

# EUROPEAN SHARED MOBILITY INDEX

— Q2 2023 —





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# FINDING ITS PLACE

Europe is the largest and most mature shared mobility market in the world. However, it's not without its problems.

The overall market continues to grow, with fleet sizes increasing by 7% across all modes compared to 2022. On the other hand, ridership has remained stable (-1%).

In one year, we have seen the introduction of ~30,000 free-floating bikes in the cities covered in this report. Whilst it is not unusual for public, station-based bikes to be used 4, 5 or 6 times a day, these free-floating bikes are used less, which detracts from the overall number of trips per vehicle per day (TVD) (see p.7).






For the second quarter running, mopeds recorded fewer trips than they did last year. This is unsurprising: some operators have left key markets, and the fall in ridership is consistent with the reduction in fleet size, meaning TVD remains stable (see p.9).

Scooters were also unable to reach the great heights of the April-June period of 2022. The continually-changing regulatory framework in cities across the continent is likely responsible for this downturn, as well as stricter fleet caps and rising prices for users (see p.8).

Cars are the outstanding mode in this edition, with ridership growth (14%) outperforming fleet growth (6%) compared to Q2 2022 (see p.10).

# 33 CITIES 381 SERVICES

Number of available services & modal breakdown

-  Station-based bikes (Physical stations)
-  Dockless bikes
-  Scooters
-  Mopeds
-  Cars





# OVERVIEW

## HIGHLIGHTS

Q2 2023 VS Q2 2022  
(All modes)

Ridership  
**-1%**

Fleet size  
**+7%**

TVD

 **3.6** (3.6)

 **1.3** (1.6)

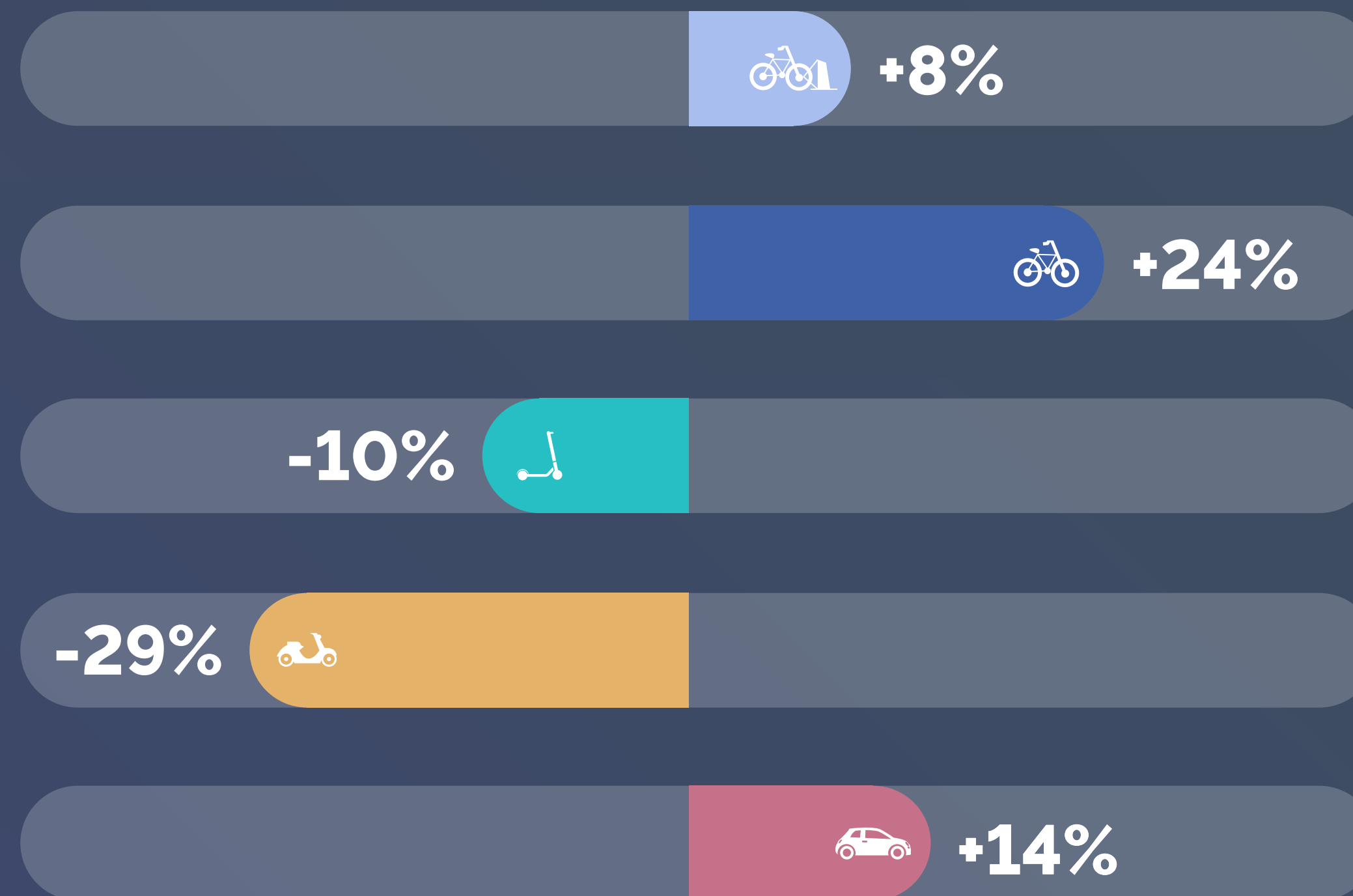
 **1.6** (1.9)

