

# SUMP for 5 MUNICIPALITIES IN NORTH MACEDONIA

LRCP-9034-MK-CS-CQS-A.1.1.5

Technical Assistance For Development Of Sustainable Urban Mobility Plans For Five  
Municipalities And Providing Training On Developing And Implementation Of Sustainable  
Urban Mobility Plans

Kavadarci, Kochani, Struga, Strumica, Prilep

## TASK 1.2 CURRENT STATE ANALYSIS OF MOBILITY REPORT ADOPTION

Februrary 2025

**01** TASK 1.2 CURRENT STATE ANALYSIS OF MOBILITY

**02** ADOPTION OF TASK 1.2

## Activity-1 Developing of Sustainable Urban Mobility Plans for 5 Municipalities

Task 1.1 – Set Up Working Structure, Determining the Planning Framework and Stakeholder Engagement

Task 1.2 – Analysis of Current State of Mobility

Task 1.3 – Strategy Development

Task 1.4 – Measure Planning and Selection of Preferred Scenario

Task 1.5 – Preperation of the Plan

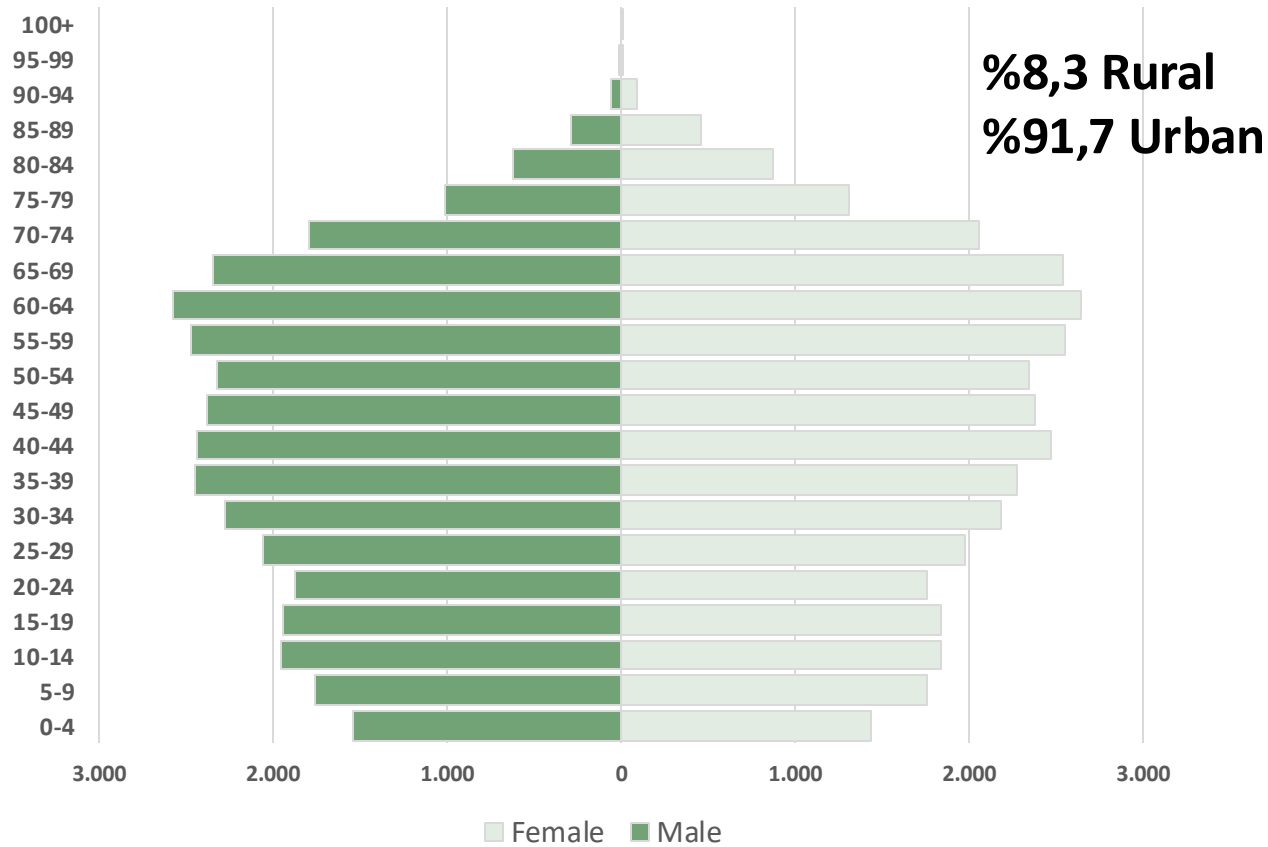
## Activity-2 Training on Developing and Implementation of SUMP and Creating Community of Practice

