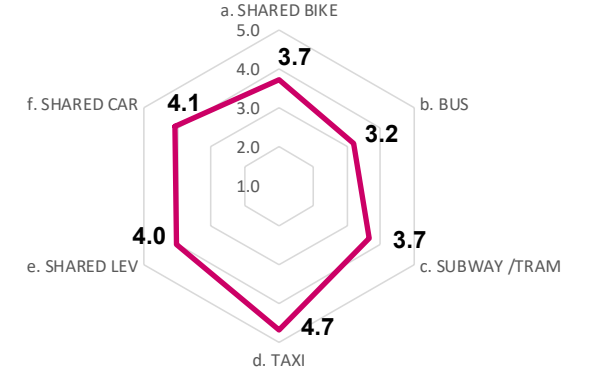
RATE (total):

3.9 ★★★★☆

Number of reviews (by type of transport):

Legend: Shared Bike — Bus — Subway / Tram — Taxi — LEV — Shared Car

UPPER

IBV
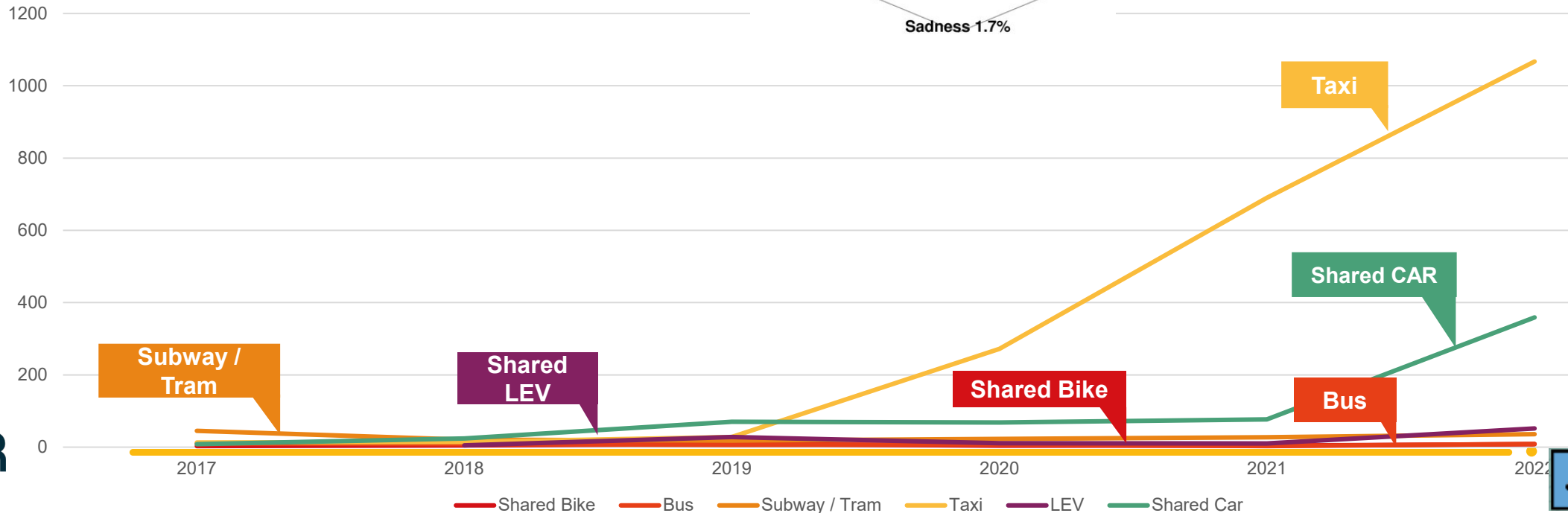
a. Shared Bike

31.6%	0.0%	47.4%	21.1%

- ● Positive
- ● Negative
- ● Mixed
- ● Neutral

POSITIVE
31.6%

- **Availability**, enough bikes (33.3%)
- Good **service**, useful, good idea (33.3%)
- **Well-located stops** (e.g. near bus stop) (20%)
- Easy-to-use **app** (6.6%)
- **Quick rental** (6.6%)
- Good **customer service** (6.6%)

MIXED
47.4%

- **Technical problems**, technology, app (26.6%)
- Bikes are **not in good condition** (handlebars, chain, etc.) (20.%)
- No bike **availability** (13.3%)
- **Stations missing in some districts** and north (13.3%)
- **No space** to leave bikes (13.3%)
- **Uncovered stations** (bikes get wet and dirty) (13.3%)
- Charges for service failure (6.6%)
- **Expensive** service (6.6%)
- **Bikes** without suspension, **uncomfortable** (6.6%)

IBV

Legend:
- ● Noun
- ● Verb
- ● Adjective

Timeline: 2017 — 2018 — 2019 — 2020 — 2021 — 2022

#Bike: "…last night I wanted to rent a bike, but their terminal did not have internet connection.".

#Station: "The idea is great and the coverage with stations is now quite useful.."

#Week: "But that only happened after two weeks and I answered promptly as it should be, but then after another almost four weeks I haven't heard anything from you. ."

#There: "There are almost never bikes available as they are always picked up very quickly"

#Stop: "Otherwise good station, directly at the bus stop".

#Home: "…after an experience in my own home country with NextBike: Among those 19 bikes that are at the official drop-off point at the bus and tram station, I parked the bike at the very edge because the other 18 bikes there have already crowded the very limited space of stationary locks. ".

#Number: "But there were also a few dark sides: The associated app never seems to work - so at least my impression when I was the support number. have called. Basically ok, as long as someone is always available (which seems to be the case).".

#Rubbish: "There is also a lot of rubbish and rubbish lying around.".

#Direction: "… it is placed on the outermost edge in the direction of the center of Käfertal.".

#Time: "Often there are no bikes at peak times".

#Area: "would also like to mention that the bikes are probably only insufficiently maintained, as I found out at the beginning of this odyssey in the VRN area.".

#Park: "It was very easy to see from the small car park on the ABB premises in front of the old kiosk, right next to the bus stop in the direction of Neckarau/Rheinau. ".

#Bike /bycicle: "I do not get any Tour de France machines here - rather such a simple touring bike. "

#Find: "The location is very easy to reach and find. ".

#Seem: "The associated app never seems to work - so at least my impression when I was the support number."

#Get: "Always bikes available, it can be a bit expensive if you use it too often. Better get a flat rate or your own bike."

#Cancel: "Now I know it was the terminal. The lady from the call center was super nice, canceled it and told me the next station."

#Stolen: "it was very good there visible and could easily have been stolen, which didn't happen - which is a miracle at this point"

#Happen: "But that only happened after two weeks and I answered promptly as it should be, but then after another almost four weeks I haven't heard anything from you."

#Good: "Also their bikes are not in so good condition."

#All: "And the second bike, which led to this incident, wasn't all right either, because the chain sometimes got stuck"

#Other: "I parked the bike at the very edge because the other 18 bikes there have already crowded the very limited space of stationary locks….".

#Great: "Great services".

#Nice: "Very nice and new"

#Certain: "My friend had a broken saddle mechanism and cannot restore the bike and pack a new one.".

#Next: ". Once it was not possible to adjust the saddle. I complained via the contact form, was canceled the next day."

#Easy: "This VRN bike station in Mannheim is very well placed and easy to reach from many sides."

#Ok: "Basically ok, as long as someone is always available (which seems to be the case)"

#Bad: "I was so relaxed, because I was glad to drive at all. But a little more well-groomed by the state would not have been bad."

Number of Reviews vs Rate (Shared bike - Mannheim)

IMPROVEMENTS & MAINTAIN:

- Appropriate **station size**
- **Availability** of bikes and spaces to leave them
- No **system failures or charges** due to system/service errors
- **Well-located stations** in all areas of a city
- Useful and functional **app**
- Well-maintained **bikes**
- **Covered** bikes/stations
- Reasonable **pricing**
- **Improved bikes** (e.g. suspension)

b. Bus | **22.2%** | **27.8%** | **27.8%** | **22.2%**

- 🟢 Positive
- 🔴 Negative
- 🟠 Mixed
- ⚫ Neutral

POSITIVE
22.2%

- Large and well-equipped **station** (5.5%)
- Sufficient **ticket machines** (5.5%)
- Useful notices and **information** (5.5%)
- **Accessible** (5.5%)

NEGATIVE
27.8%

- **Dirt**, garbage, and urine (22.2%)
- Unsafe and **dangerous** stop **for women** (11.1%)
- Late and reckless **drivers** (11.1%)
- **Unsafe stop**, delays (e.g. of 1 hour) (5.5%)
- **Uncovered** stop (5.5%)
- Poor **customer service**, unresponsive staff (5.5%)
- Users not following **rules** (e.g. mask-wearing) (5.5%)

IBV

Word cloud timeline (Noun / Verb / Adjective), 2018–2022
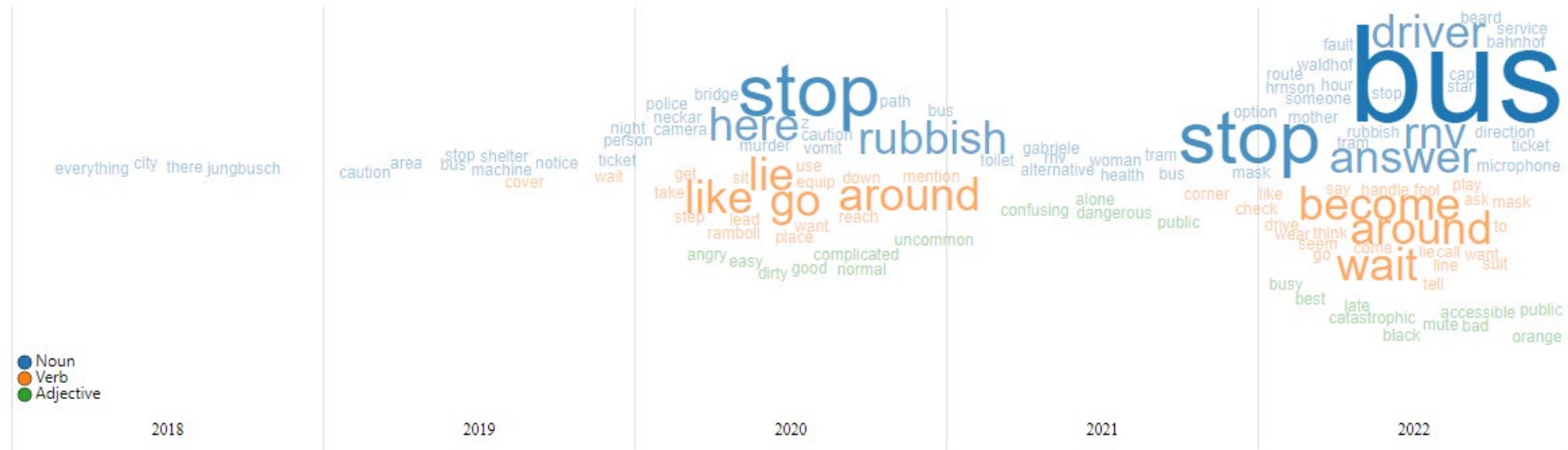
- **#Bus**: "Great bus stop with a shelter without a ticket machine.".
- **#Stop:** "Quite normal stop, but often rambolled and there is often a lot of rubbish lying around."
- **#Rubbish:** "There is a lot of rubbish lying around here, some of the people sitting at this bus stop are extremely aggressive and it is not uncommon for you to get angry about stepping on vomit. ".
- **#Driver:** "Bus drivers have become catastrophic, always late, especially line 55 in the direction of Waldhof Bahnhof..".
- **#Answer:** "My mother has been waiting at the bus stop for 1 hour. She asked me to call RNV but no one answers or someone answers but the microphone is on mute so you think it's a fault".
- **#RNV:** "Compulsory masks only seem to be an option at RNV!? It goes without saying that the passengers handle it as it suits them. ".
- **#Tram: "**I like the stop of the tram and the 60 bus from the rnv."