 **2.3** (2.3)

 **1.8** (1.7)

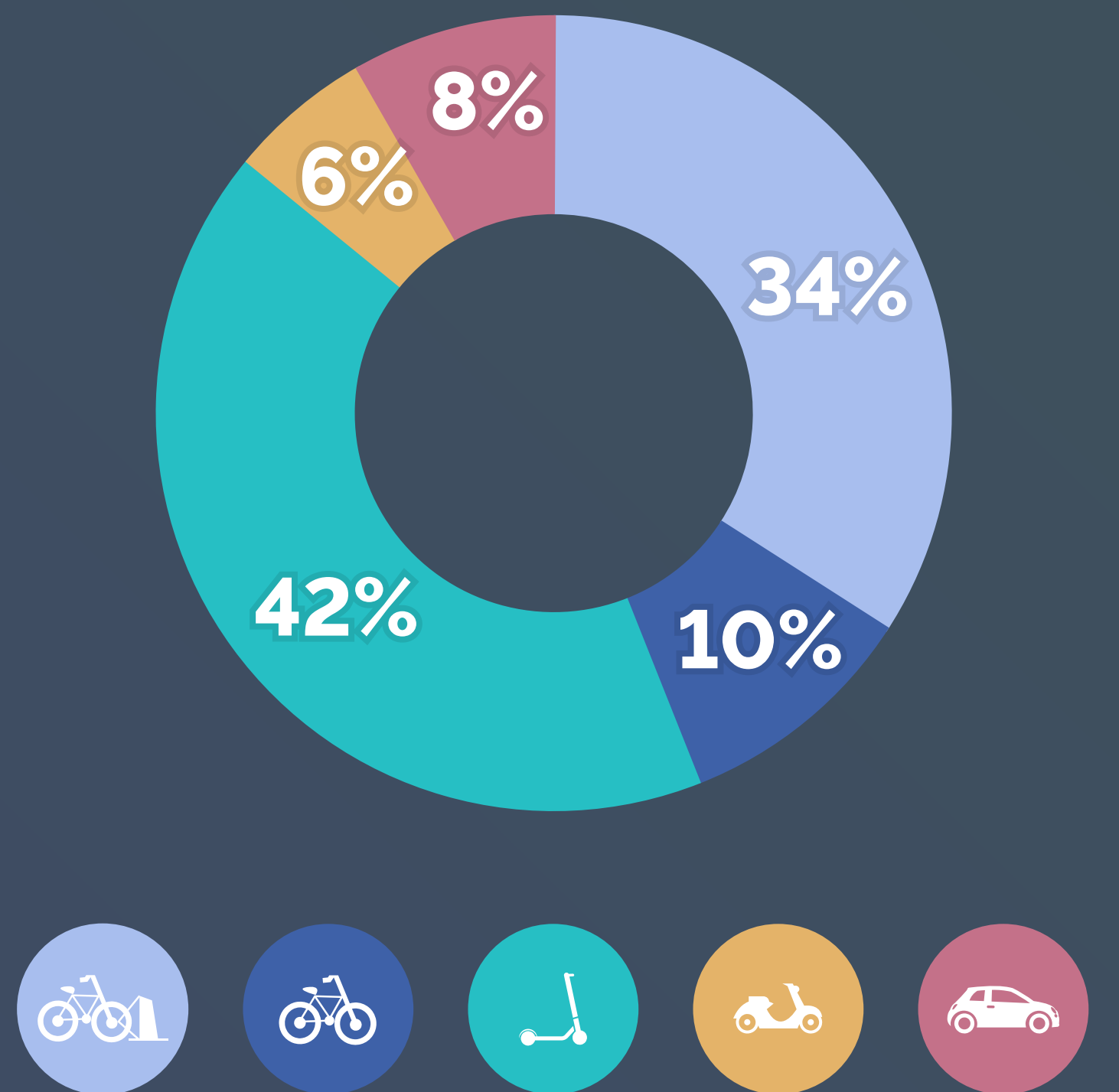
## RIDERSHIP GROWTH

Q2 2023 VS Q2 2022



## MODAL SHARE

Total ridership per mode | Q2 2023



## YEAR-ON-YEAR RIDERSHIP

Q2 2023 VS Q2 2022





# EVOLUTION OF SHARED SERVICES

When we started this report, we covered **16 cities\***, and tracked their evolution over one year. Two years on, we wanted to have a look back on how these cities have changed.

The trend is clear: the number of shared mobility services in these 16 cities reached its peak in late 2021. Since early 2022, the number of services has settled down.

## Why is the number of services decreasing?

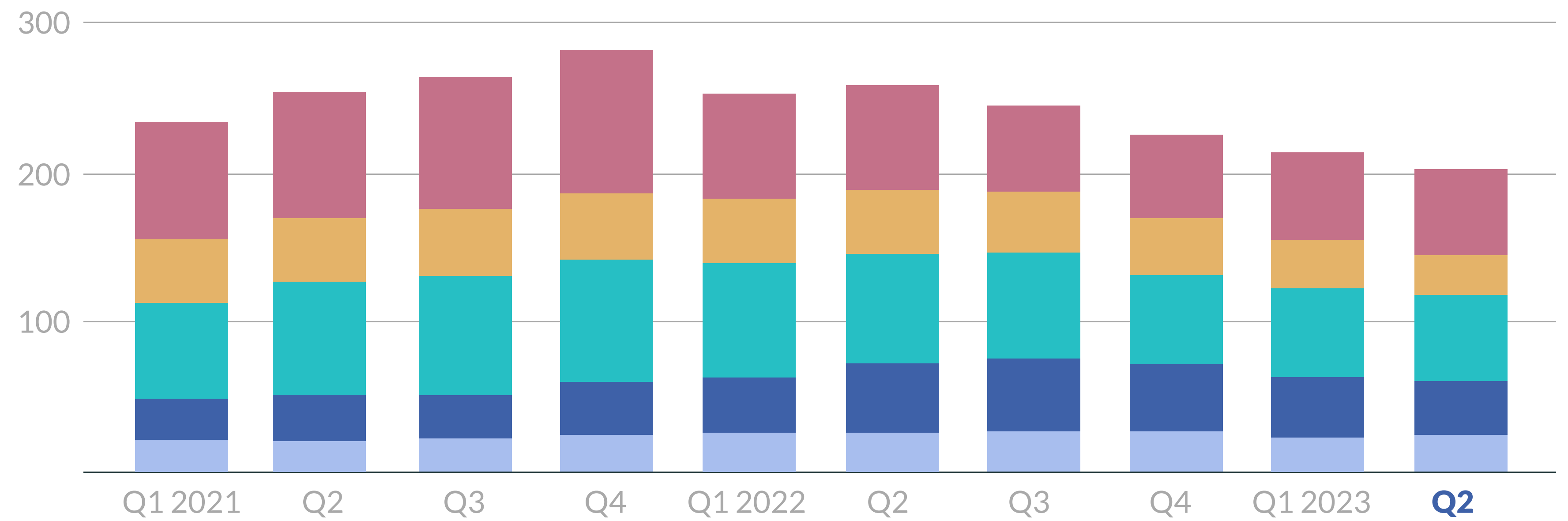
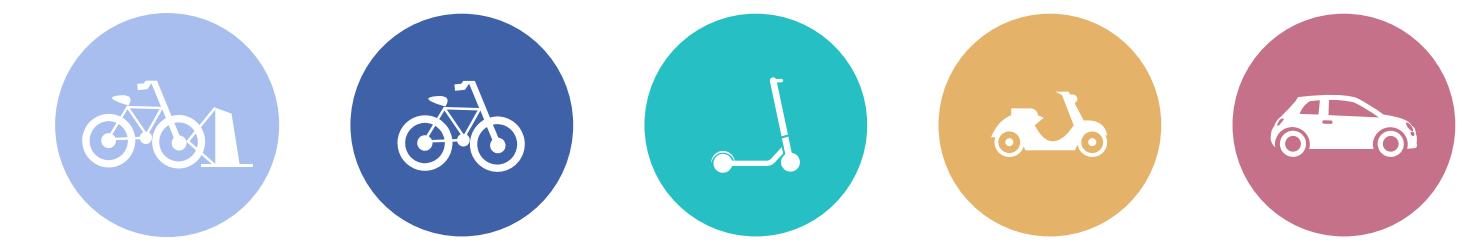
Tenders are being put in place to limit the number of operators in a city. Where you once might have had five operators deploying dockless scooters, there might now only be room for two. Interestingly, the number of vehicles has continued to grow, and cities are finding that fewer operators with more vehicles each can provide a better service.

## How will these graphs look in 2024 & 2025?

For these 16 cities, we expect the number of vehicles to stabilise around 300,000. This is due, in part, to the removal of 15,000 scooters in Paris (Sept. 2023) and the upcoming tender in Brussels that will reduce bike and scooter fleets by 7,000. Elsewhere, we don't expect major increases in fleet size.