Task 2.1 – Training on Developing and Implementing of SUMPs

Task 2.2 – Community of Practice

# CURRENT STATE ANALYSIS OF MOBILITY AND SOCIODEMOGRAPHIC STRUCTURE Of PRILEP

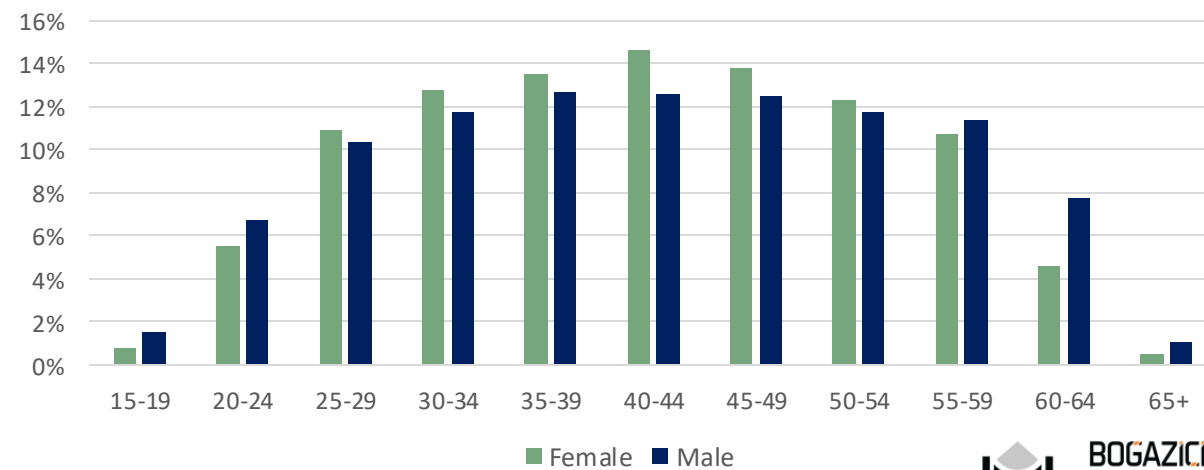
# PRILEP WITH NUMBERS



<b>Population</b>	Population	69,025
<b>Household</b>	Household Number	24,607
	Household Size	2.81
<b>Disability Status</b>	Disabled People (%)	7.42%
	Employed (%)	36.0%
<b>Working Status</b>	Unemployed (%)	20.6%
	Literate (%)	95.5%
<b>Education Status</b>	Illiterate (%)	1.4%
	Unknown (%)	3.2%
<b>Income</b>	Average Household Income	450.600 MKD

	Population	Households	Household Size
<b>North Macedonia</b>	1,836,713	598,632	3,07
<b>Vardar Region</b>	210,431	72,440	2,90
<b>Prilep</b>	69,025	24,607	2,81

Labour Force Age-Gender Distribution



# PRILEP PUBLIC TRANSPORT

Number	Vehicle Type	Fuel Type	Age	Capacity (Seat+On Stand)
Vehicle-1	Bus	CNG	5	105 (27+78)
Vehicle-2	Bus	CNG	5	105 (27+78)
Vehicle-3	Bus	CNG	5	105 (27+78)
Vehicle-4	Bus	CNG	5	105 (27+78)
Vehicle-5	Bus	Diesel	13	33
Vehicle-6	Bus	Diesel	26	109 (28+81)
Vehicle-7	Bus	Diesel	33	51

Number	Line Code	Length (km)	Number of Bus Stops	Frequency (min)
Line-1	1	9.5	20	60
Line-2	1A	9.5	20	60
Line-3	2	5.6	17	60
Line-4	2A	5.7	16	60
Line-5	3	6.7	19	60
Line-6	3A	6.7	19	60
Line-7	Only Sunday	12	25	60
Line-8	School transport - Primary school "Rampo Levkata"	2.6	4	60
Line-9	School transport - Primary school "Kliment Ohridski"	4	5	60

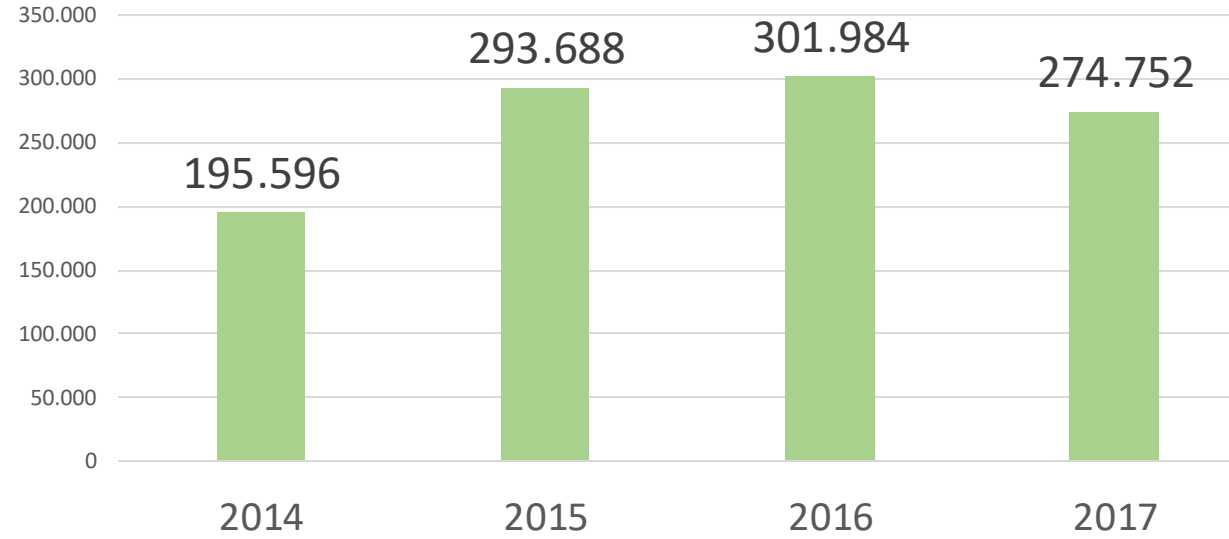


# PRILEP PUBLIC TRANSPORT

## Number of Passengers-2017



## Yearly Total Public Transport Passengers

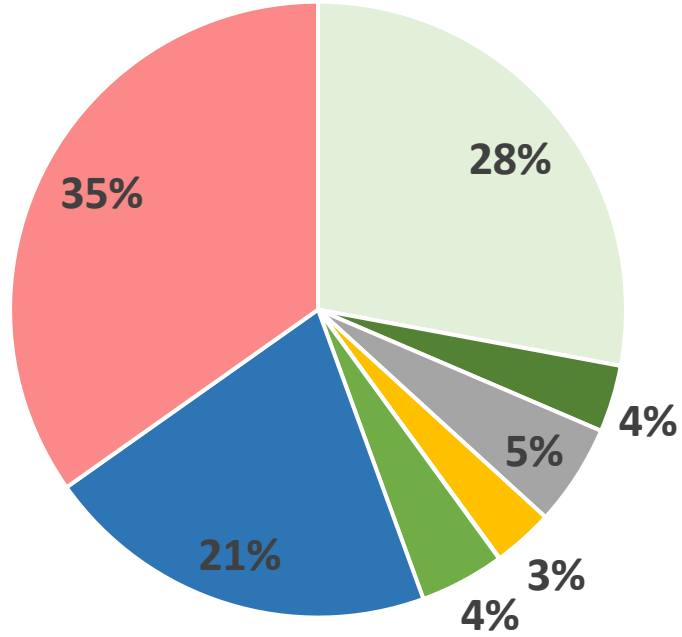


<b>Public Transport Network</b>	<b>43,8 km</b>
<b>Number of PT Lines</b>	<b>6+3</b>
<b>Annual Vehicle-Km</b>	<b>1.671.537</b>
<b>Average Commercial Speed</b>	<b>15 km/h</b>
<b>Frquency of Bus Services</b>	<b>60 min</b>
<b>Operational Cost (Euro/vkm)</b>	<b>19.0244</b>