- **#Around:** "Easily accessible but there is a lot of rubbish lying around."
- **#Become**: "If public transport is to become more attractive, then the health of the passengers should not be played with".
- **#Wait: "**Unfortunately no covered waiting area."
- **#Go:** "Easy to reach, but dirty, complicated, and every path leads somewhere you didn't want to go.".
- **#Like:** "Would like the bridge to be equipped with police cameras, just like down on the Neckar where it is very dangerous at night"

- **#Good:** "Perfect for cornering and a good alternative to public toilets".
- **#Public: "**If public transport is to become more attractive, then the health of the passengers should not be played with."
- **#Dangerous:** "The stop is confusing and dangerous for women, it is better not to be alone at this stop."

Number of Reviews (Bus)
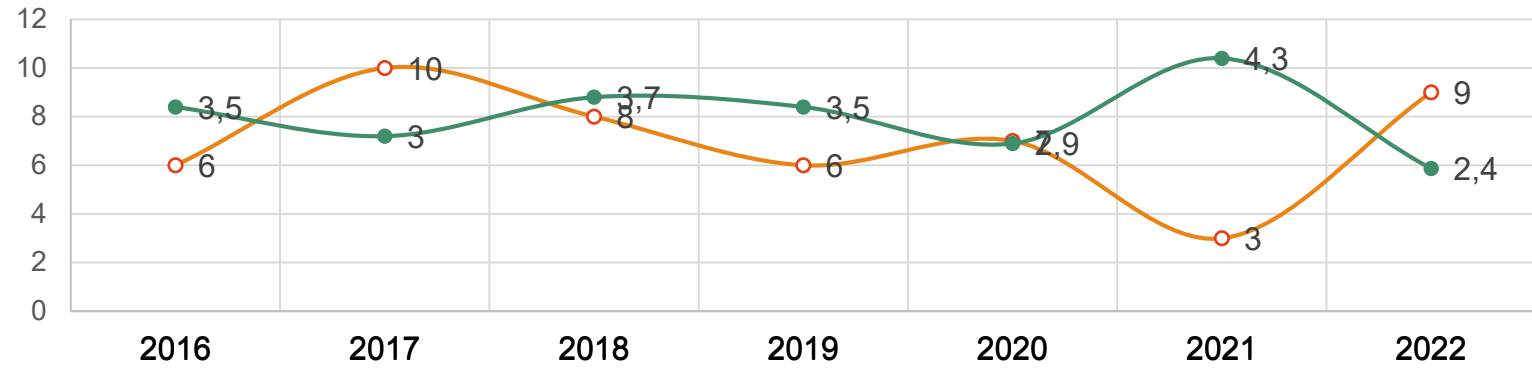
IMPROVEMENTS & MAINTAIN:

- Improve **cleanliness** and maintenance of the station to reduce dirt, garbage, and urine.

- Increase **safety** measures and provide security personnel to ensure the stop is safe **for women**.

- Implement stricter hiring and training procedures for **drivers** to reduce incidents of reckless driving and lateness.

- Ensure that all stops have adequate **infrastructure and maintenance** to avoid delays and provide a safe environment for passengers, including covered shelters.

- Provide better **customer service** training for staff and establish more efficient complaint resolution procedures.

- Enforce **rules** more strictly and educate users on the importance of following them, such as wearing masks.

- Expand and improve **facilities at the station** to accommodate increased passenger traffic, including more seating and restrooms.

- Increase the number of **ticket machines** to reduce wait times and improve the purchasing experience for passengers.

- Provide clear and comprehensive **information for passengers**, including schedules, route maps, and fare prices.

- Ensure that the stop is easily **accessible for all passengers**, including those with disabilities or mobility issues, by providing ramps, elevators, and other necessary accommodation.

d. Subway / Tram

36.6%	20.8%	20.8%	21.8%

- ● Positive
- ● Negative
- ● Mixed
- ● Neutral

POSITIVE
36.6%

- **Good location** (30%)
- **Stops with services**: parking, cafes, etc. (23.3%)
- **Accessible** for wheelchairs, etc. (13.3%)
- **Clean** and organized (10%)
- **Good connection** with other lines (10%)
- **Station** with seating (6.6%)
- **Easy-to-see**, real-time information that is accurate and works perfectly (6.6%)
- **Good atmosphere** (6.6%)
- Everything is okay (6.6%)
- **Others**:
  - Good **customer service** (3.3%)
  - Punctual trains (3.3%)

NEGATIVE
20.8%

- **Dirty** and poorly maintained (benches), bad odor, etc. (20%)
- **Insecurity**: aggressive people, beggars, unsafe for women, etc. (16.6%)
- **Not accessible** for wheelchairs and strollers (6.6%)
- **Others**:
  - Train malfunctions, not running, long wait times (3.3%)
  - Expensive (3.3%)
  - Poor management (3.3%)

Foto de Fisnik Murtezi en Unsplash

Noun
Verb
Adjective

2016   2017   2018   2019   2020   2021   2022
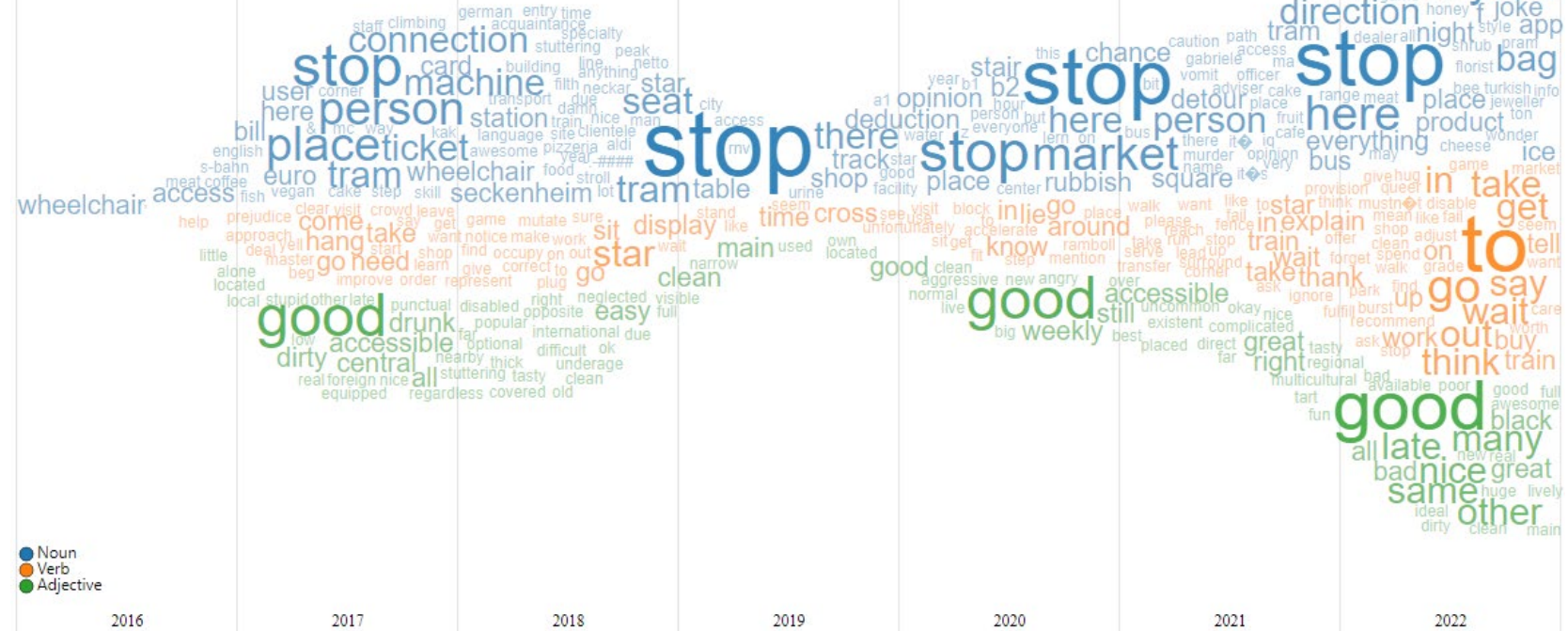
- **#Stop:** "A tram stop which needs steps climbing.".
- **#Tram:** "It's a normal tram station. It has many seats to sit. Display board of the bus stop is visible from long distance.".
- **#Here:** "People with restricted mobility have no chance here... ."
- **#Place:** "Not to mention that the murder of Gabriele Z took place here in 2013"
- **#Ticket:** "Actually a nice and central stop, with a covered waiting area, notices, seats and ticket machines."
- **#Year:** "…pay a lot of money every year and what do I get? Lots of delayed trains, endless construction sites and incompetent staff."
- **#Wheelchair:** "Not accessible for people in wheelchairs or for prams".
- **#Station:** "Unfortunately, the underground station is in a poor condition".
- **#Everything**: "She wrote down everything I could do to get my bag and gave me another glass of water. Such nice and unbureaucratic service made up for the wait for my bag ".
- **#Direction:** "The train (line 5) in the direction of Weinheim didn't come and nobody could tell us where it was, even the conductors didn't know! "

- **#To:** "Display board of the bus stop is easy to observe. ".
- **#Go:** "The stop is at a construction site that has been going on for many year.".
- **#Wait**: "it is not always pleasant to wait here. The stop is spacious and has seating..".
- **#Think:** ". I think it's very good that the Lidl is right next to the tram stop.".
- **#Take:** "One wonders why the people take the train".
- **#Star:** "1 star deduction for the rubbish."
- **#Train:** "Trains run until late at night."

- **#Good:** "There is a very good connection with the tram in both directions"
- **#Many:** "It's the same as in many other places in Mannheim. Unfortunately, there is also a lack of security staff here."
- **#Late:** "Either the train is 10 minutes late or 10 minutes early!!!...“
- **#Other:** "Those responsible must have an iq below 60, there is no other way to explain it".
- **#Nice:** "Very nice, big, with cafes surrounded by and tram stop in front of the market square."
- **#Great:** "The range of dealers is simply great".
- **#All:** "The smell of urine was so bad, it was dirty and scrawled all over the place when you enter the main entrance
- **#Same:** "Same bad quality, every year at an increased price."
- **#Bad:** "The staff is very friendly, but the tram always comes to Schpet, which is really bad."

Number of Reviews vs Rate (Subway /Tram - Mannheim)
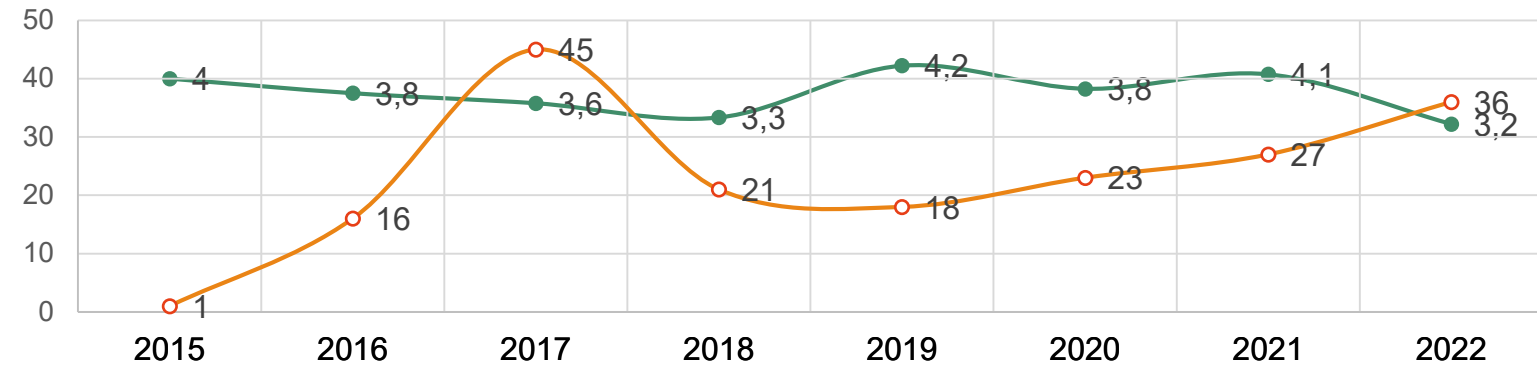
IMPROVEMENTS & MAINTAIN:

- **Good location** is highly valued by users.
- Stops with **additional services**, such as parking and cafes, are appreciated.
- Dirty and **poorly maintained facilities**, such as benches and bad odors.
- **Insecurity** due to aggressive people, beggars, and unsafe conditions **for women**.
- **Accessibility** for wheelchairs, strollers, and other mobility aids is crucial to users, while lack of it can be a significant challenge for them**.**
- **Cleanliness** and organization are significant factors for users.
- **Good connection** with other lines is important to users.
- **Station seating** is valued by users.
- Accurate and easy-to-see **real-time information** is crucial for users.
- A **good atmosphere** at the station is appreciated by users.