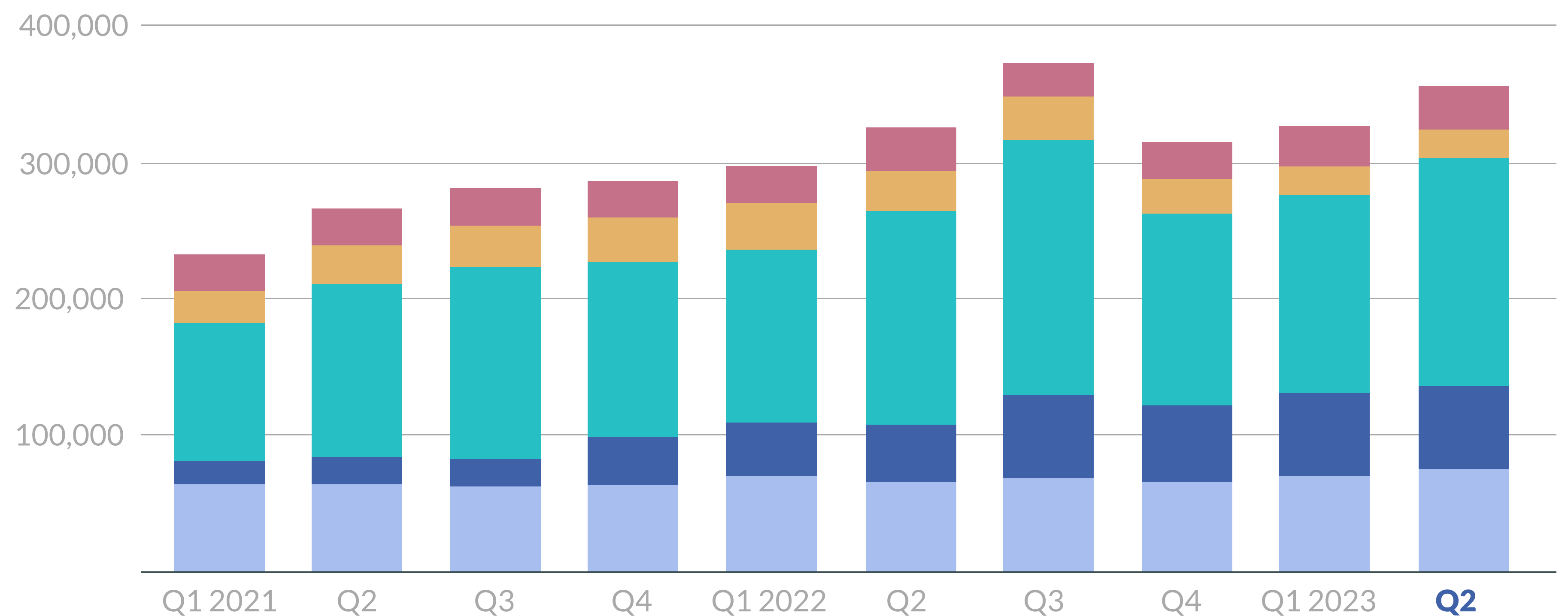
## SHARED SERVICES (2021-2023)

Total number of shared services across 16 cities



## SHARED VEHICLES (2021-2023)

Total number of vehicles across 16 cities



**\*16 Cities:** Barcelona, Berlin, Bordeaux, Brussels, Hamburg, London, Madrid, Milan, Oslo, Paris, Prague, Rome, Rotterdam, Stockholm, Vienna, Warsaw



On this graph, we have selected 9 cities with the largest fluctuations in fleet size over the past 2 years.

**Oslo** banned scooters in Q2 2021 before bringing them back with a fleet cap one year later.

**Milan** have welcomed more and more bike & scooter operators in the city, although a tender is imminent.

**Stockholm**, like Oslo, had a similar ban of scooters; now scooters are heavily regulated.

**Brussels** has little regulation in place to stop operators from joining the market, so scooter fleets are very large. The planned tender will drastically change this.

**Berlin** has the largest scooter fleet in Europe (there are 20,000 more scooters on the streets than 24 months ago), and car sharing is becoming increasingly more popular.

**Bordeaux** resolved a problem where many operators had fleets of just 100 vehicles, in favour of a system where just two operators per mode could operate a larger fleet.

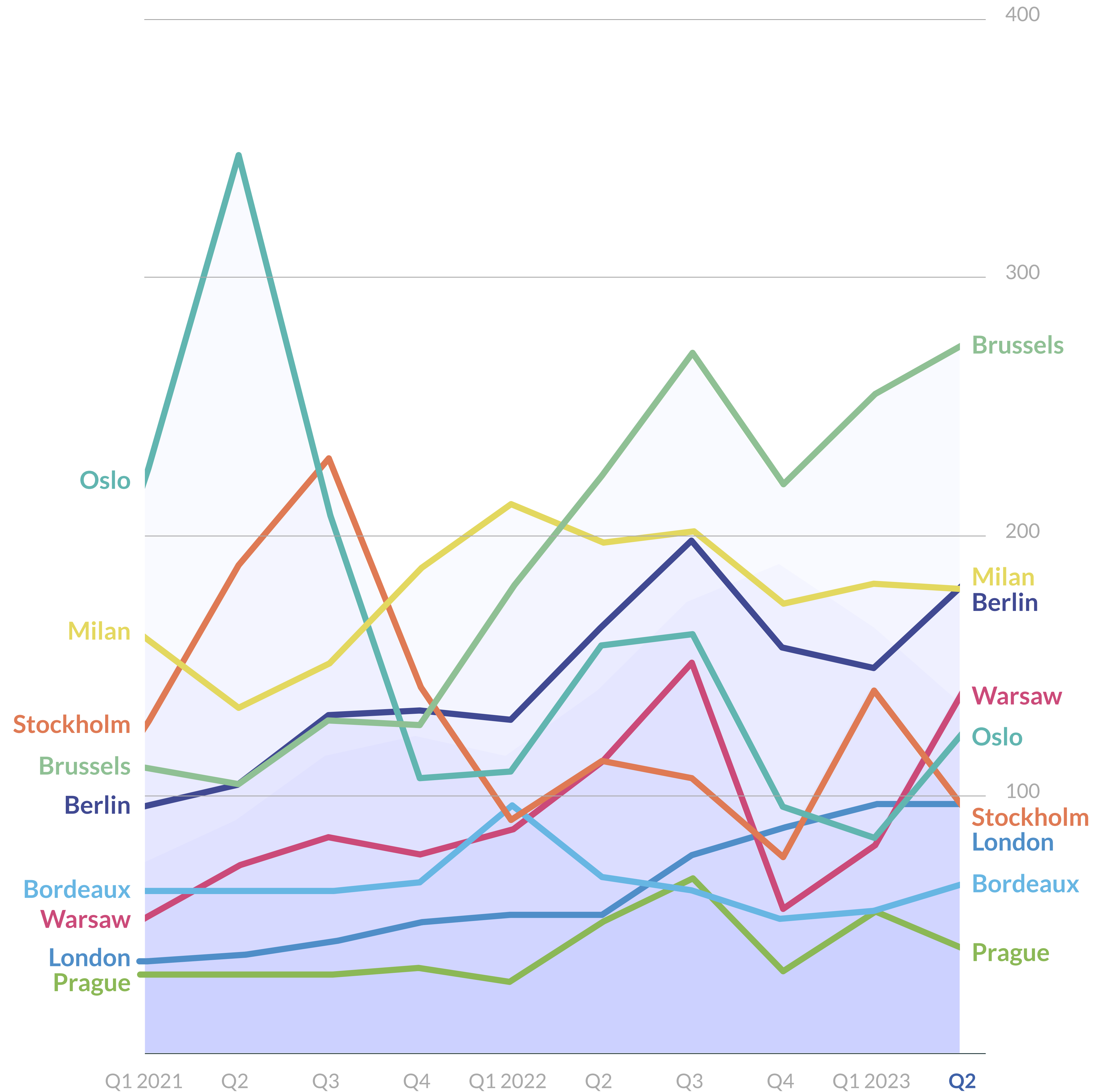
**Warsaw's** extreme winters forces scooter fleets to be removed, but they come back strong in summer months.