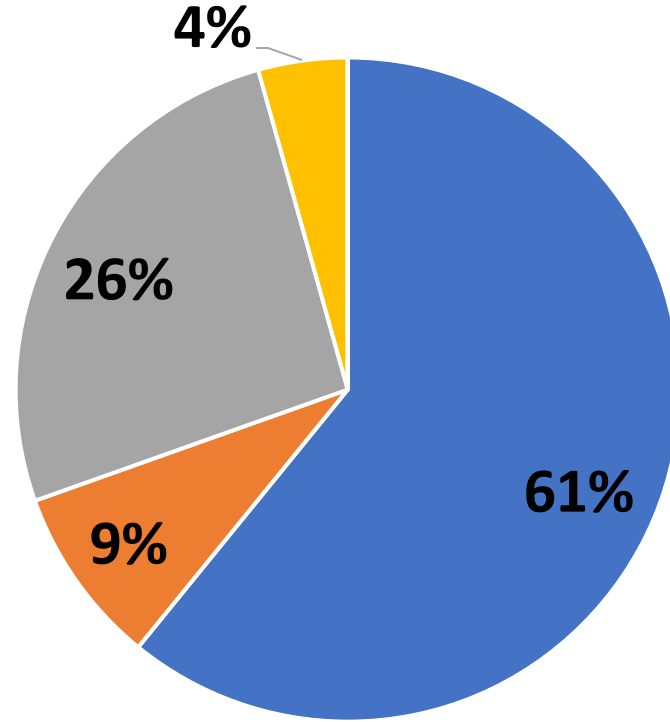
<b>Ticket Type</b>	<b>Per Trip Euro</b>
<b>Student</b>	<b>0.3</b>
<b>Normal</b>	<b>0.5</b>
<b>Pensioners</b>	<b>Free</b>
<b>Monthly Pass-Normal</b>	<b>25</b>
<b>Monthly Pass-Students</b>	<b>15</b>



Mode Choice Distribution of People Who Make Work-School Trips



- By walk
- Bus (city)
- Train
- Organized transportation
- Bicycle
- Bus (intercity)
- Other
- Private Transport

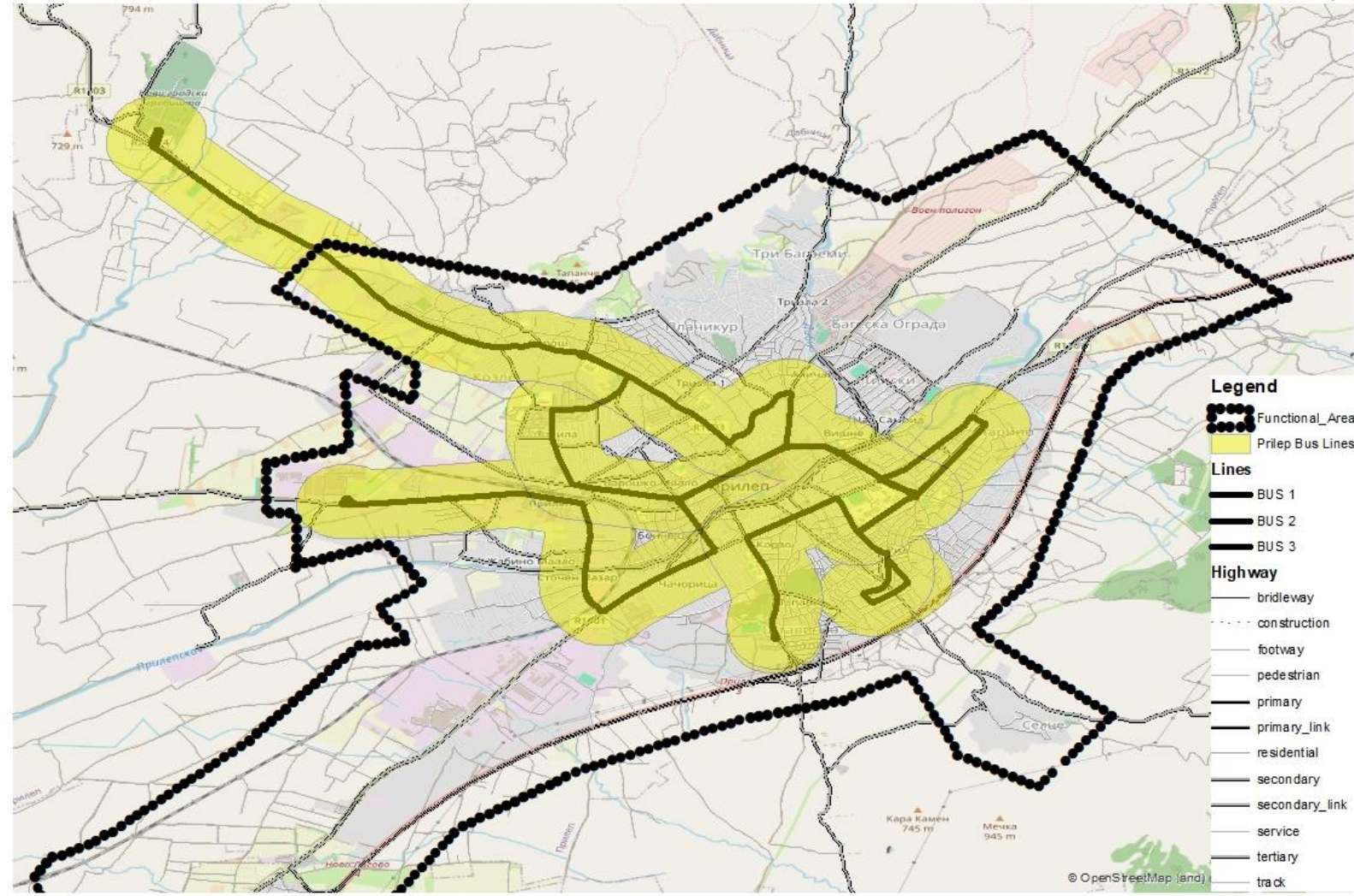
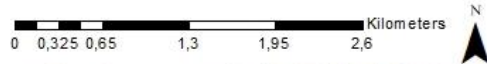