- **Others**: Poor train performance, including malfunctions and long wait times, coupled with high service costs and inadequate management, are significant issues that need to be addressed.

e. Taxi

83.3%   **7.1%** **3.6%**   **6.0%**

- Positive
- Negative
- Mixed
- Neutral

POSITIVE
83.3%

- **Punctuality** (30%)
- **Professionalism** (20%)
- **Value** (20%)
- **Speed** (20%)
- Reliable and friendly **driver** (20%)
- **Quality** (20%)
- **Fast** (20%)
- User-friendly, **easy to use** (10%)
- **Reliable** service (10%)
- Great service, **recommended** (6.6%
- **Others**:
  - o Available (3.3%)
  - o Clean taxi (3.3%)
  - o Quick response to calls (3.3%)

NEGATIVE
7.1%

- Bad **customer service** (10%)
- **Unprofessional**, unreliable (10%)
- **Unavailable** or taxi doesn't show up (10%)
- Unpleasant, **rude** (10%)
- **Don't answer** the phone (6.6%)
- **Others**:
  - o Lack of punctuality, arrive late (3.3%)
  - o No refunds (3.3%)
  - o Poor service (3.3%)
  - o Unsafe, driving at high speed, using phone, etc. (3.3%)

Legend:
- Noun
- Verb
- Adjective

Timeline: 2017 | 2018 | 2019 | 2020 | 2021 | 2022

- **#Punctuality:** "Punctuality top"
- **#Driver:** "Very reliable driver is very nice"
- **#Quality:** "Positive: Professionalism , Quality , Value"
- **#Professionalism:** "Positive: Professionalism , Punctuality , Quality , Value"
- **#Value:** "Better driver good service and value for money top top"
- **#Taxi:** "A very good taxi company in Mannheim".
- **#Time:** "Everything was great and on time!.".
- **#Company:** "I am very satisfied with the company. Ahead of time!!!"
- **#Phone:** "I have never experienced such an impudent, unfriendly and impatient person on the phone as the "lady" from the Mannheim taxi company."
- **#Person:** "I hardly ever leave reviews, but I just pre-booked a cab and had what must have been the rudest person on the phone. I have never experienced anything like it.".
- **#Positive:** "Positive: Quality Fast & friendly!. "

- **#Recommend:** "Very satisfied recommended".
- **#Call:** "Fast answering of calls no matter what time you call, friendly drivers and always there very quickly after you have ordered it.".
- **#Say:** "On time, good value and friendly. I don't think I need to say more about a taxi company."
- **#Up:** "Supposed to be 24/7 and they don't pick up the phone"
- **#Order:** "The second time I called to order this taxi, I was told quite rudely that something like this is not possible (taken from a village to Mannheim). ".
- **#Thank:** "Very polite, fast and helpful service team. Thanks"
- **#Drive:** "Very good company. Good drivers. Conversations lead top."
- **#Get:** "Call there, try to get a taxi just after 6 in the morning. After asking for my address they just hang up. Had previously tried 1 1/2 hours to reach someone"
- **#Arrive:** "I had an emergency and needed to go to Uniklinikum Mannheim. The driver arrived immediately…"

- **#Friendly:** "Punctual and friendly."
- **#Good:** "Friendly driver, good prices and great music is playing. From my point of view very recommendable"
- **#Great:** "Used as a taxi to the airport in an emergency very quick very friendly great service definitely would recommend"
- **#Nice:** "Very nice service, gladly again!."
- **#Punctual:** "Very punctual and friendly driver"
- **#Fast:** "Super friendly fast and pleasant taxi ride. always happy ????"
- **#Reliable** "Reliable and serious drivers, fast good service. I like it.".

5.5.4. Mannheim (Germany). Netnography of Taxi

Number of Reviews vs Rate (Taxi - Mannheim)

IMPROVEMENTS & MAINTAIN:

- **Punctuality**
- **Professionalism**
- **Value**
- **Speed**
- **Reliable** and **friendly** driver
- **Quality**
- **Fast**
- User-friendly, **easy** to use
- Improve **customer service**
- **Unavailable** or taxi doesn't show up
- **Unpleasant**, rude
- **Quick response** to calls
- **Clean** taxi
- No **refunds**
- **Unsafe**, driving at high speed, using phone, etc.

e.   Shared LEV

| 15.1% | 14.2% | 7.5% | 63.2% |

● Positive
● Negative
● Mixed
● Neutral

POSITIVE
15.1%

- **Fun** (20%)
- Good **app** (12%)
- **Easy to use** (8%)
- Practical **service** (8%)
- **Good alternative** for transportation (4%)
- **Connects quickly** (4%)

NEGATIVE
14.2%

- **Scooters parked where they shouldn't**, obstructing the way, etc. (12%)
- **No** scooters **available** (within a radius of 20-30 km) (4%)
- **Unclear**, non-transparent prices (4%)
- **App** sometimes doesn't work (e.g. search function) (4%)
- Require **too much data** to register (4%)
- Unauthorized charges, **system/service failures** (4%)
- Poor **customer service** (chat only responds in English, pre-set responses) (4%)

Legend: Noun (blue) · Verb (orange) · Adjective (green)

Timeline: 2018 — 2019 — 2020 — 2021 — 2022
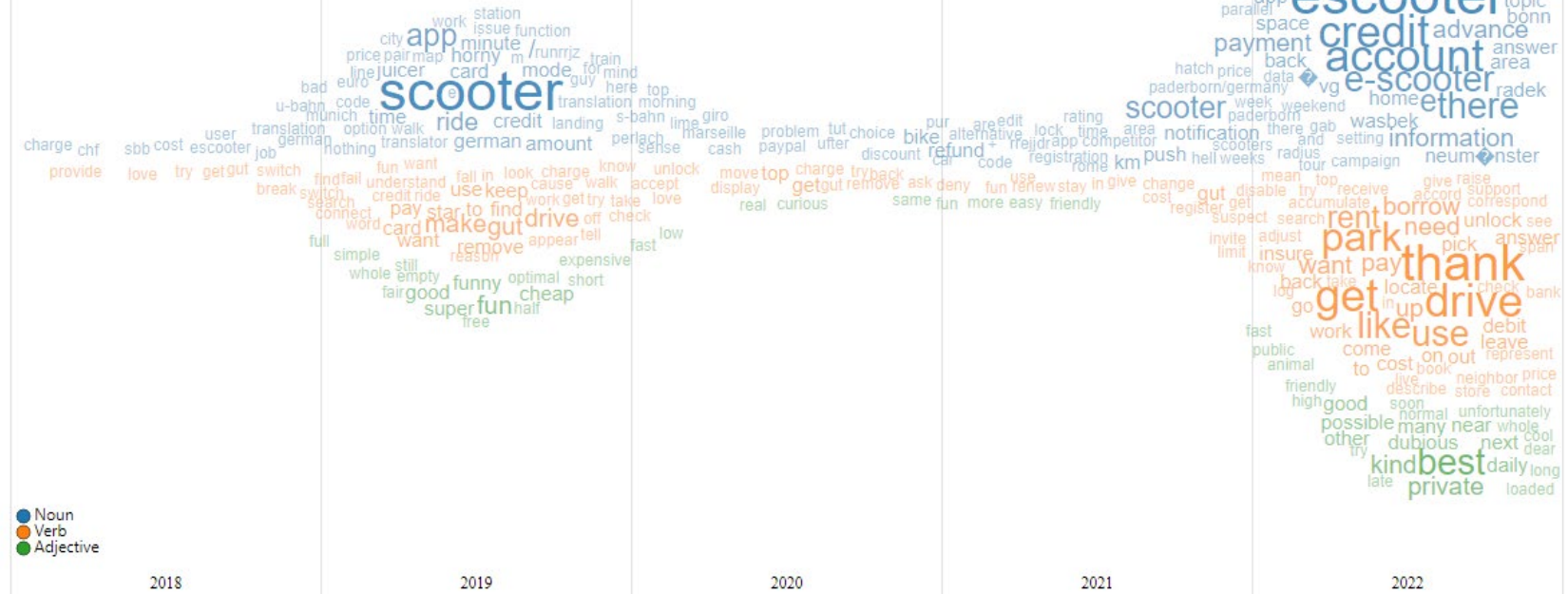
#Scooter / e-scooter: *"One of your e-scooters has been in the Harbach underpass for a week. I suspect that he cannot be located there"*

#Credit: *"I don't have a credit card, but I can e.g. B. offer PayPal. Is there the possibility to store another payment route as a credit card?"*

#Card: *"Unfortunately it is absolutely dubious how to get an account. First you accumulate the card data for payment. Then you get the information that the card is not loaded and it is only an indication of future payments. A minute later I get the news of my bank that was debited around 59 euros.".*

#Account: *"I only have a normal savings bank checking account, I also pay account with it."*

#There: *"Today there was a Liueferwagen here, but did not invite the scooters! We are not a public parking space if you are not picked up in a timely manner, I contact the local police!"*

#Day: *"Would it also be possible to rent/rent scooters on a daily basis? It has to drive about 12 km to work and back again every day.".*

#Paypal: *"Is there only PayPal, credit card, or other number options"*

#Week: *"Since 2 Weeks or more there is not 1 scooter in an area of ??30 km where have the scooters stayed in Paderborn. There has not been 1 scooter for 2 weeks or more. Within a radius of 20 km."*

#Drive: *"My second question is where can an e-scooter drive?*

#Get: *"Prices are fair and those things are everywhere so you can get to where you want from where you want without a lot of issues. ".*

#Park: *"I wanted to give the whole scooter topic a chance but it is not a user friendly and only adjusts parking spaces!"*

#Use: *"But for daily use its too expensive"*

#Rent: *"Would it also be possible to rent scooters on a daily basis?"*

#Pay: *"However, this did not drive. Now I should pay 9 euros. For what?"*

#Need: *"Where should I become a member. I only need access. To the e-scooters. How can I activate the scooter and*

there is a short description. Where is my check card still used."