**London** experiences steady growth due dockless bikes and the extended scooter trial.

**Prague** is a popular tourist destination. Scooter and bike fleets have grown, but seem to have reached a ceiling. Again, we see the effect of cold weather on vehicle availability.

## VEHICLES PER 10K INHABITANTS

Evolution of vehicle numbers in specific cities (all modes)





## FOCUS ON BIKES



### HIGHLIGHTS

Q2 2023

Ridership YoY

**+8%**

Fleet size YoY

**+28%**

TVD (vs 2022)

**2.6 (2.9)**

**Bikes continue their strong growth into 2023 - a trend that looks set to continue long into the future.**

In Paris, operators anticipated the removal of their scooter fleets at the end of August by bolstering their bike fleets, which are now more than twice the size (17,000) that they were last year (8,000). The bet was that existing users would switch from scooters to bikes, and it seems to be the case: dockless bike usage grew 66% in Q2 2023 versus Q2 2022.

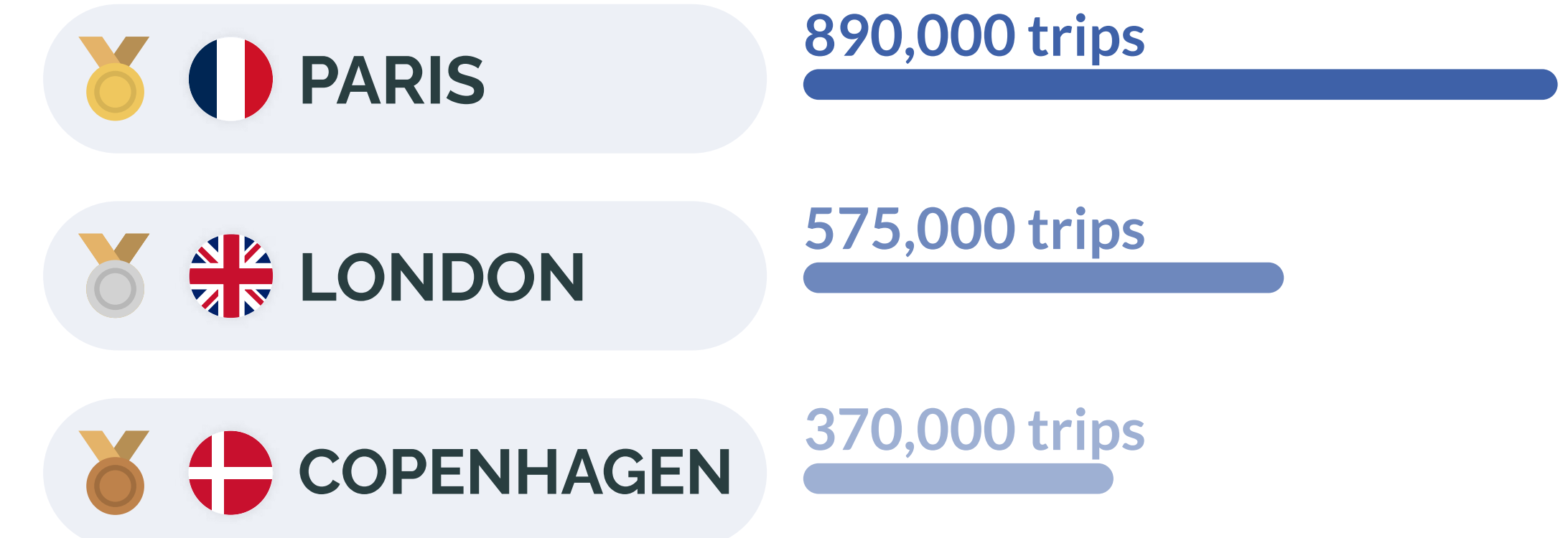
Elsewhere, Berlin's dockless schemes saw ridership grow 55%, and Bordeaux's by a staggering 182%. Public bike ridership in Vienna doubled, and usage of Marseille's fresh new system operated by Inurba grew by an enormous 429%, compared to the same period last year.

In Madrid, the public bike system BiciMAD has been made free until the end of the year, and is proving as popular as it was last year. That said, there is now little demand for dockless bikes (which are paid) with this free alternative taking centre stage.

On the negative side, dockless bikes did not return to Oslo after the winter break, and Stockholm eBikes had to be removed from the city due to concerns surrounding the safety of the vehicles.

### TOP 3 - DOCKLESS BIKE RIDERSHIP

AVG Trips per month in Q2 2023



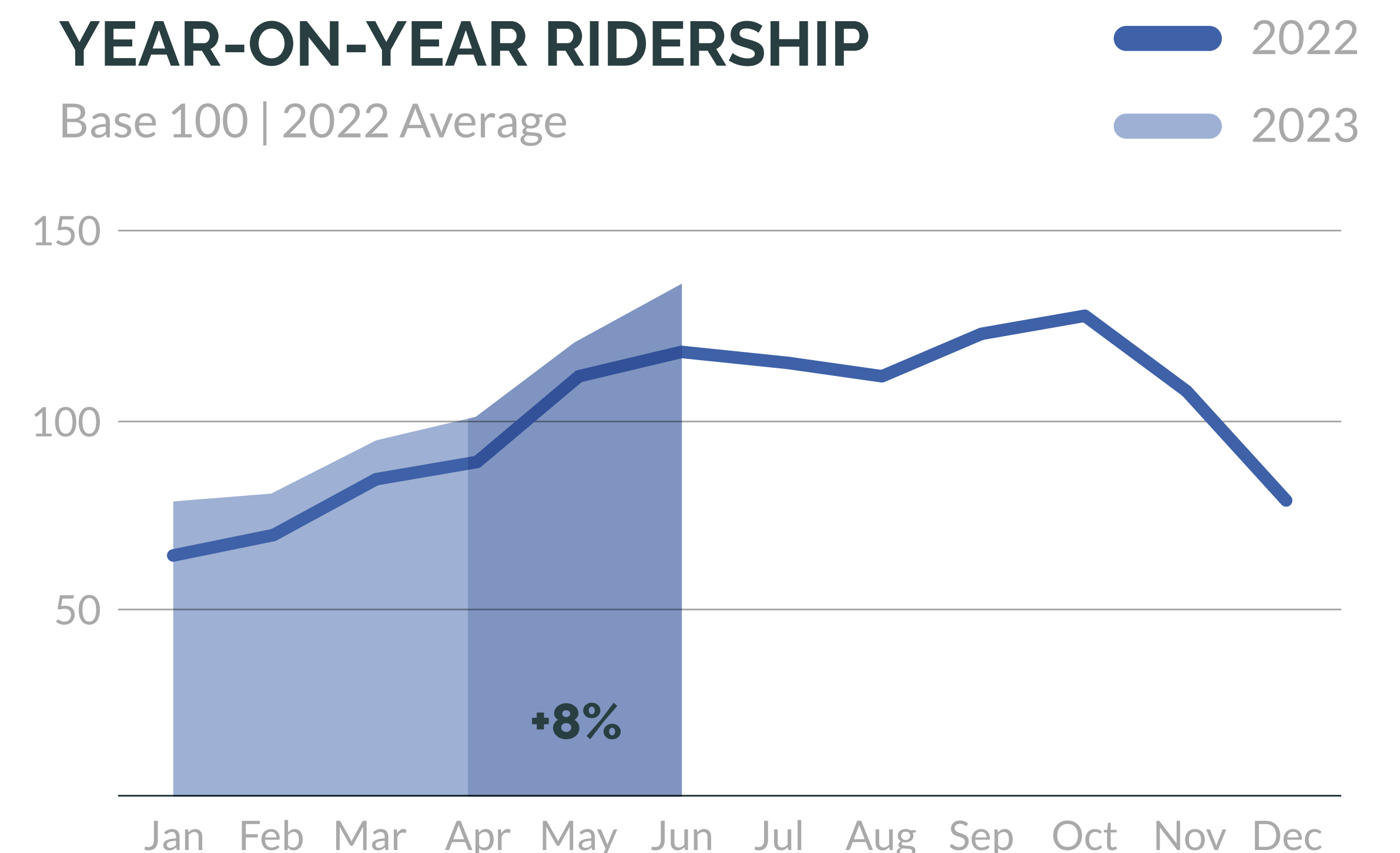
### TOP 3 - STATION-BASED BIKE RIDERSHIP