- Private car
- Bicycle
- Other
- Public transportation
- Motorcycle
- Hiking
- Taxi

# PUBLIC TRANSPORT PERFORMANCE ANALYSIS

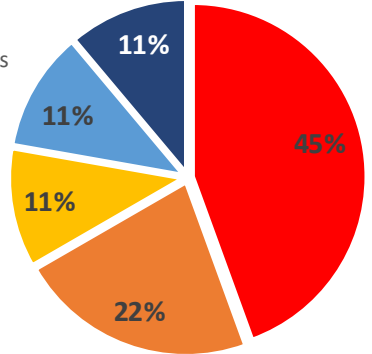
# PRILEP

## PRILEP - PUBLIC TRANSPORT LINES RANGE

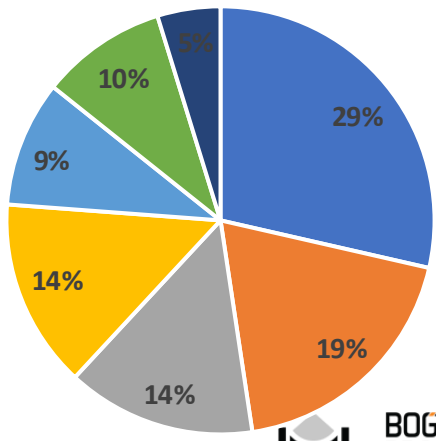


Number	Line Code	Length (km)	Frequency (min)
Line-1	1	9.5	60
Line-2	1A	9.5	60
Line-3	2	5.6	60
Line-4	2A	5.7	60
Line-5	3	6.7	60
Line-6	3A	6.7	60

- Irregular or unreliable schedule
- Difficulty in finding timetables/schedules
- Lack of real-time travel information
- Cleanliness/comfort
- Overcrowding
- High cost
- Poor accessibility to stops
- Poor condition of vehicles and stops
- Safety concerns

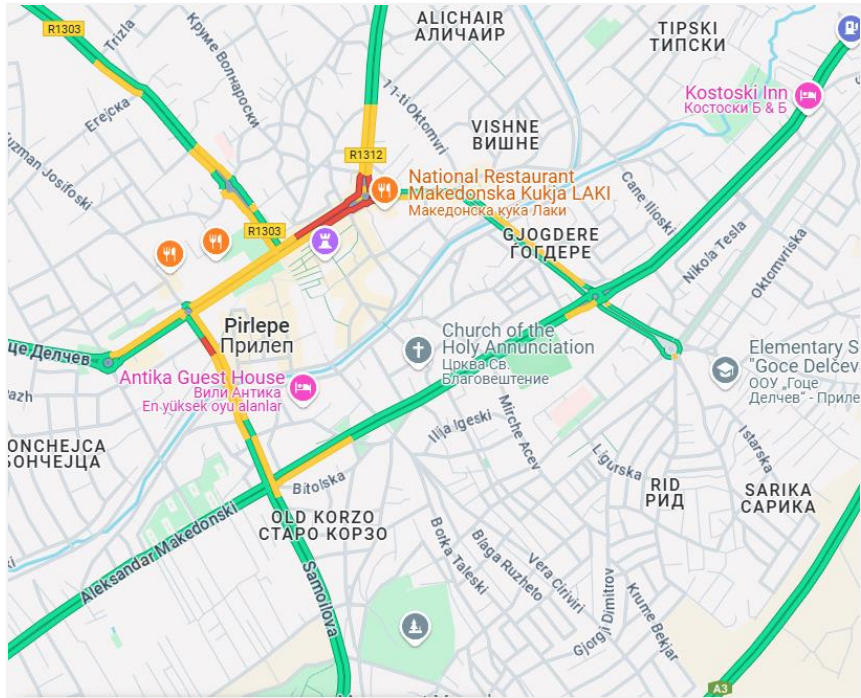


- If the routes are improved and developed
- If it becomes a smart transport system
- If a separate line is created for public transport
- If the vehicles are renewed
- If the frequency of trips increases