#Borrow: *"I would like to borrow an e-scooter for the first time "*

#Best: *"Thanks and best regards"*

#Fun: *"Fun and fast, but not cheap"*

#Private: *"For days, an e-scooter has been on private grounds around Bahngasse 48 or 48a courtyard"*

#Good: *"Good app. Connects quickly to the scooter. Search function sometimes doesn't work and the map appears empty for the whole city.".*

#Daily: *"Our question now is what costs for a daily rent and how long the accule output lasts?"*

#Possible: *"Why no Paypal chargement possible?"*

#Expensive: *"But for daily use its too expensive"*

Number of Reviews vs Rate (Shared LEV - Mannheim)
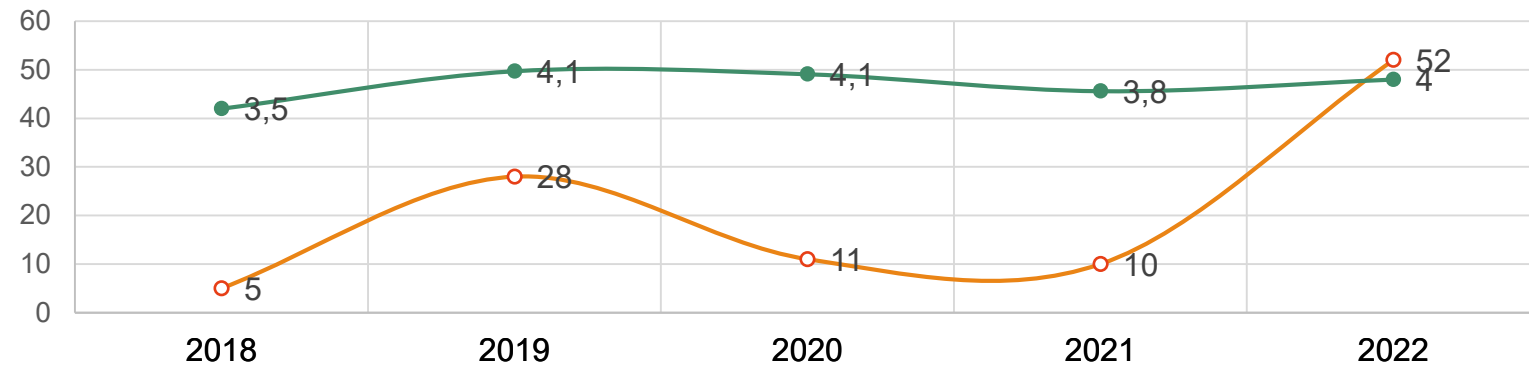
IMPROVEMENTS:

- Improve the **app's functionality** to make it even better.

- Streamline the app's interface to make it even **easier to use**.

- **Expand the service** to more areas to make it more practical for users.

- **Develop a better system** to prevent scooters from being parked in prohibited areas and obstructing pathways.

- Optimize the connection speed to provide a seamless **user experience**.

- Increase the number of **available scooters** to avoid situations where there are none within a reasonable distance.

- Provide clearer and more transparent **pricing information** to avoid confusion or surprises.

- Simplify the **registration process** to minimize the amount of personal information required.

- Implement better **monitoring and prevention** mechanisms to prevent unauthorized charges or system failures.

- Improve the quality of **customer service** by providing more personalized and effective support, including multilingual support.

f. Shared CAR

| 60.0% | 18.3% | 18.3% | 3% |

● Positive
● Negative
● Mixed
● Neutral

POSITIVE
60.0%

- **Good service** provided by the provider (20%)
- Good **customer service** (20%)
- **Availability** of cars throughout the city, always nearby (20%)
- **Fair price**, cheaper than owning a car (20%)
- Good **alternative** to owning a car or renting a car (17.1%)
- Good **experience** (8.6%)
- **Easy to use**, easy to handle (8.6%)
- **Quick and easy** to register/rent (8.6%)
- Cars in **good condition**, clean and well maintained (8.6%)
- **Others**:
  - Good location (2.9%)
  - Good cars (2.9%)
  - Makes life easier (2.9%)
  - App works well (2.9%)

NEGATIVE
18.3%

- **Incorrect charges**, hidden penalties (e.g. paying admission fee twice because the car is not functioning) (11.4%)
- **Expensive** service (8.6%)
- **Others**:
  - The service has lost quality (2.9%)
  - Poor customer service (2.9%)
  - No parking available (2.9%)
  - No discounts for couples/families (2.9%)
  - Occupies necessary parking spots (2.9%)
  - No available parking spots (2.9%)
  - Expensive if you lose the card (2.9%)
  - App malfunctions (2.9%)
  - Not suitable for commuting to work (2.9%)
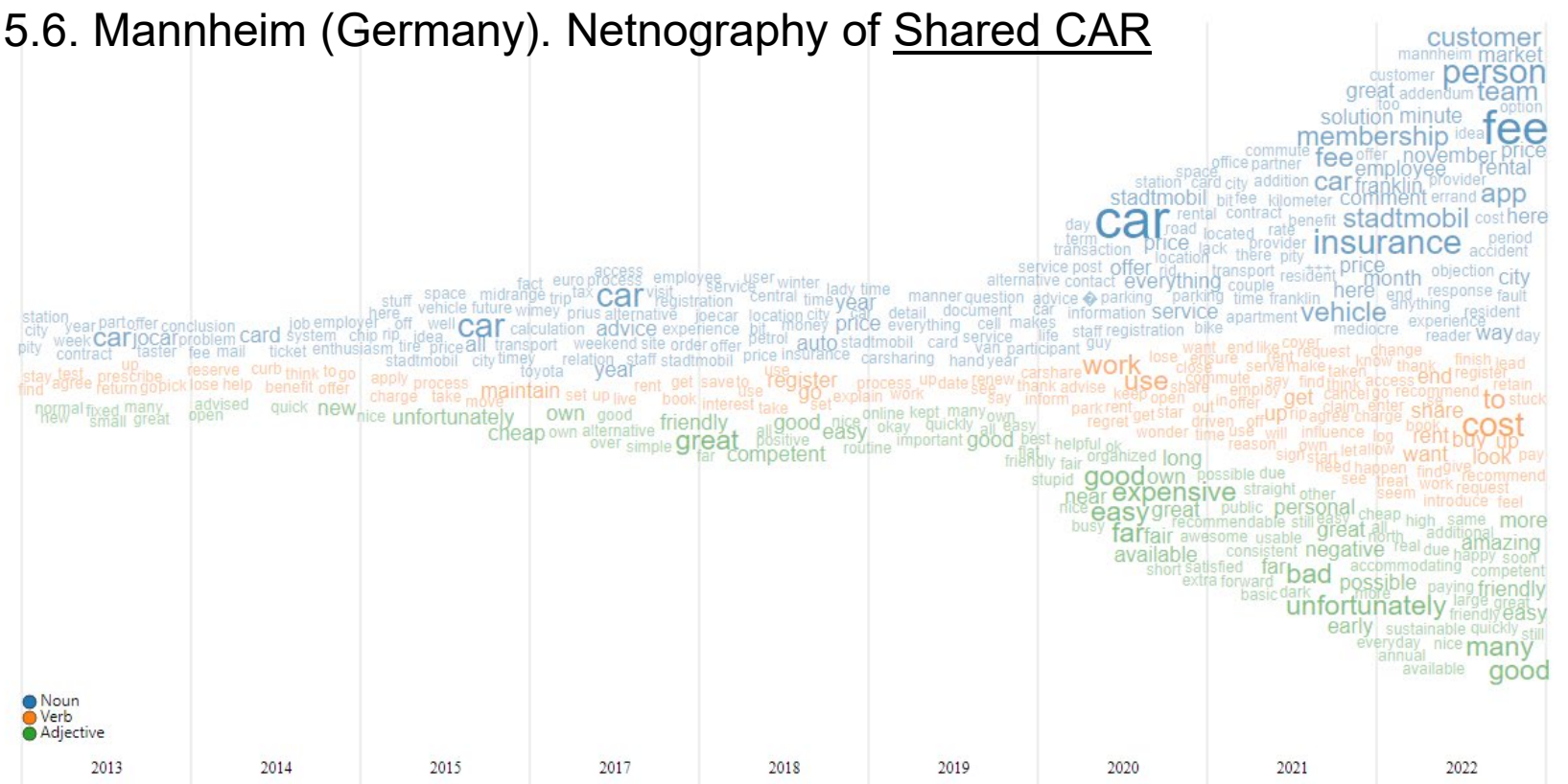
Legend: ● Noun ● Verb ● Adjective

Timeline: 2013 2014 2015 2017 2018 2019 2020 2021 2022

- **#Car:** *"A great way to be mobile and still not have to buy a car. Or as a temporary solution. Very easy handling, team always available and different cars available. The app is still giving me problems, but that's probably my fault."*
- **#Stadtmobil:** *"Registering for Stadtmobil CarSharing was super easy and went really quickly."*
- **#Fee:** *"Stadtmobil charges a whopping €30 processing fee for this! Sorry, but that's just a rip off."*
- **#Insurance:** *"I signed up for membership at the end of November 2020 and I am requesting insurance to cover accident costs."*
- **#App:** *"Had a booking at 6pm. Was there 5 minutes before my pickup when I no longer had access to my account in the app, even though I entered my relevant credentials."*
- **#Customer:** *"My experience is negative. Customers are systematically ripped off here. I can only agree with the negative comments.".*
- **#Vehicle:** *"Large selection of vehicles."*
- **#Here:** *"My favorite provider for car sharing is now also here in …"* explaining this problem to them. The service was unpleasant on the phone".
- **#Team:** *"Very easy handling, team always available and different cars available".*

- **#Cost:** *"Rebooking at the parking lot due to a defect in the rented car cost me a rebooking fee"*
- **#Up:** *"The normal cars with the fixed stations are one thing, but the new JoCar offer, where you can pick up and return the cars in many parts of the city, is really a great thing. "*
- **#To:** *"The app is very easy to use and the fees are standard in the market."*
- **#Buy:** *"A great way to be mobile and still not have to buy a car. Or as a temporary solution"*
- **#Work:** *"There are almost always clean and well-kept cars available and booking by cell phone works perfectly"*
- **#Go:** *"It's pretty easy to register and there is auto all over the city the price for having the auto is okay especially when you have to go far away"*
- **#Register:** *"Registering for Stadtmobil CarSharing was super easy and went really quickly"*
- **#Want:** *"Not recommended if you want to be treated fairly."*

- **#Good**: *"Very good advice and service.".*
- **#Unfortunately:** *"Unfortunately, my enthusiasm was curbed recently: I had lost my chip card and had to apply for a new one. It went smoothly, the new card came promptly in the mail., but…"*
- **#Great:** *"Great alternative to renting a car and friendly staff. "*
- **#Easy:** *Good location. Road is not too busy. Easy parking in and out.*
- **#Expensive:** *"Only if you lose the card is that a bit expensive, otherwise there would be 5 stars."*
- **#Many:** *"Absolutely smooth transaction. Many locations. Fair prices."*
- **#Bad:** *"Can't say anything bad."*
- **#Friendly:** *"Very friendly service, my questions were answered very quickly and competently".*
- **#Far:** *"So far I've always been very satisfied but that's not possible at all!"*
- **#Possible:** *"There are enough cars around. So far, a car has always been available, even for short-term rentals. Even renting for several days is possible. Everything at a fair price"*

Number of Reviews vs Rate (Shared CAR - Mannheim)
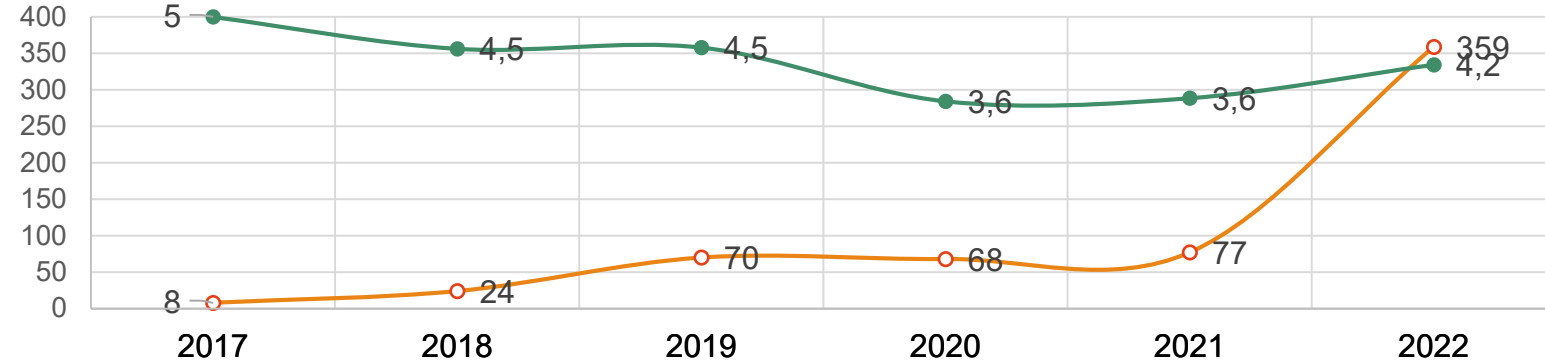
IMPROVEMENTS & MAINTAIN:

- **Fair price**, cheaper than owning a car
- **Good service** provided by the provider
- Good **customer service**
- **Availability** of cars throughout the city, always nearby
- Good **alternative** to owning a car or renting a car, good for commuting to work
- **Easy to use**, register/rent, easy and quick handling
- **Incorrect charges**, hidden penalties (e.g. paying admission fee twice because the car is not functioning)
- **Expensive** if you lose the card
- **Cars** in good condition, clean and well maintained
- No available **parking spots**
- **App** works well

- **Others:**
  - Good location
  - The service has lost quality
  - No discounts for couples/families
  - Occupies necessary parking spots

5.5.7. Mannheim (Germany). Emotions by type of transport

Foto de Eirik Skarstein en Unsplash

a. Shared bike

Joy 22.2%
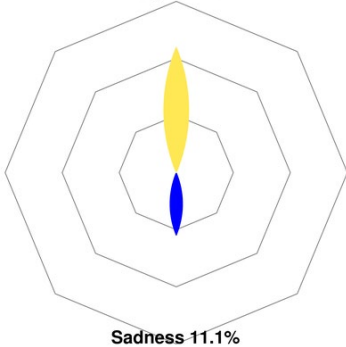
Anger

Sadness 11.1%

Level of **Hateful**:

0,0%

b. Bus

Joy 17.6%

Anger 11.8%
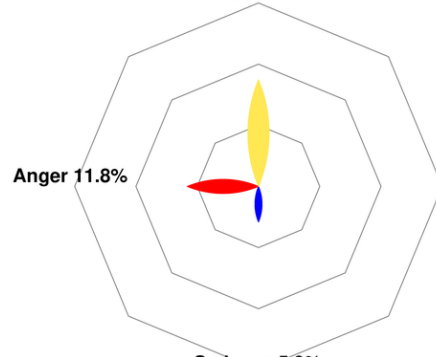
Sadness 5.9%

Level of **Hateful**:

6,3%

c. Subway/Tram

Joy 21.0%

Anger 13.0%
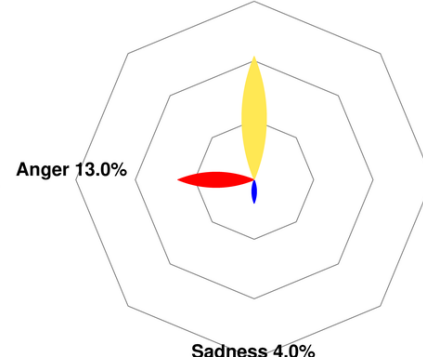
Sadness 4.0%

Level of **Hateful**:

6,0%

d. Taxi

Joy 65.8%
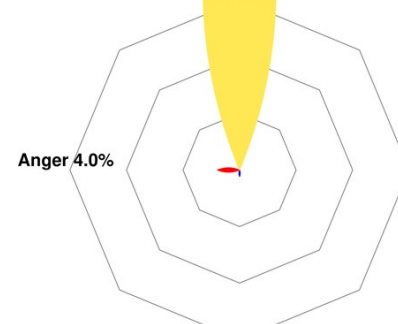
Anger 4.0%

Sadness 1.2%

Level of **Hateful**:

1,2%

e. Shared LEV

Joy 11.5%
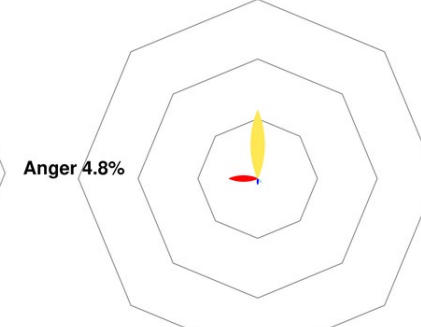
Anger 4.8%

Level of **Hateful**:

1,9%

f. Shared car

Joy 32.2%

Anger 16.9%
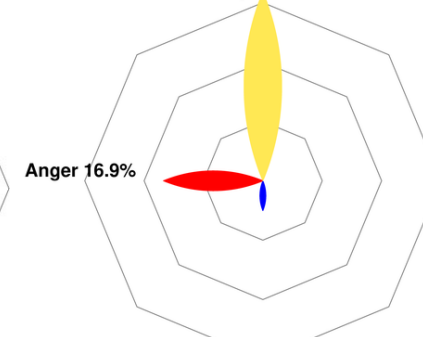
Sadness 5.1%

Level of **Hateful**:

1,7%

- The **Bus** is the transportation mode that has the highest percentage of identified hate (6.3%), followed by Subway/Tram (6.0%).
- **Taxi** and **Shared Bike** are transportation modes with the highest ratio of joy to anger comments. However, shared bike has no comments classified as anger but does have comments classified as sadness (11.1%), the highest percentage among all modes of transportation.
- **Taxi** and **Shared Bike** are transportation modes with the highest levels of identified joy, 65.8% and 32.2% respectively.
- **Shared bike** and **Taxi** have the lowest levels of hate.
- In general, Mannheim's ratings are the best compared to the rest of the cities

UPPER

- If we analyze all the transports grouped, the most repeated words are: **driver**, **taxi**, **service**, **friendly**, **time**, **super, fast** and **reliable.**

- The words that only men say are highlighted as: **company, drive**, **scooter**, **hostile**, **night, station, waiting** and **perfect.**

- The words that only women say are highlighted as: **star, called, arrived, train, staff, simply, loading, card, women, accessible** and **comfortable.**

- male
- female

- According to the number of reviews, **Taxi** and **Subway/Tram** seem to be the most used transports.
- **Taxi** and shared car are the ones that are growing the most after the pandemic.
- There is a high and positive correlation between positive comments, a higher rate level (0.7), and lower levels of hate (-0.6).
- The best-rated modes of transportation in Mannheim are **Taxi** and **Shared Car**, while the worst-rated are clearly the **Bus** and **Subway/Tram**, with levels of hate of 6.3% and 6.0% respectively
- 79% of the analyzed users are men, 18% are women, and the remaining 3% are unknown.
- Men tend to use shared transportation more, while women tend to use the **Subway/Tram** and **Bus** more. There is a high correlation between a higher percentage of women and a higher percentage of negative and low ratings (women tend to be more critical)
- 21% of the analyzed users are tourists, and the remaining 79% are residents.
- The higher the number of reviews (the more users of a service), the lower the ratings or satisfaction level (rate) (high correlation, 0.9).

Number of Reviews vs Rate (TOTAL - València)
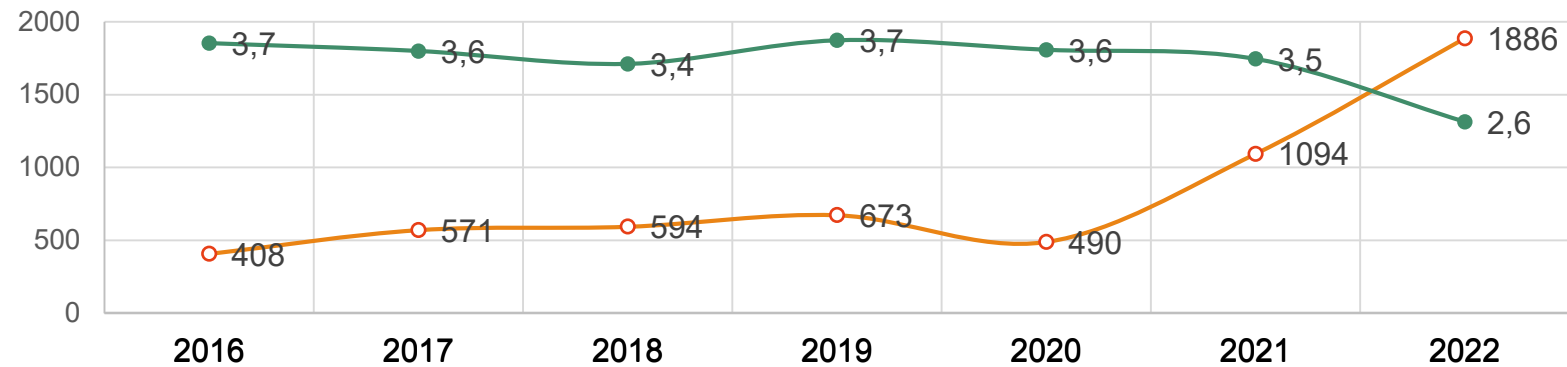
- If we analyze separately the comments made by men and women, we see that men are more critical with a lower number of positive comments (30.0%) compared to 57.9% made by women. The percentage of negative comments is higher, 24.0% compared to 19.3%.
- Men make more mixed comments (containing positive and negative aspects) than women. 34.9% compared to 9.4%.

Legend:
- ● Positive
- ● Negative
- ● Mixed
- ● Neutral

♂ 30.0% | 24.0% | 34.9% | 11.1%
♀ 57.9% | 19.3% | 9.4% | 13.5%
47.1% | 27.6% | 19.4% | 5.8%

5.5.9. Mannheim (Germany). <u>Conclusions</u>

The main highlights / most important aspects of each transport are:

- **Shared Bike:**
  - Availability of bikes is crucial for users.
  - Good service and well-located stops are appreciated.
  - Technical problems and poor bike condition are major complaints.
  - Some districts and areas lack stations.
  - Uncovered stations and uncomfortable bikes are also problems.
- **Bus:**
  - Hygiene issues, including dirt, garbage, and urine
  - Safety concerns for women
  - Late and reckless drivers
  - Unsafe stops with delays
  - Poor customer service and rule-breaking users
- **Subway /Tram:**
  - Good location of stations
  - Stops with services: parking, cafes, etc.
  - Dirty and poorly maintained (benches), bad odor, etc.
  - Accessible for wheelchairs, etc.
  - Insecurity: aggressive people, beggars, unsafe for women, etc.
- **Taxi:**
  - Punctuality
  - Professionalism
  - Value
  - Speed
  - Reliable and friendly driver
- **Shared LEV:**
  - Fun factor
  - Good app
  - Issues with scooter parking
  - User-friendly
  - Practicality
- **Shared Car:**
  - Improve service quality and features to enhance customer satisfaction.
  - Strengthen customer service training to provide prompt and effective support.
  - Increase the number of cars available and their distribution to reduce wait times and ensure they are always nearby.
  - Continuously assess pricing strategies to ensure a fair and cost-effective alternative to owning a car.
  - Communicate the benefits of the service and promote it as a viable alternative to car ownership or rentals.
  - Implement clear and transparent billing practices to avoid hidden fees or penalties.

General conclusions (I)

- If we **group** all public transport modes together, it can be observed that during the **pandemic**, the **usage** of all public transport modes **decreases** due to **restrictions**, **remote work**, etc., and it is not until **2022** that a **recovery** is seen. There is a **high correlation** (-0.88) between the **increase** in **reviews** (usage) and the **decrease** in **average ratings**. The evaluations is lowering from 2015 to 2022 (average of satisfaction from 3.8 to 3), which is based on the large increase in users, and probably a more saturated PT.