AVG Trips per month in Q2 2023



### YEAR-ON-YEAR RIDERSHIP

Base 100 | 2022 Average





# FOCUS ON SCOOTERS



## HIGHLIGHTS

Q2 2023

Ridership YoY

**-10%**

Fleet size YoY

**+14%**

TVD (vs 2022)

**1.6 (1.9)**

For the first time in 4 years, scooters weren't able to break their ridership record from the previous year. Yet, they still make up 42% of all shared mobility trips this quarter.

This dip in ridership (-10%) is likely due to market saturation in under-regulated markets, and in other markets, the introduction of stricter parking regulations, speed limit enforcements and area deployment restrictions (see Rome, p.14).

We expect that the number of scooters in these 33 cities will continue to decrease in 2023 and 2024. As of September 2023, 15,000 scooters will be removed from Paris, and in January 2024, Brussels will cut scooter fleets from 20,000 to 8,000.

These changes will have a significant impact on ridership going forwards. The two aforementioned cities rank in the top 3 cities in Europe, and represent a total combined market share of 18% of all scooter trips in the 33 cities monitored.

On the brighter side, one (continuing) success story is that of Bordeaux, where ridership has more than quadrupled since last year after a tender limited operators to just two, but with a much larger allocation of vehicles for each operator.

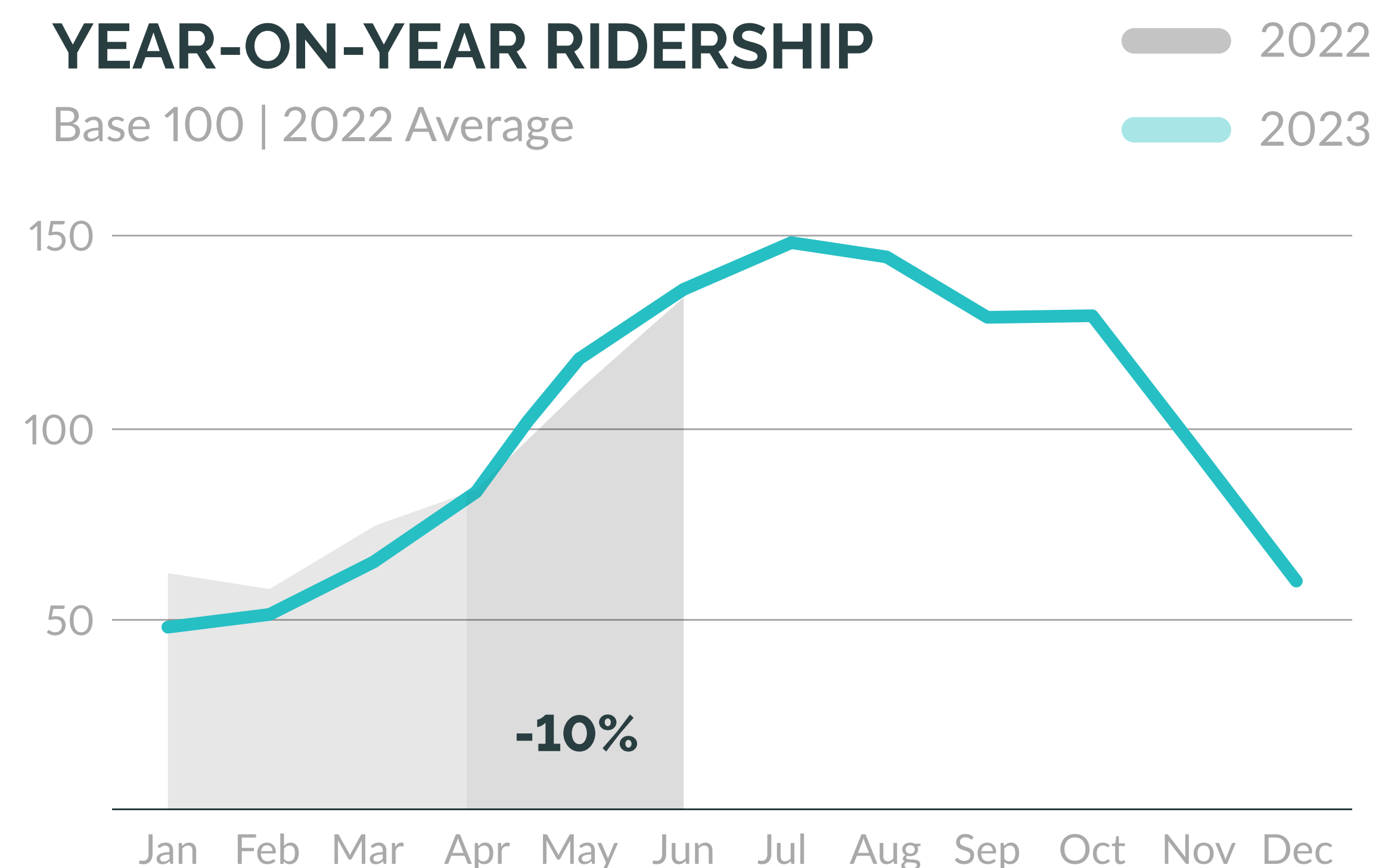
## TOP 3 - SCOOTER RIDERSHIP

AVG Trips per month in Q2 2023



## YEAR-ON-YEAR RIDERSHIP

Base 100 | 2022 Average





## FOCUS ON MOPEDS



### HIGHLIGHTS

Q2 2023

Ridership YoY

**-29%**

Fleet size YoY

**-28%**

TVD (vs 2022)

**2.3 (2.3)**

Significant disruption to the market over the first half of 2023 has contributed to a 29% decline in moped ridership in Q2. It's important to note that there are 28% fewer mopeds on the streets of the cities analysed. Let's look at some specific examples.