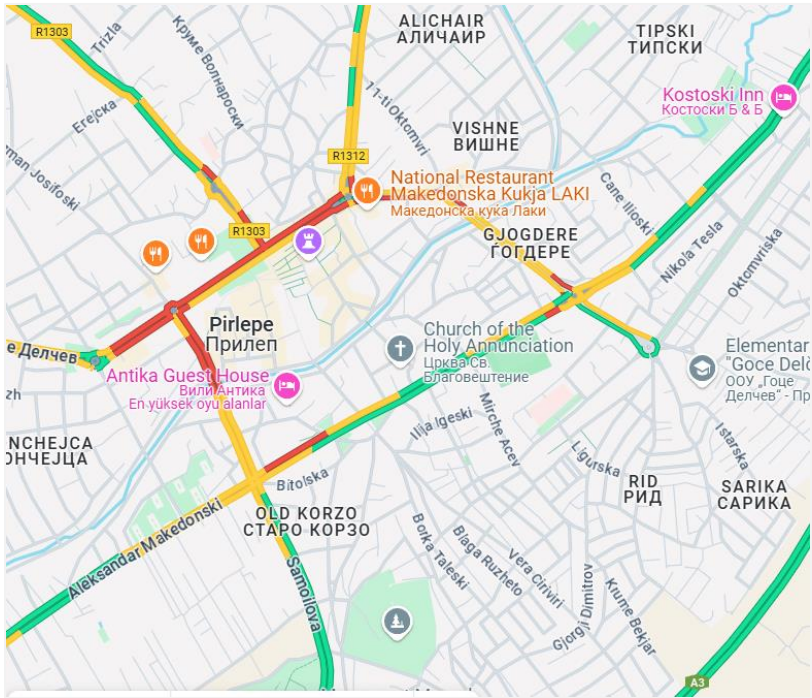


# TRAFFIC DEMAND ANALYSIS

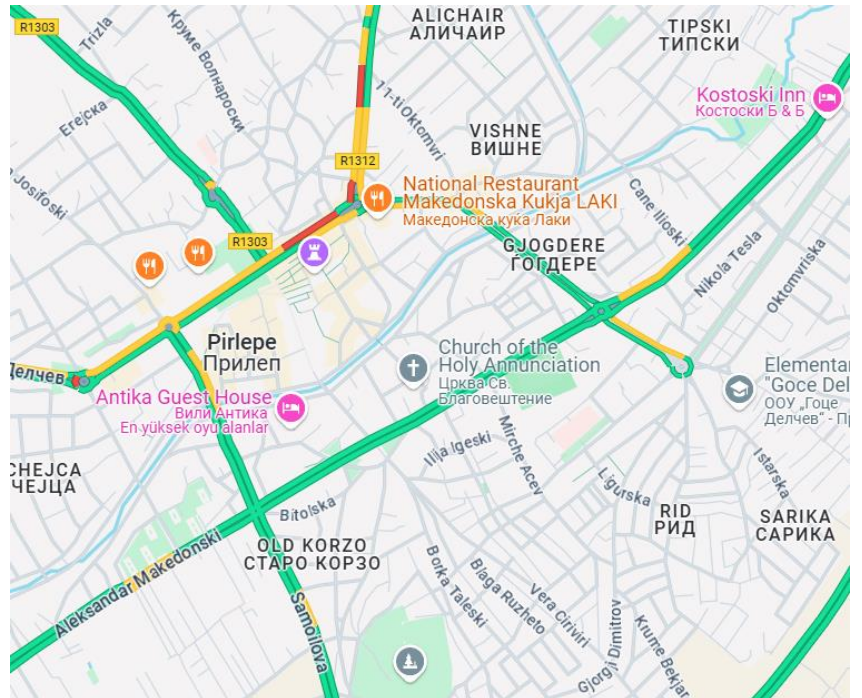
# PRILEP



Morning Peak (10.00 am)

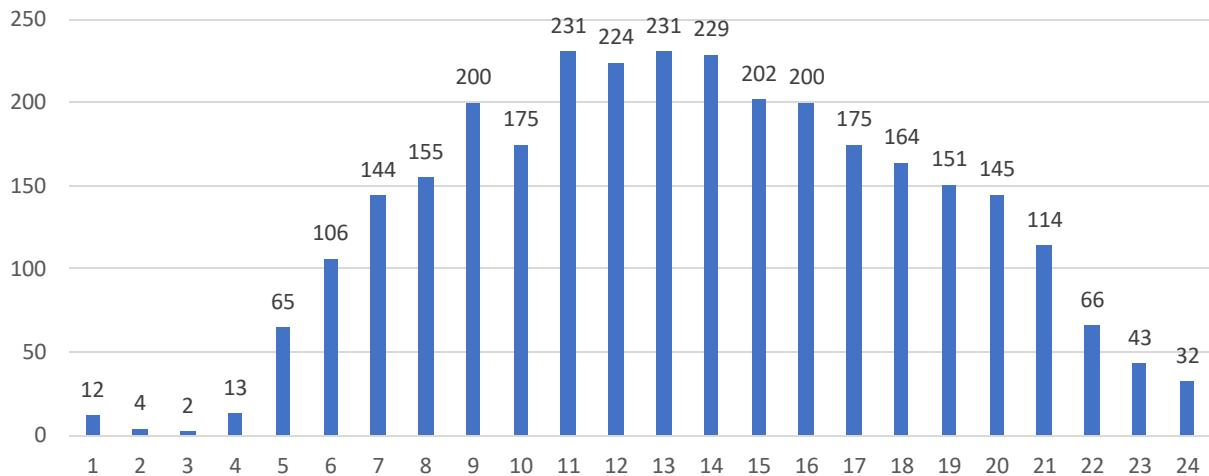


Noon Peak (01.45 pm)

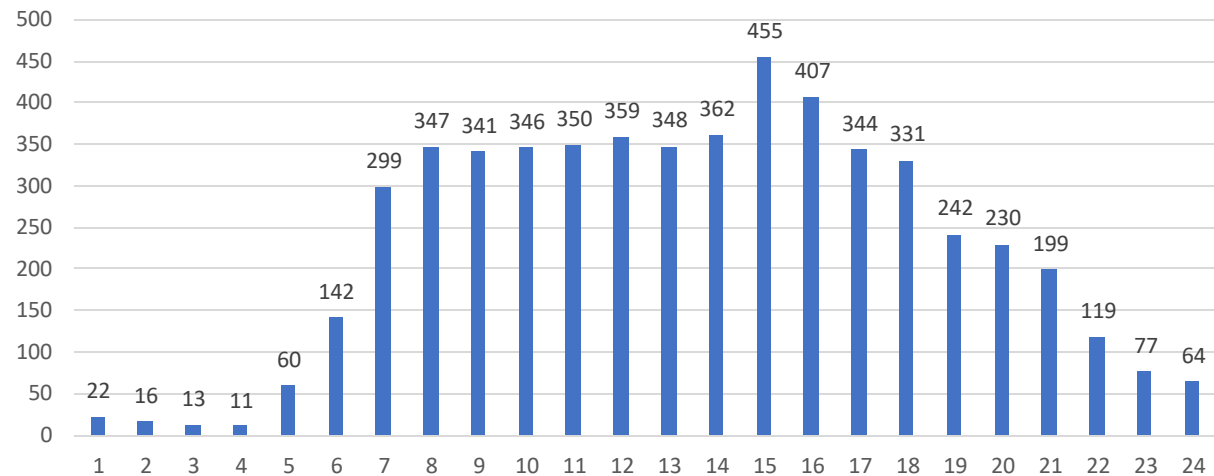


Evening Peak (07.30 pm)