Number of Reviews vs Rate
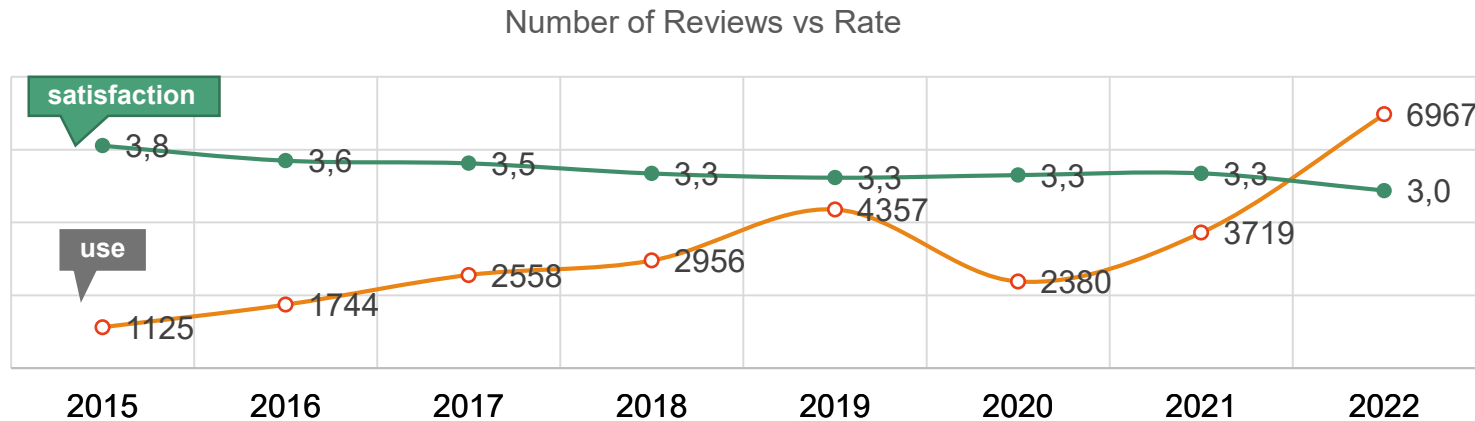
- There is a correlation between **lower ratings** and **larger cities** with higher **population density** and greater **complexity**, such as **Rome** and **Ile de France**.

- The results and improvement needs **repeat** in the **5 analyzed cities** (Valencia, Ile de France, Rome, Oslo, and Mannheim), leading us to conclude that the information can be **extrapolated** to most **European cities.**

General conclusions (II)

- On average, **for all the transport mode** analysed, **there are 25% more positive comments than negative comments**.

- All transport modes in the 5 cities obtain an **average rating** of **3.2 out of 5**. Above the average, we have the **metro** with **3.7, taxi** with a **3.6**, and **shared LEV** and **shared Car** with **3.6.** Below the average, and with lower average ratings, we have **shared bike** with **3**, and the **bus** with the lowest score of (**2.5**).

- There is a **correlation** between the **average star ratings**, the **percentage of positive comments**, and the levels of **hate speech**. The **bus** has the lowest average star rating (**2.5** out of 5), the lowest percentage of positive comments (**21.2%**), and the highest percentage of negative comments (**47.6%**) and hate speech (**10.7%**).

- According to the ratio positive/negative comments, **we can distinguish two groups** in the assessment of the transport modes: **Subway/Tram and Taxi ([3,2.5]),** and **Shared Car, Shared Bike, Shared LEV and Bus ([1.5,0.5]).**

- The **best valued** (**Subway/Tram**) and **the worst valued** (**Bus**) are both **communal transport modes**.

- **For individual transport modes**, the **best valued is the Taxi**, followed by Shared LEV, Shared Car and Shared Bike.

CITIES:

Legend:
- ● Positive
- ● Negative
- ● Mixed
- ● Neutral

	VALENCIA (SPAIN) 3.6	ÎLE DE FRANCE (FRANCE) 3.0	ROME (ITALY) 2.9	OSLO (NORWAY) 2.8	MANNHEIM (GERMANY) 3.9	AVERAGE: 3.2

Rate — radar charts per city

Sentiment-Polarity (total):

	Valencia	Île de France	Rome	Oslo	Mannheim	Average
Positive / Negative / Mixed / Neutral	48.7% / 27.4% / 17.1% / 6.8%	39.4% / 37.0% / 12.9% / 10.8%	38.9% / 35.0% / 15.6% / 10.5%	34.1% / 38.5% / 20.6% / 6.8%	41.5% / 14.7% / 20.9% / 22.9%	40.5% / 30.5% / 17.4% / 11.6%

Sentiment-Polarity (type of transport):

	Valencia	Île de France	Rome	Oslo	Mannheim	Average
a. Shared bike	33.3% / 25.5% / 28.9% / 12.2%	22.1% / 49.0% / 22.6% / 6.3%		26.7% / 33.3% / 33.3% / 6.7%	31.6% / 0.0% / 47.4% / 21.1%	28.1% / 28.2% / 33.1% / 10.6%
b. Bus	45.9% / 34.8% / 12.7% / 6.6%	16.6% / 51.8% / 18.9% / 12.7%	8.4% / 63.0% / 19.7% / 8.9%	12.9% / 60.7% / 17.1% / 9.3%	22.2% / 27.8% / 27.8% / 22.2%	21.2% / 47.6% / 19.3% / 11.9%
c. Subway/Tram	52.6% / 10.1% / 28.0% / 9.4%	41.0% / 16.7% / 4.4% / 37.9%	33.9% / 22.2% / 22.4% / 21.5%	65.2% / 4.8% / 20.5% / 9.5%	36.6% / 20.8% / 20.8% / 21.8%	45.8% / 14.9% / 19.2% / 20.0%
d. Taxi	45.1% / 40.4% / 10.3% / 4.2%	83.3% / 8.8% / 4.9% / 3.0%	77.4% / 10.0% / 7.0% / 5.6%	19.9% / 51.8% / 19.2% / 9.1%	83.3% / 7.1% / 3.6% / 6.0%	61.8% / 23.6% / 9.0% / 5.6%
e. Shared LEV	45.4% / 42.5% / 6.9% / 5.2%	47.2% / 33.3% / 16.0% / 3.2%	69.3% / 6.9% / 8.8% / 15.0%	28.0% / 49.3% / 20.0% / 2.7%	15.1% / 14.2% / 7.5% / 63.2%	41.0% / 29.2% / 11.9% / 17.8%
f. Shared CAR	69.8% / 11.1% / 15.9% / 3.2%	26.2% / 62.3% / 9.8% / 5.6%	73.0% / 19.8% / 1.6%	51.9% / 31.1% / 13.5% / 3.5%	60.0% / 18.3% / 18.3% / 3.3%	42.7% / 39.2% / 15.5% / 2.6%

Sentiment – Emotions:

	Valencia	Île de France	Rome	Oslo	Mannheim
Joy	23.1%	25.3%	29.2%	16.2%	55.5%
Anger	21.8%	21.5%	20.9%	23.1%	5.3%
Sadness	1.6%	4.6%	4.0%	2.5%	1.7%

Level of Hate:

Valencia	Île de France	Rome	Oslo	Mannheim
4.8%	10.7%	9.0%	5.7%	1.7%

UPPER

IBV

Analysis of hate level

- **The hate level related to the big cities** of the study is double to those related to the middle size cities, **and five times** to that related to the small city of the study. This result suggests that **PT mobility in big cities is more difficult that in middle size cities or small cities**. Paris and Rome are the most mentioned cities in hateful comments due to their complexity and the volume of tourists they receive.

- It is important to pay attention to the levels of hate and aggression to see **which topics provoke this extreme emotion in users**. Among the most repeated words in comments containing hate, the highlighted topics that are most frequently mentioned refer to:

  - <u>Ticket</u>: **problems** when purchasing tickets **due to queues**, **malfunctioning machines**, **difficulty understanding** which ticket is appropriate and **how to obtain** it, **fines** for errors in ticket purchase or validation, **limited flexibility** in payment methods, **high prices** or **poor value for money**…

  - <u>Subway</u>: **insecurity**, **degraded or outdated** carriages, **overcrowding**, **limited flexibility** in payment methods, **lack of accessibility**, **no single ticket** for different modes of transport, **poor customer service**, **limited usability**, **dirty** stations, stops, and carriages, **malfunctioning app**, **no night service**, etc.

  - <u>Bus</u>: **old**, **poorly maintained**, and **dirty**, **aggressive** and **unsafe** driving, **crowded** (especially in tourist cities), **long waiting times**, **lack of information and functioning screens**, **no air conditioning**, fines for errors in ticket validation, **not user-friendly**, **limited stops**, **poor customer service**...

  - <u>Station</u>: **poorly designed**, **poorly maintained**, **inaccessible** with long corridors, difficult for carrying luggage and carts, **lack of staff to ask for assistance**, **dirty**, **unsafe**, **pickpockets**, **lack of lockers or difficult to use**, **no bathrooms**, **smell of urine**, **disrespectful people** and **bad manners**...

word	value
subway	790
ticket	713
paris	421
bus	366
station	357
tourist	305
time	293
train	280
people	276
day	242
euro	226
city	224
service	224
card	198
fine	176
pay	166
rome	156
dirty	155
bad	147
trip	146
transport	145
machine	137
bicycle	137
driver	130
car	126
money	113
police	111
minute	110
pass	107
hour	104
french	101
taxi	96
stairs	92
careful	88
told	88
experience	88
leave	87
travel	86
lines	85
door	85
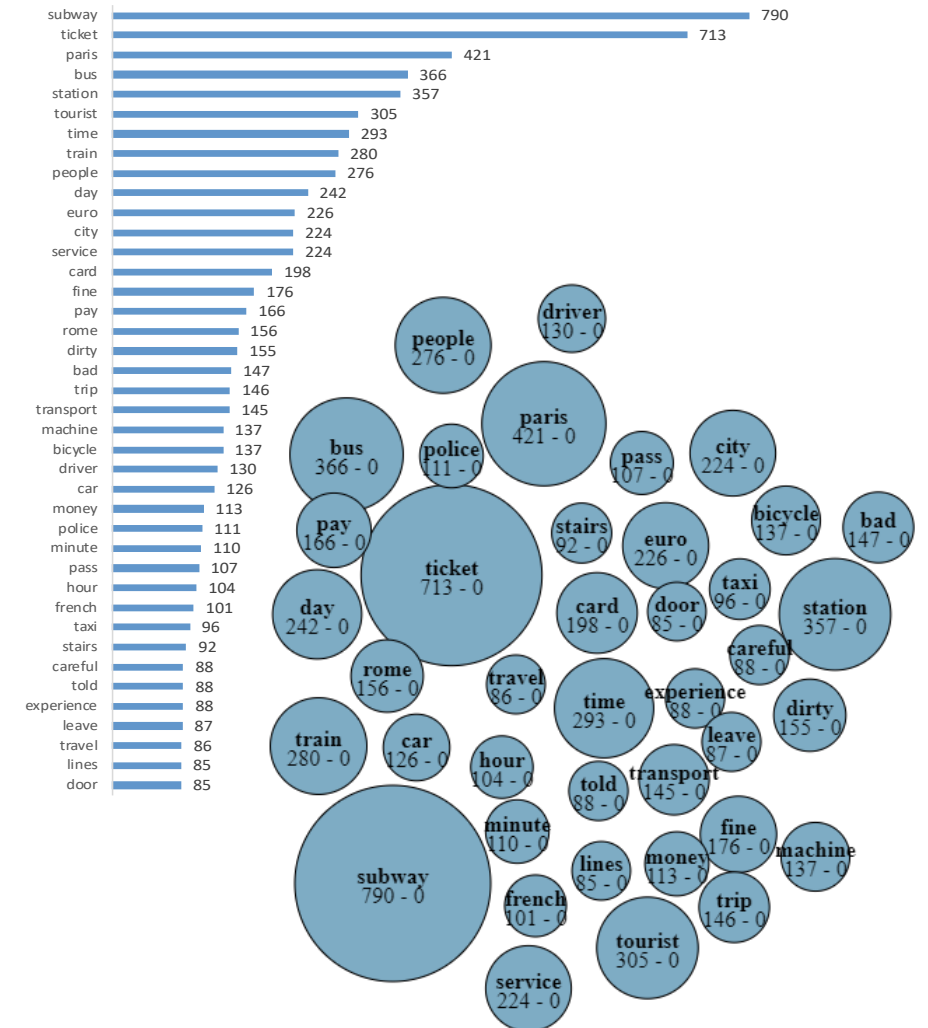
Individual public transport vs. collective public transport (I)

- According to the number of reviews, **individual transport** has **grown more after the COVID pandemic** compared to mass public transport.