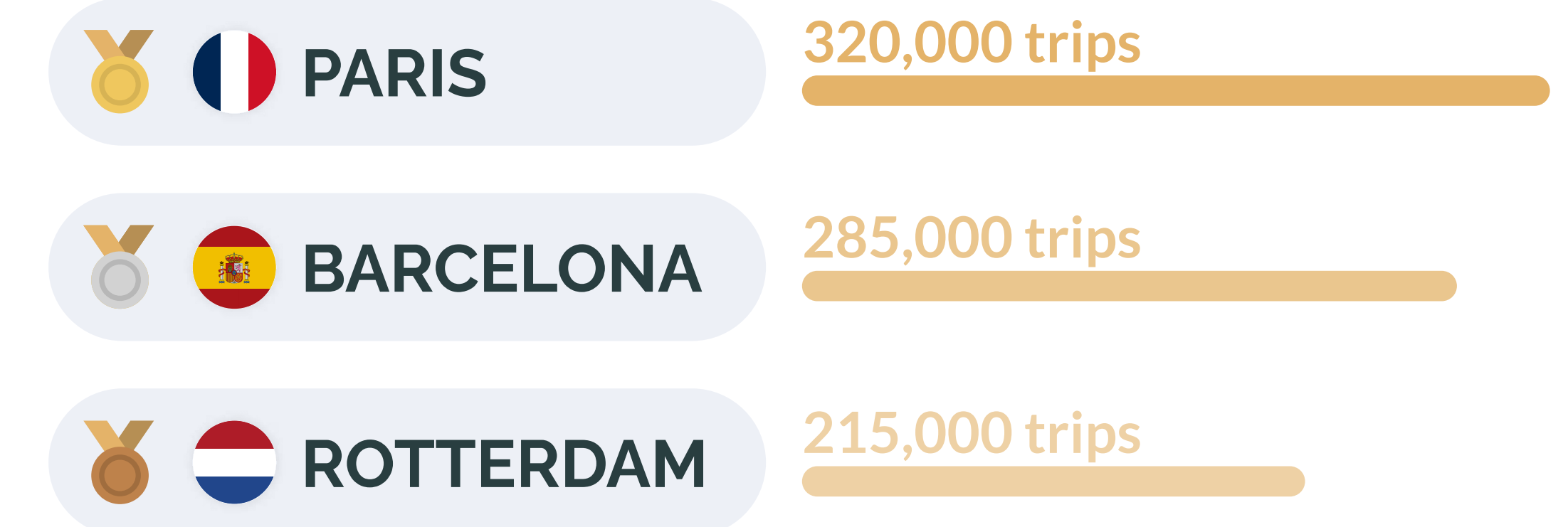
Mopeds in Paris recorded more trips than in Barcelona, who usually top the chart. As we saw in the last edition of the Index, Reby-affiliated companies left Barcelona, and ridership is yet to recover: the number of trips could only reach three-quarters of Q2 2022's levels

In Berlin, Hamburg and Madrid, moped fleets have been halved due to operators leaving the market. Ecoshare in Poland witnessed significant disruption to their service as theft crippled their operations and meant no trips could be taken. In Brussels and Rome, fleets were reduced to 58% of the size they were last year.

On the positive side, ridership in Turin doubled, and remained consistent with last year's in Bordeaux. Mopeds continue to be popular in Seville, where Cooltra have recently joined Acciona and Yego. In Amsterdam, ridership has grown by 22% despite new regulations on helmets being brought into effect. There's more good news for the Dutch capital as city authorities are in the process of trying to increase the fleet cap of mopeds from 770 to 1,200 across 2 operators.

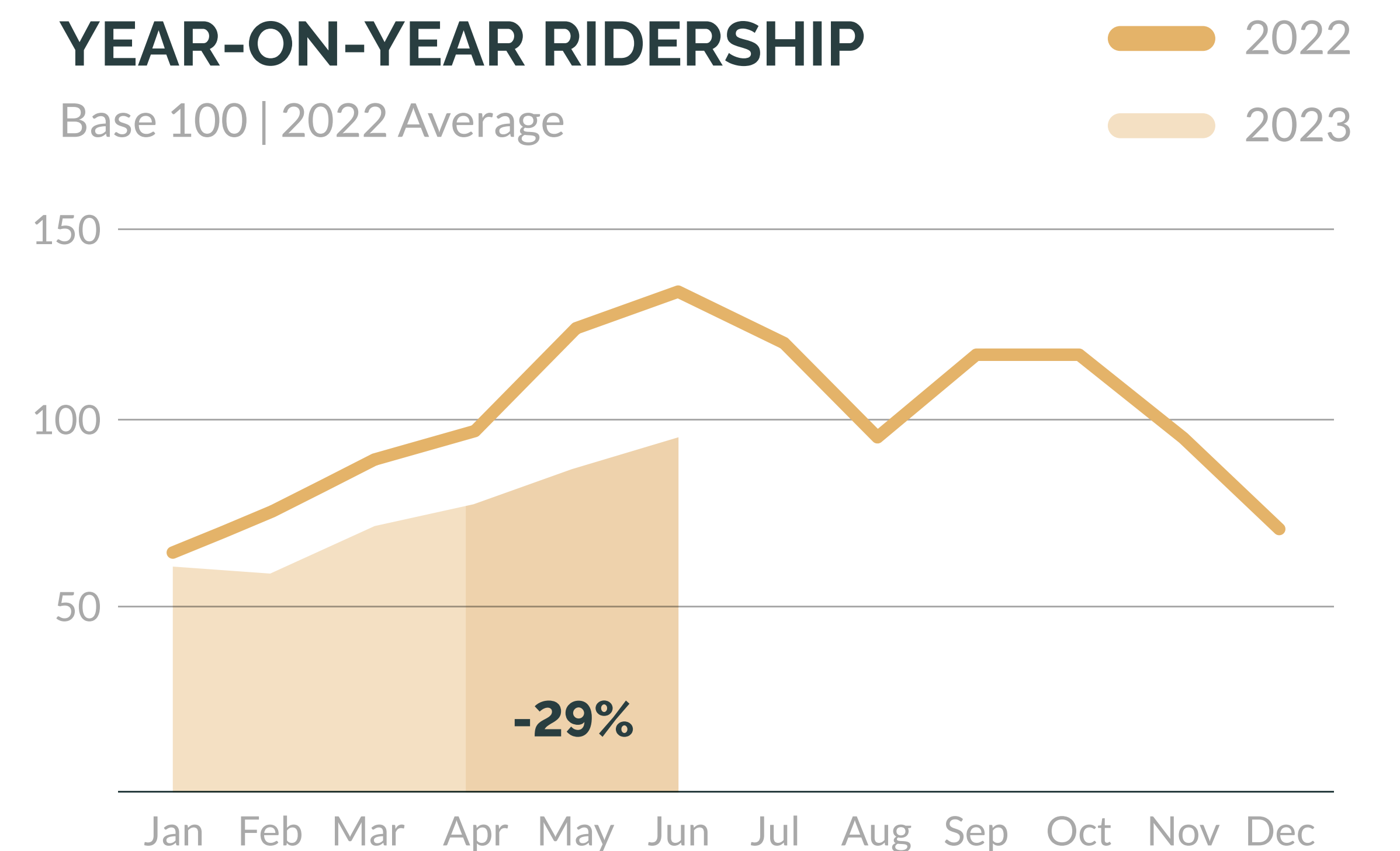
### TOP 3 - MOPED RIDERSHIP

AVG Trips per month in Q2 2023



### YEAR-ON-YEAR RIDERSHIP

Base 100 | 2022 Average





## FOCUS ON CARS



### HIGHLIGHTS

Q2 2023 v Q2 2022

Ridership YoY

**+14%**

Fleet size YoY

**+6%**

TVD (vs 2022)

**1.8 (1.7)**

Another first! This time shared cars are the mode showing the biggest growth compared to Q2 of last year.