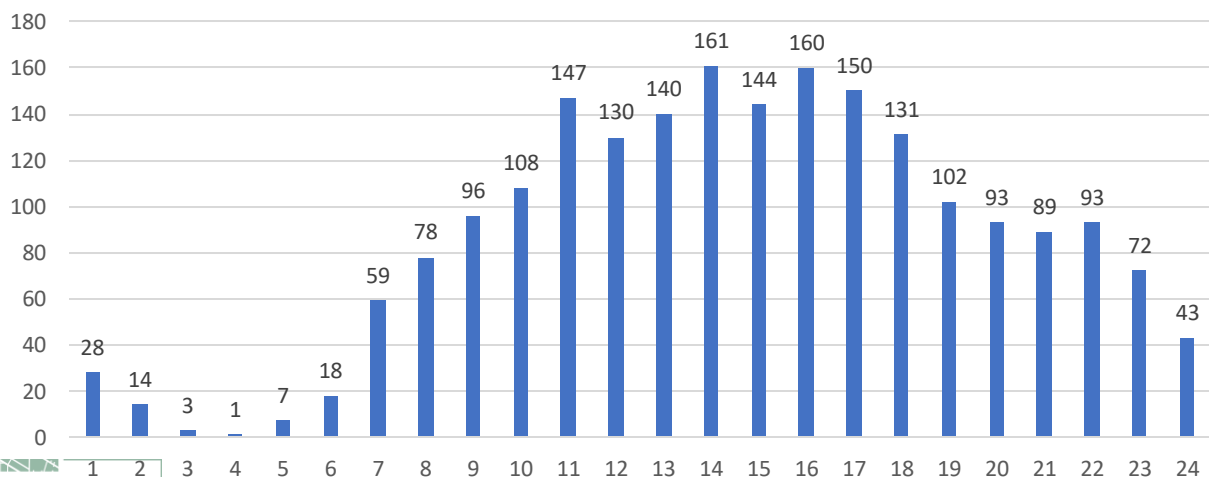
### Prilep-Bitola



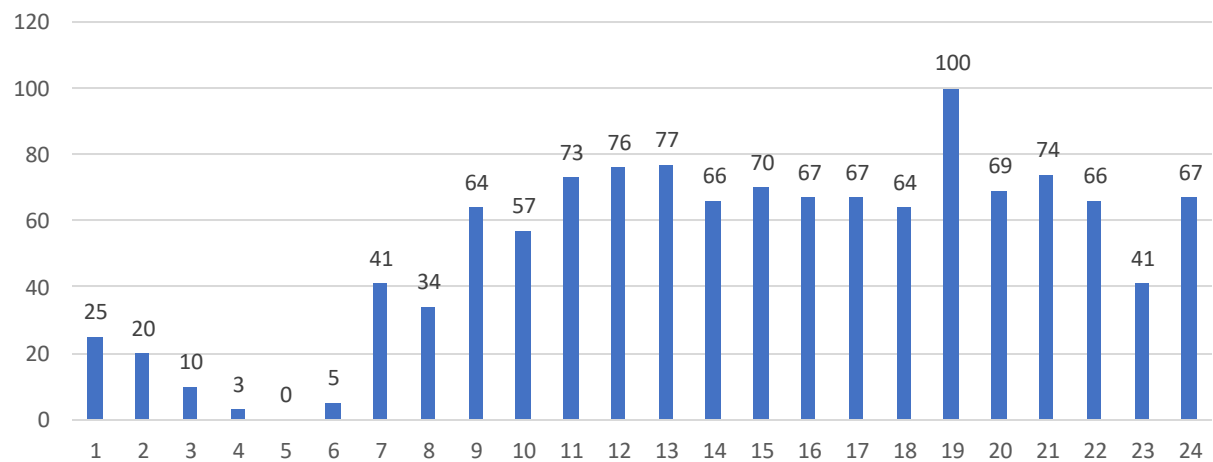
### Prilep-Makedonksi Brod Route



### Prilep-Krusevo



### Prilep-Rudnik Sivec



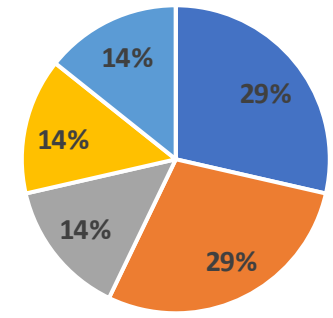
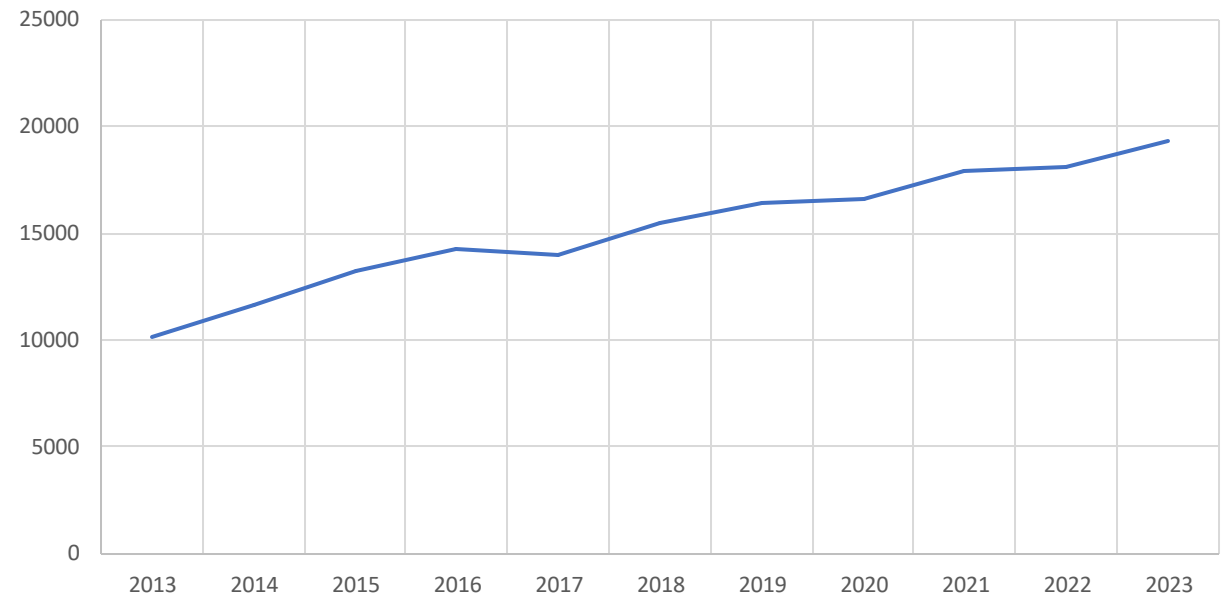
# PRIVATE CAR USE