- There are observed **changes in mobility patterns after the pandemic**: **public mass transport is gradually recovering**, **taxis show a quicker recovery**, shared transport experiences a slower and uneven recovery (**shared bicycles do not recover** and have seen a decline in usage even before the pandemic, they are the oldest service with the most improvement needs). Finally, **motorcycles, electric scooters, and car sharing return to pre-pandemic levels**.

- The **best mass public transport valued is Subway/Tram** and the worst valued is the Bus.

- **For individual transport modes**, **the best valued is the Taxi**, followed by Shared LEV, Shared Car and Shared Bike.

- According to emotions, **Anger and Joy are balanced for the Subway/Tram**, but surprisingly **Taxi users feel Joy** (nearly half of the comments) when they use the service.

- Mass public transport has the lowest average ratings. There is a high correlation between the increase in reviews (usage) and the decrease in average ratings (correlation of -0.7).

- In that line, shared transport is experiencing a decline in satisfaction year after year, regardless of the COVID pandemic, due to wear and lack of improvements made by the companies. There is a negative correlation between usage and satisfaction (-0.4).

- Taxis are the only mode of transport that increases their average rating (satisfaction) after the pandemic. There is a positive correlation (0.5) between the number of reviews (usage) and higher ratings (satisfaction).

UPPER

IBV

Individual public transport vs. collective public transport (II)

Collective public transport

- **Subway/Tram** is positively perceived as **easy, clean, excellent, efficient, fast, network**. On the contrary, **Bus** is negatively perceived as **bad, minute, worst, waiting, late, arrive, schedule**. Considering these terms, Subway/Tram fulfils users' expectations related to trip duration, including waiting time and access, and Bus does not.

- **The main difference between** these two communal transport modes **is the infrastructure** they use; **Subway/Tram has a dedicated one, and the Bus shares the infrastructure with all the other actors integrating the daily traffic**. This difference by itself should mostly explain this result.

- Regarding the **Bus**, the **positive comments** are related to the terms **attention, excellent, friendly, fast, staff, office, appointment**. Some of them (attention, friendly or staff) can be related with the driver, although the term driver has gathered four negative comments per one positive. This result shows an interaction between drivers and customers, that in most situations is difficult.

Individual public transport

- Among individual transport modes, Shared Bike is the only one that is active. Users **value positively the bikes as practical, easy, excellent, transport, trip, rental, ideal, cycling**. On the contrary, the users relate their **negative comments** to terms like **pay/paid, bad, euros, inscription, customer, broken, company, electric, account, terminal, pass, scam, user, returned**, which seem to be related to the **service of hiring the bikes**, and the **bikes maintenance**.

- For **Shared LEV**, the positive comments are related to **excellent, friendly, city, day, staff, experience, recommend, super and practical**, while the **negative comments are** related **to minute, bad, application, phone, euros, card, expensive, company, and finish**. Most of the comments are reported by men, who value the experience of moving by the city with LEV, but have objections about the price and the service.

- **Taxi is positively perceived as professional, excellent, recommend, friendly, perfect, super, pleasant, and nice**. On the contrary, **Shared Car is negatively perceived as bad, app, company, scam, euros, month, recommend, and day**. Basically, both transport modes are cars for private transport, but this result suggest that the service supplied by the taxi driver is not counterbalanced by the better price (**cost is a negative comment for Taxi and price is positive for Shared Car**) and the digital experience offered by the Shared Car.

a. SHARED BIKE
5.0
4.0
3.0
2.0
1.0
f. SHARED CAR
b. BUS
e. SHARED LEV
c. SUBWAY /TRAM
d. TAXI

UPPER
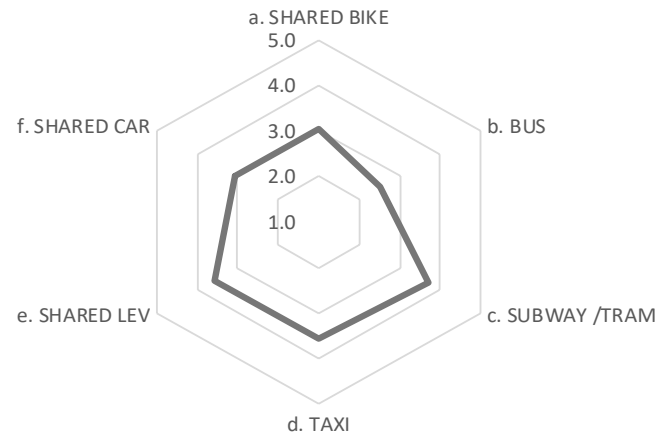
Analysis of Gender Differences

- According to gender data, there would be a **gender bias** in **shared transport** (Bike+LEV+Car). **67.7%** of comments are made by **men**.

- According to the data, **women** tend to use **bus, taxi, and subway** more, but less **shared transport**.

- **Men** are more **critical** of **public transport** than **women**, with a lower percentage of **positive comments** and more **negative comments**.

| ♂ | 31.6% | 33.9% | 28.1% | 6.4% |
| ♀ | 47.0% | 27.6% | 16.4% | 9.0% |

■ positive ■ negative ■ mixed ■ neutral

Level of hate by gender and by type of transport

	Bus	Subway / Tram	Taxi	shared_bike	shared_LEV	shared_car	mean
female	13.3%	12.9%	2.1%	7.3%	—	6.1%	2.5%
male	11.2%	13.1%	2.8%	5.3%	2.8%	5.0%	2.2%

shared_LEV female: 1.8%

— female — male
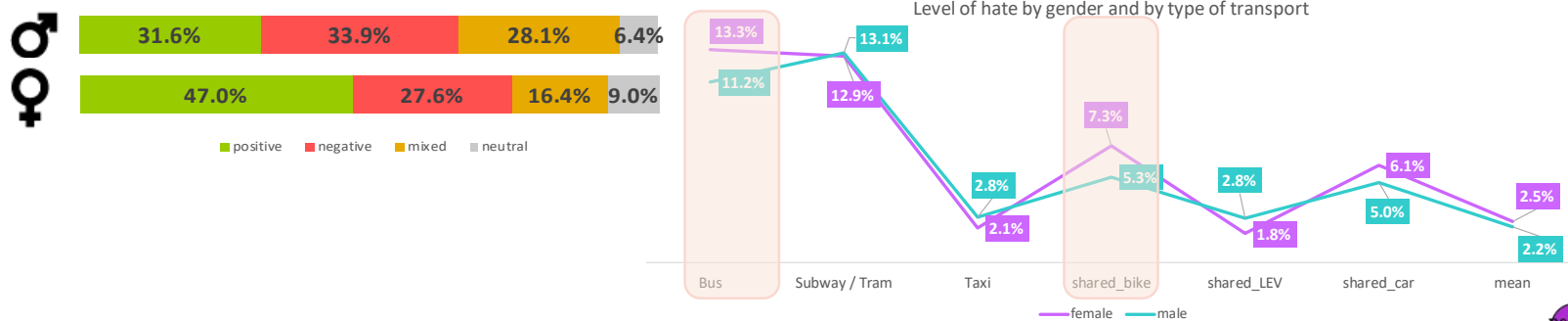
- Although there are some differences **in the topics that women and men are addressing when assessing the transport modes**, in general the assessment **in terms of emotions (anger-joy-sadness) is very similar**.

- However, media hate levels are similar for men and women, but are significantly higher for women both on the bus and on the shared bike.

- If we compare the **terms that women and men use** the most, it stands out that **women** name more: **punctual, hour** and **bad**. **Men**, on the other hand, **transport**, **scooter**, **company** and **customer**.

metro 512 - 936
bus 270 - 434
professional
car 196 - 358
city 254 - 486
bike 225 - 378
excellent 205 - 376
experience 155 - 228
paris 519 - 950
ticket 305 - 491
subway 208 - 321
company 0 - 257
trip 163 - 274
taxi 448 - 635
rome 143 - 345
price 0 - 250
min 223 - 329
scooter 0 - 284
people 129 - 0
card 143 - 0
airport 187 - 254
friendly 158 - 234
customer 0 - 235
punctual 164 - 0
bad 144 - 0
transport 0 - 329
hour 147 - 0
day 295 - 516
train 171 - 275
service 802 - 1534
easy 178 - 298
recommend 230 - 300
time 476 - 833
driver 468 - 662
station 350 - 613

● male
● female

UPPER

IBV

Georeferenced data and images

- Furthermore, all these **data** are **georeferenced**, and **images** are also shared. Although this study did not analyse them, as an example, **heat maps** of cities can be generated based on whether the comments are **positive** (or have **4 or 5 stars**) or **negative** (or have **1 or 2 stars**), along with associated **images** related to **positive** or **negative comments**.

[**Heat Map of Shared Bike (València-Spain)**

mixed   negative   positive

Crowded stations
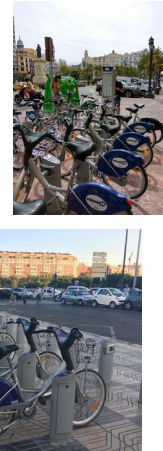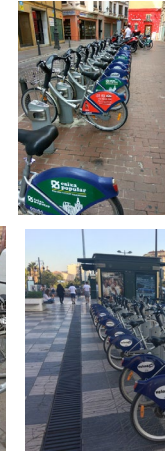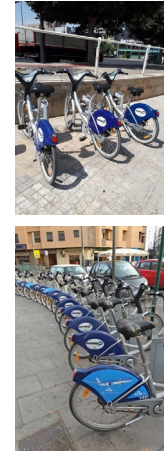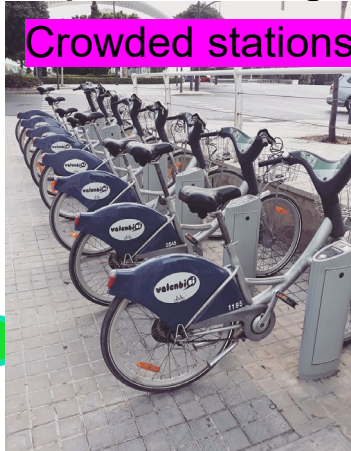
System failures
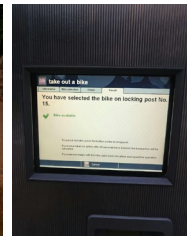
Empty stations
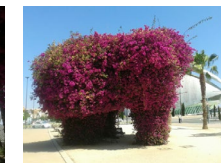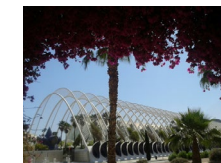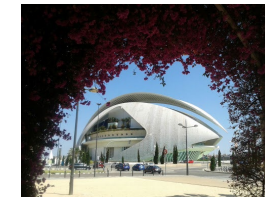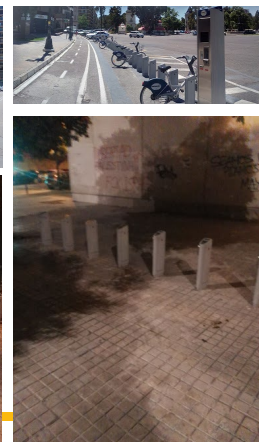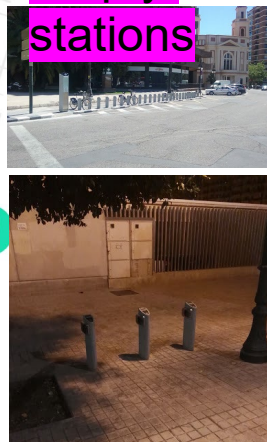
Images shared by tourists

Creado con Datawrapper

IBV

Bus

Subway / Tram

Taxi

Bus

1. Service Coverage and Reliability
- Increase the frequency of buses and the number of buses available to **improve service coverage**.
- Ensure greater **punctuality and reliability** by minimizing delays and adhering to schedules.
- Provide good **customer service** with quick resolution of issues and 24-hour availability for assistance, along with effective management of the public service.