German cities continue to lead the way for car sharing. Year-over-year ridership has increased 34% in Berlin and 50% in Hamburg. Among the other cities reporting strong numbers are Antwerp, Budapest, Brussels and Warsaw.

The rise of free-floating car sharing services continues. Today, just 15% of car sharing services are station-based – last year this number was 18%. In the 33 cities monitored, there are 6,000 more free-floating shared cars than a year ago, and this is where most of the growth in ridership is coming from.

When we look at station-based services, ridership is steady. We are not expecting huge growth from station-based services in the future, unless fleets are to significantly increase in size - this is because the use case is very different to a free-floating trip. Rentals from station-based services very rarely exceed 1 trip per vehicle per day, as the user takes the car for the day and returns it after a few hours. For free-floating services, having a car that makes 5 trips in one day is not beyond the realm of possibility.

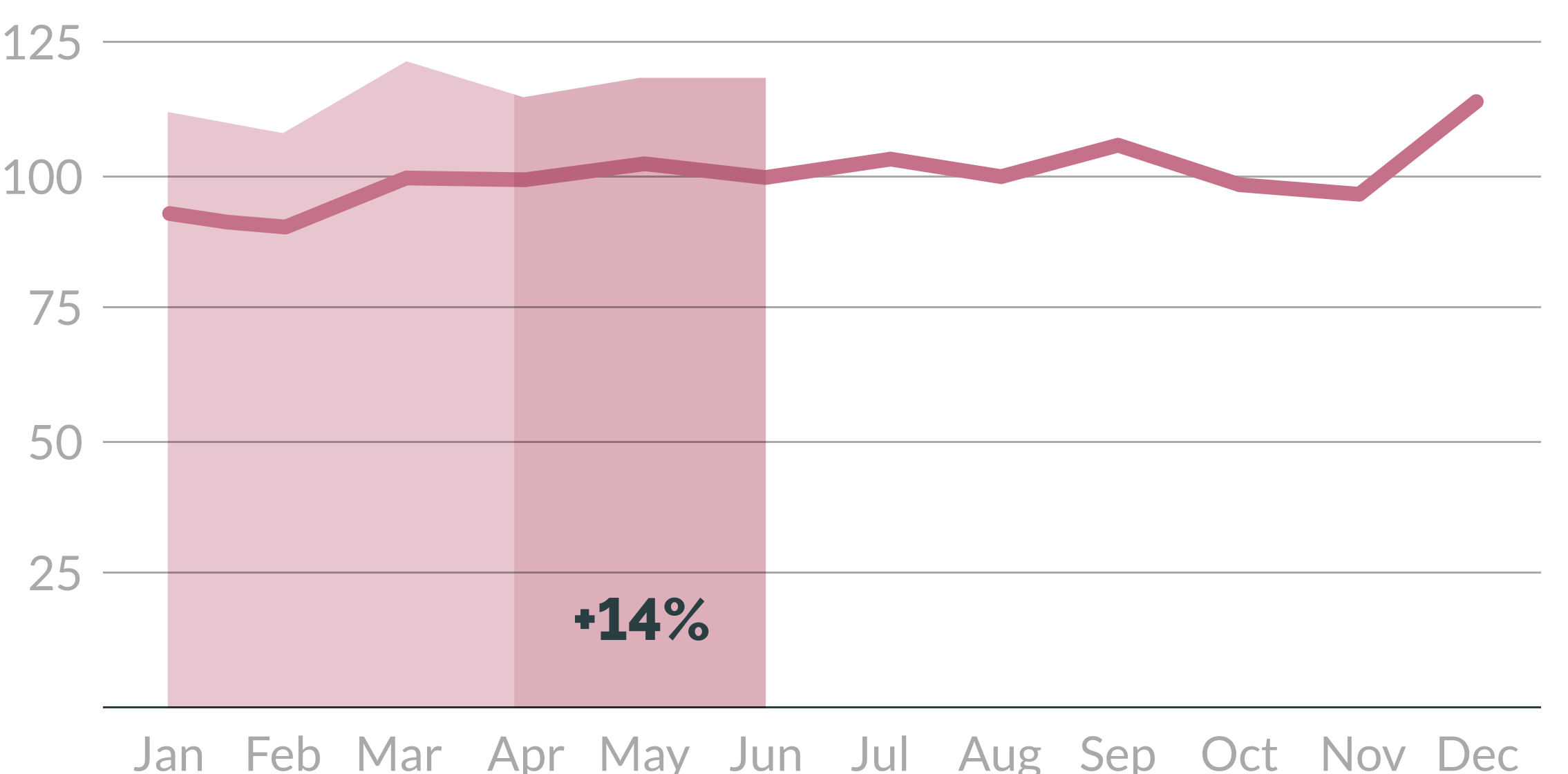
### TOP 3 - CAR RIDERSHIP

AVG Trips per month in Q2 2023



### YEAR-ON-YEAR RIDERSHIP

Base 100 | 2022 Average





# GLOBAL OVERVIEW

Europe continues to lead the world in shared mobility usage.

In a previous report, we compared shared mobility in Europe in 2022 with North America in 2021. Now that NABSA (North American Bike and Scooter Share Association) have released their report of 2022, we are now able to make a like-for-like comparison.

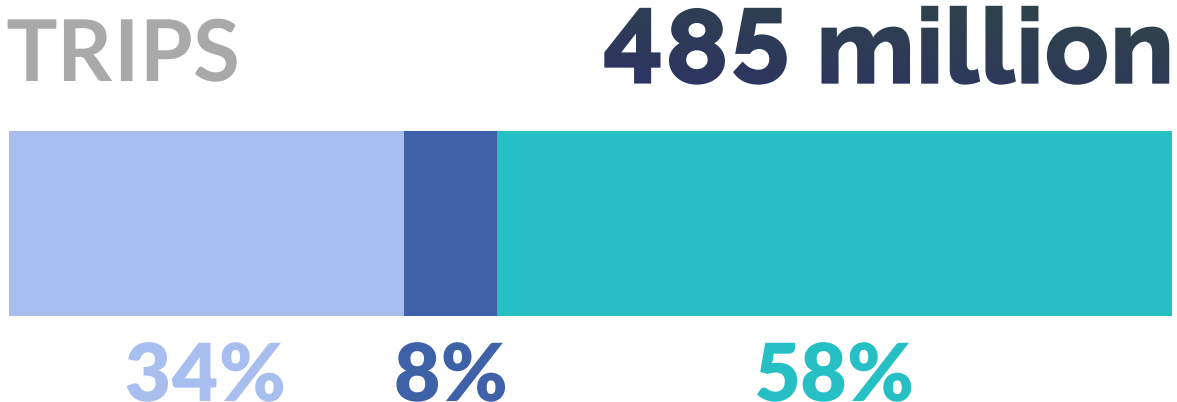
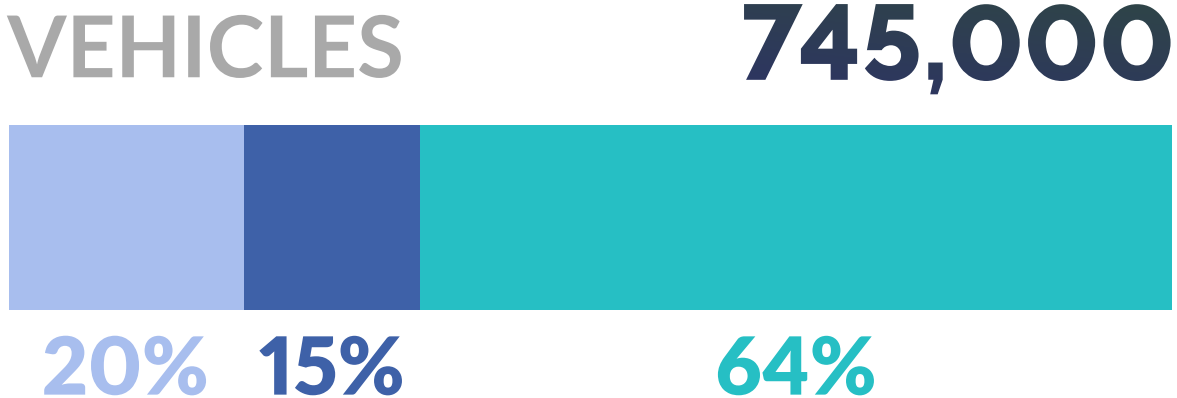
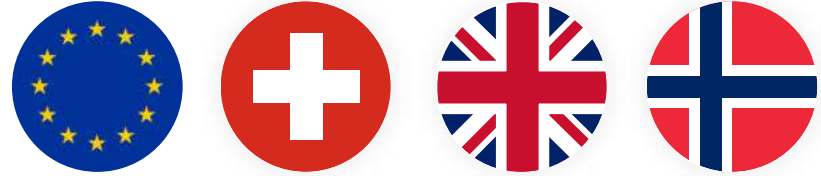
Europe leads the way - not only for fleet size and total trips - but for TVD and per capita usage too. This shows that, even though Europe is more populous, vehicles are used more frequently and, on an individual level, Europeans are taking nearly double the number of trips than North Americans.