# PRILEP

Year	Number of Cars	Yearly Increase Rate %
2013	10,173	
2014	11,621	14%
2015	13,189	13%
2016	14,278	8%
2017	13,959	-2%
2018	15,457	11%
2019	16,403	6%
2020	16,568	1%
2021	17,955	8%
2022	18,083	1%
2023	19,330	7%
<b>Increase in Recent 10 years</b>		<b>90%</b>

Year	Population	% (Increase/Decrease)
2002	76768	
2021	69025	-10,1%

Number of Cars Through Years



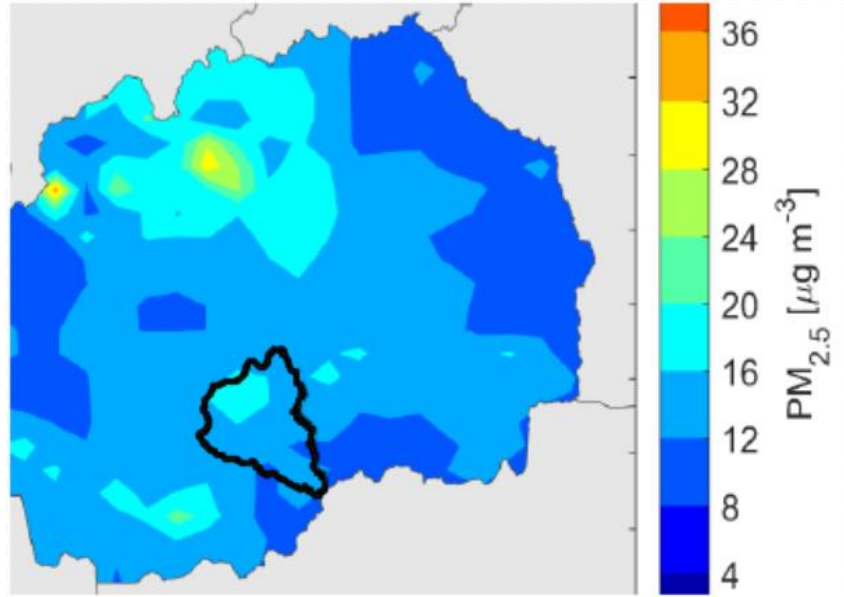
■ It is fast ■ Lack of public transport services ■ It is comfortable ■ It is the only alternative ■ It is safe ■ It is cheap

# AIR QUALITY COMPARISON

## PRILEP

Cities	CO	NO2	Ah3	PM2,5	PM10	SO2
Prilep	Very Low	No Data	Very Low	No Data	No Data	Very Low
Kochani	Very Low	Very Low	Very Low	Medium	No Data	No Data
Kavadarci	Very Low	Very Low	Very Low	Medium	Low	Very Low
Strumica	No Data	Very Low	Very Low	Very High	High	Very Low

Quality Level	SO2	NO <sub>2</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>	About <sub>3</sub>	CO
Very high	500-	400-	180-	110-	240-	20-
High	350-500	200-400	90-180	55-110	180-240	10-20
Medium	100-350	100-200	50-90	30-55	120-180	7,5-10
Low	50-100	50-100	25-50	15-30	60-120	5-7,5
Very low	0-50	0-50	0-25	0-15	0-60	0-5

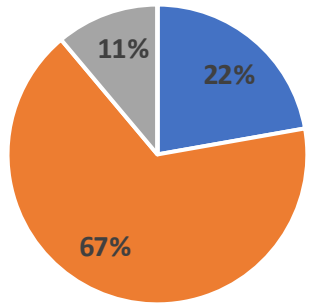
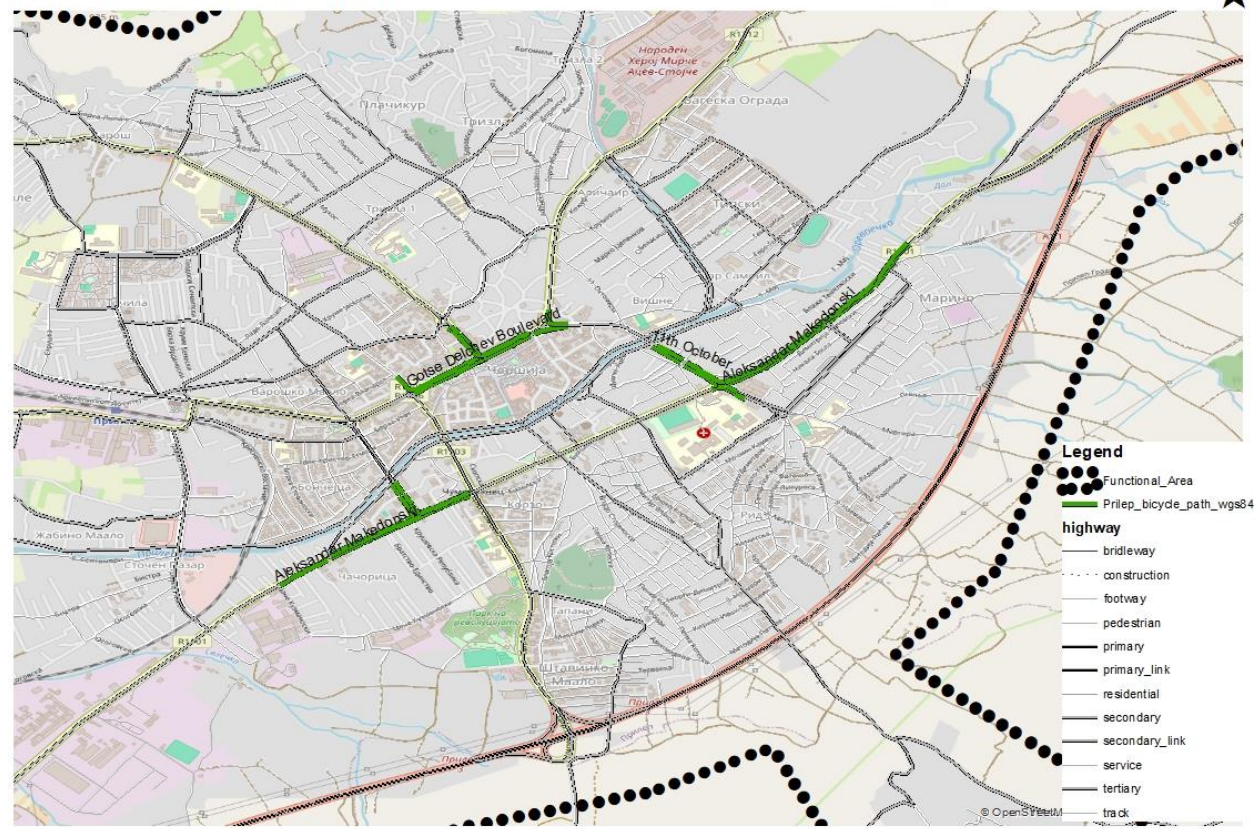