2. Bus Capacity and Comfort
- Enhance bus capacity by redesigning the interiors to **maximize space utilization**.
- Upgrade buses to **improve comfort** and modernize services according to new requirements.
- Maintain cleanliness and ensure regular maintenance of buses to provide a **pleasant environment** for passengers.
- Enhance safety for standing passengers through redesigned walking spaces, such as **semi-sitting options**.
- Provide adequate air conditioning on buses, maintaining a **comfortable temperature**.

3. Driver Professionalism and Safety
- Promote safe driving practices, reducing aggressive maneuvers such as excessive braking and accelerating.
- Improve driver attentiveness, emphasizing friendliness and professionalism, and ensuring that buses consistently stop at designated bus stops.
- Focus on optimizing bus speed without compromising safety.

4. Ticketing and Mobile App
- Develop an intuitive, user-friendly, and well-signposted service for **easy ticket acquisition and payment**.
- Enhance the functionality of the mobile app, eliminating bugs, ensuring reliability, speed, and usability. The app should accurately provide bus schedules and enable **agile ticket purchase/recharge**.
- Establish an appropriate pricing structure with different ticket options, including cheaper tickets and discounts.

5. Service Accessibility and Connections
- Extend the service time slots, especially for night service, to cater to the needs of passengers during all hours of the day.
- Establish good connections between the bus service, airports, and other means of transportation.
- Improve accessibility of bus stops and buses for individuals with disabilities, the elderly, and those using baby carriages. This includes features like ramp lighting and other accommodations.

6. Safety and Security
- Avoid fines by providing clear explanations and easy-to-understand instructions for using the service.
- Establish clear rules for users and promote respect among passengers.
- Implement improved security measures to **prevent theft and other safety concerns**.
- Ensure well-located bus stops for convenient access and visibility.

Subway / Tram

1. Cleaning, Maintenance, and Upgrades
- **Implement** a comprehensive cleaning and maintenance program for trains, stations, escalators, and vending machines, with particular emphasis on suburban areas.
- **Conduct** regular maintenance and renovation of trains to ensure their reliability and performance.
- **Enhance** comfort, efficiency, and usability of the train service through upgrades and improvements.

2. Service Coverage and Connections
- **Establish** good connections between the train service, airports, major city hubs, and other modes of transportation.
- **Expand** the train network to ensure comprehensive coverage with enough lines and stops to serve all areas.

3. Security, Punctuality, and Frequency
- **Improve** security measures to prevent theft and other safety concerns for passengers.
- **Increase** the frequency of trains to provide more frequent service and reduce waiting times.
- **Emphasize** punctuality, speed, and reliability of the train service, ensuring precision in adherence to schedules.

4. Ticketing, Accessibility, and Customer Service
- **Minimize** or eliminate fines for failures or lack of knowledge, especially for tourists, such as accidental ticket disposal before leaving.
- **Enhance** accessibility for individuals with reduced mobility, baby carriages, and other special needs.
- **Improve** customer service by addressing inquiries and incidents in a friendly manner, catering to multiple languages, and ensuring helpful staff.
- **Offer** a variety of ticket types, including day passes, weekly passes, and monthly passes.
- **Establish** an adequate pricing structure that balances affordability with the quality of service provided.
- **Ensure** clear and visible signage, complete and reliable information on screens, websites, and other platforms.

5. Comfort and Rules
- **Provide** appropriate air conditioning on trains to maintain a comfortable environment for passengers.
- **Establish** clear rules of use and behavior, including effective supervision, communication campaigns, and sanctions, to encourage respectful behavior among users.
- **Expand** the night service to cater to passengers during late hours.

6. Technological Improvements
- **Implement** troubleshooting measures to minimize problems or errors with ticketing machines and other systems.
- **Optimize** the interior space of trains through redesigning to maximize capacity and comfort.
- **Facilitate** various forms of payment, eliminating the need for a physical card and allowing alternative payment methods.

7. Multi-Modal Transportation Options
- **Consider** allowing passengers to bring bikes on the train, even if they are not collapsible, to promote multi-modal transportation options.

Taxi

1. Driver Behavior and Efficiency:
- Train and encourage **friendly** and **professional** behavior among drivers.
- Emphasize taking **faster** and **shorter routes** while maintaining **efficiency**, **safety**, and **flexibility**.
- Accommodate changes in routes when necessary.

2. Service Quality and Customer Support:
- Prioritize **speed**, **punctuality**, **reliability**, and **precision** in taxi services.
- Provide good **customer service** with **fast**, **flexible**, and **friendly assistance**.
- Streamline the process of **hailing a taxi**.
- Develop a **useful**, **reliable**, and **user-friendly** mobile app for taxi services.
- Explore the use of **low-emission** taxis for environmental sustainability.

3. Pricing and Transparency:
- Establish a good **pricing structure** that offers **value for money** and accommodates various forms of payment.
- Ensure **transparency** in pricing and rates, offering **fixed prices**.
- Establish an **automatic refund system** for overpayment or other refund situations.

4. Vehicle Condition and Accessibility:
- Maintain **clean** and **comfortable** cars.
- Increase taxi service **availability** during nighttime hours.
- Make taxis more **accessible**, including suitable car seats and accommodations for passengers with specific accessibility needs.
- Implement a system for **recovering lost items** in taxis.

5. Additional Services and Convenience:
- Increase taxi **availability** and **accessibility**.
- Provide dedicated taxi services to and from **airports**.
- Consider offering a **home pick-up service**.
- Allow passengers to specify **preferences**.
- Promote **multilingualism** among drivers.
- Remove unnecessary **restrictions** on travel destinations.

UPPER

Shared bike

Shared LEV

Shared Car

Shared bike

1. Customer Service and Communication
- Implement an option for **customer service in different languages** to cater to the needs of tourists.
- Ensure that system failures are **solved quickly, efficiently, and without any additional costs** to the customers.
- Develop a system that avoids charging customers for system or service failures and provide **advisories** to address common issues.

2. Bike Stations and Infrastructure
- Establish **well-sized bike stations** with an adequate number of spaces and bikes, balanced according to user demand and real-time information.
- Ensure that bike stations are **conveniently located near bike lanes** and other transportation options, promoting intermodality.
- Establish a comprehensive, well-signposted, and safe network of **bike lanes**.
- Consider implementing bikes and covered stations in cities with **rain and/or harsh weather conditions** to ensure customer comfort and protect the equipment from damage.

3. Bike Improvements and Accessories
- Improve the bikes by addressing concerns such as excessive weight, inadequate suspension, and introduce **electric rental solutions** and accessories for transporting children or purchases.
- Provide accessories for customers, including **holders for mobile devices**, **child seats**, and **cargo options** for purchases.

4. Mobile Application and Real-time Information
- Develop a **mobile application** that provides real-time information about the availability of bikes and spaces, ensuring its reliability, usefulness, and user-friendly interface.

5. Pricing and Payment
- Establish transparent and appropriate **pricing options** with different types of tickets for various customer needs, including single tickets, 24-hour passes, weekly passes, etc.
- Improve the service by adapting to new, simpler, and more agile **payment and rental methods**, such as reducing the deposit amount, offering a 45-minute free rental period, and ensuring the refund of deposits within a maximum of 24 hours.
- Enable **mobile payment options** to enhance convenience for customers.

6. Continuous Improvement and Safety
- Continuously improve the service to meet the changing needs of both residents and tourists.
- Promote respect among all citizens for bike lanes and cyclists to ensure a safe and harmonious coexistence with other road users.

Shared LEV

1. Service Excellence and Usability:
- Ensure an **easy-to-use service** that is **simple, fast, agile, and satisfactory**, minimizing system errors such as **incorrect charges**.
- Develop a **usable, functional, useful, and flawless mobile app** for seamless interaction with the service.
- Set a suitable and **transparent price structure** that is easily understandable to users.

2. Customer Service and Support
- Provide **fast, decisive, and adequate customer service** with **24-hour availability** and a focus on **kindness and responsiveness**.
- Offer **discounts based on usage and user profiles** to incentivize frequent and loyal customers.

3. Service Quality and Maintenance
- Deliver a **quality and reliable service** by ensuring **motorcycles work well**, are **easy to drive**, and undergo regular **maintenance and cleanliness**.
- Design motorcycles and e-scooters to be **attractive, comfortable, functional, and durable**.
- Provide **insurance coverage** that is integrated with the rental service and adequately protects users.

4. Expansion and Availability
- Establish the service as a **viable alternative** to other forms of transportation by **improving, regulating, and maintaining** it effectively.
- Maintain a sufficient **availability of motorcycles/e-scooters** to meet user demand at various locations.
- **Expand the service radius** to cover areas that currently do not have access to the service, improving its availability and reach.

5. Payment and Transactions
- Implement **agile and simple forms of payment and rental processes**, minimizing the need for large deposits or excessive personal information.
- Ensure **automatic return of funds** within a timeframe of less than 24 hours for smoother transactions.

6. Parking and Orderliness
- Enforce proper **parking protocols** to prevent disorderly parking that may inconvenience pedestrians or disrupt public spaces.

7. International Compatibility
- Ensure **compatibility with international cards**, including cards from other countries such as the US.

8. Data Security and Privacy
- Establish robust and secure management practices for handling **personal data**, prioritizing user privacy and data protection.

Shared Car

1. Customer Service Excellence
- Implement **good customer service practices** with **professionalism** and **excellent treatment** towards users.
- Minimize fines and charges for service or system failures by addressing common issues such as **malfunctioning doors**, **app errors**, **parking difficulties**, **locking/unlocking problems**, **unrecorded returns**, and **double admission fee charges**.

2. Service Development and Accessibility
- Develop a **useful** and **practical service** that serves as a **viable alternative** for individuals without a car, offering **convenience** and **flexibility**.
- Ensure the service caters to both **city transportation needs** and **trips outside the city center**.

3. Competitive Pricing and Value
- Set a **suitable** and **competitive pricing structure** that costs **less than owning a car**, providing **good value for money** and offering **free registration**.

4. Charging Efficiency and Reliability
- Prevent charging problems by maintaining electric cars with a **battery charge level of more than 30%**, ensuring **reliable autonomy indications**, avoiding fines for **low battery levels**, preventing **false or disproportionate mileage charges**, and ensuring the presence and functionality of **charging cables**.

5. Fast and User-Friendly Experience
- Offer a **fast and user-friendly service** that allows users to access and start using cars within **four minutes**, emphasizing **simplicity** and **ease of use**.
- Develop an **intuitive and well-functioning mobile app** that is **easy to use** and provides a **seamless experience** for users.

6. Vehicle Condition and Variety
- Ensure cars are in **good working condition**, **easy to drive**, and **comfortable**, preferably offering a **variety of models and typologies**, including **automatic transmission options**.
- Maintain cars in **good condition**, regularly **cleaning** and performing necessary **maintenance tasks** to ensure a positive user experience.

UPPER

Thank you!

Instituto de Biomecánica (https://www.ibv.org/)
Carol Soriano (https://www.linkedin.com/in/carol-soriano-garcia/)
Amparo López (https://www.linkedin.com/in/amparo-lopez-vicente/)
Juan Gimenez (jugimen@ibv.org)

UPPER
Unleashing the Potential of
Public Transport in Europe

CIVITAS
Sustainable and smart mobility for all

EU MISSIONS
CLIMATE-NEUTRAL & SMART CITIES

UPPER contributes to achieving the aims of the CIVITAS Initiative and the goals of the EU Mission: Climate-Neutral and Smart Cities