Source: GAINS Model 2018.

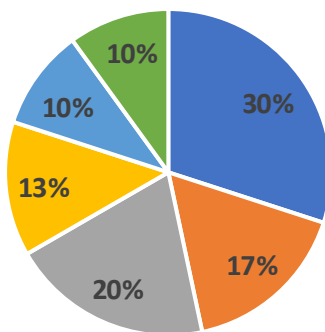
# BICYCLE TRANSPORTATION

# PRILEP

## PRILEP - BICYCLE LINES



- None of very few
- Some, but unsafe od poorly connected
- Moderate, but could be improved
- Sufficient, mostly safe and connected
- Excellent, extensice and safe network

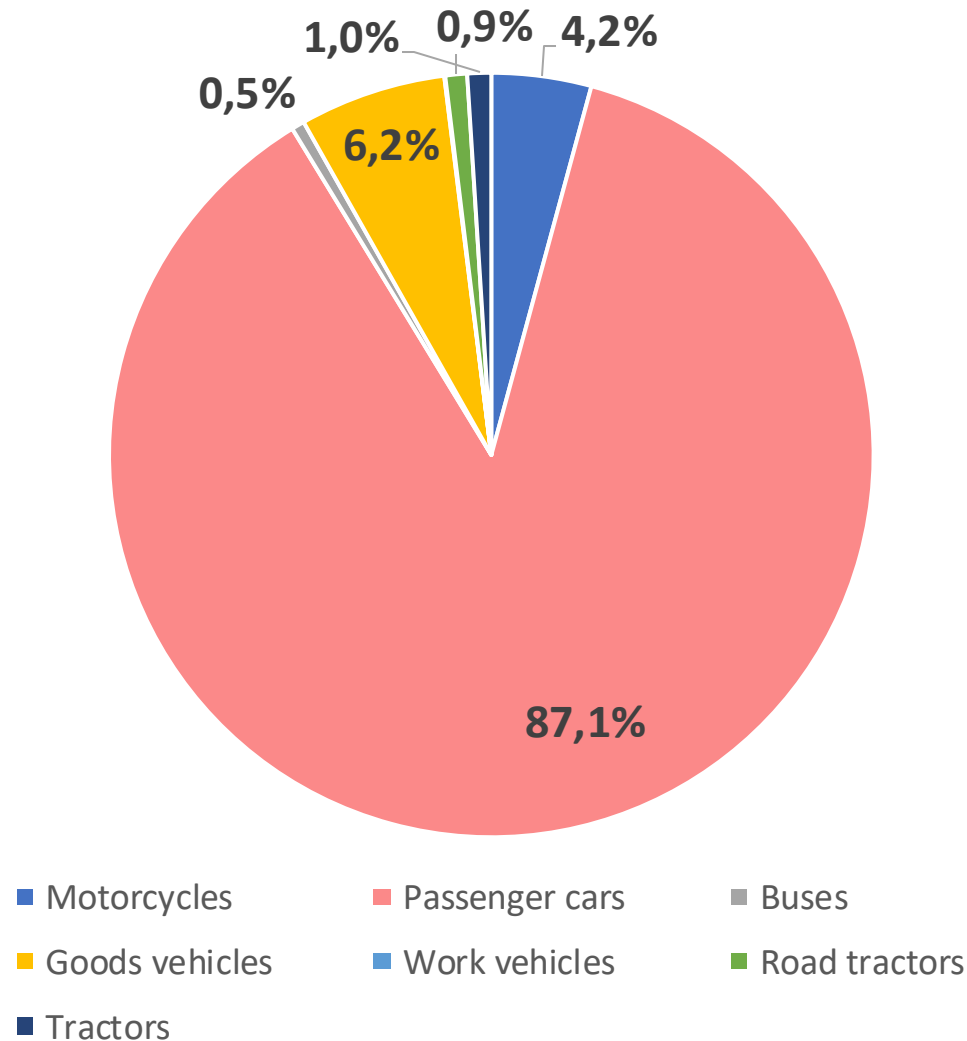


- Lack of dedicated bike lines
- Unsafe road conditions
- Vehicles illegal parking on cycle lanes or karbs (Conflict with other vehicles)
- Safety at crossing or intersections
- Difficulty finding bike parking
- Risk of theft

City	Bike Line Length (km)	Bike Line Length per 1000 people (km)	Bicycle Use Rate %
Prilep	5,6	0,08	4
Bremen	390	0,69	20
Kopenhag	469	0,76	36
Barcelona	181	0,11	1,5
Melbourne	135	0,89	4

Transport Mode	Fatalities	Serious Injuries
Walk	0	8
Bike	2	4
Car	4	8
Motorbike	2	10
Bus	0	0
Car Sharing/Taxi	0	0
Trucks	0	0
<b>Total</b>	<b>8</b>	<b>30</b>

### Registered Vehicle Type Distribution



THANK YOU