## BIKES & SCOOTERS EUROPE VS NORTH AMERICA 2022



### EUROPE

Source: Fluctuo

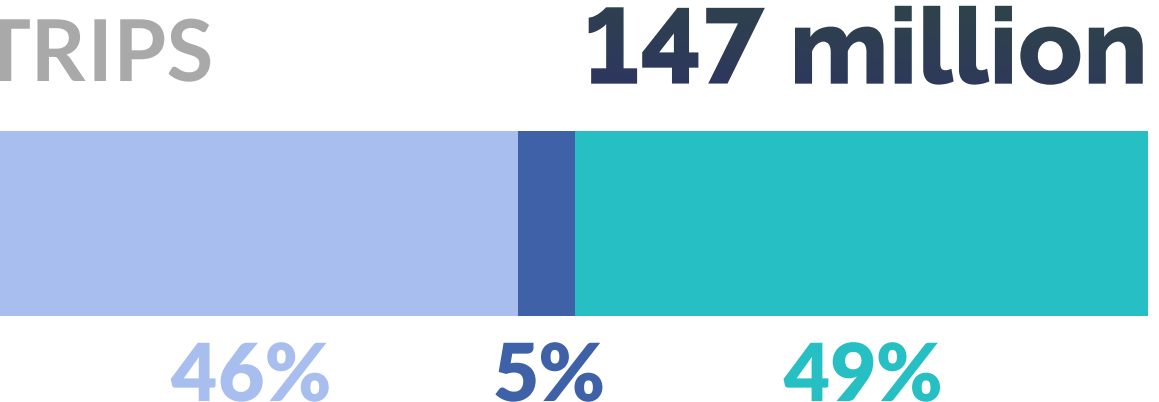
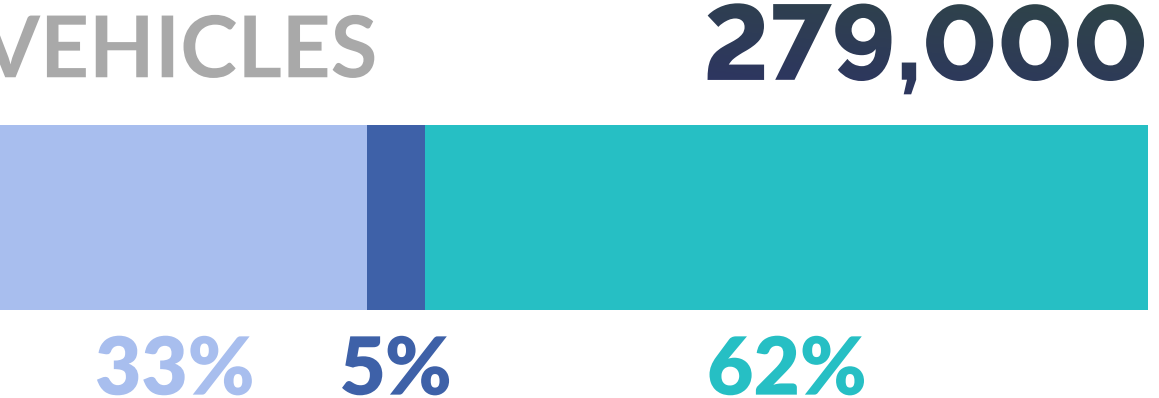
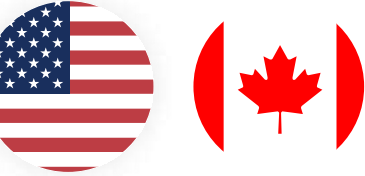


**TVD** **1.8**

**TRIPS PER CAPITA** **0.9**

### NORTH AMERICA

Source: NABSA



**TVD** **1.4**

**TRIPS PER CAPITA** **0.4**





# MARKET & POLICY DEVELOPMENTS

## Fewer operators

Cities are realising that the optimum number of operators to provide a vehicle type is between 2 and 4. Many cities have reduced the number of operators by more than half, but have also given each operator the chance to have more vehicles. We saw this with Rome's decision to cut scooter operators from 7 to 3, Madrid from 5 to 3 and Brussels' upcoming tender which will cut operators from 8 to 2.

## Consolidation

Despite healthier market conditions when operators are selected, opportunities to be chosen are shrinking. For example, 6 operators in Brussels will lose out when the tender to select 2 services comes into effect in January 2024. This squeeze is being felt across the continent, and is fuelling rumours of mergers and acquisitions among the biggest operators, including Bolt, TIER and Voi.


## Will Paris' decision change anything?

Paris has decided to ban scooters after a referendum in April- joining Barcelona and Amsterdam as two of the only major European capitals not to have them. It seems like Paris is swimming against the current: cities are largely choosing to introduce stricter policies on scooters to improve the services, rather than banning them outright. No aftershocks of this decision have been felt outside of Paris just yet, but it will take more time for the full repercussions to be known.

### APRIL

-  Paris (FR)  
Paris votes overwhelmingly to ban shared scooters
-  Helsinki (FI)  
Designated parking bays introduced for bikes and scooters
-  London (UK)  
Forest (Formerly Human Forest) raises £12m
-  Rome (IT)  
Acciona exits the city, along with Milan
-  Brussels (BE)  
Gliize becomes 8th scooter operator in the capital
-  Berlin (DE)  
Avocargo ceases operations

### JUNE

-  MILES increases fleet by 500 vehicles in Hamburg, Munich, Berlin, and the Rhineland
-  Berlin (DE)  
Bolt launches Bolt Drive with 500 shared cars
-  Berlin (DE)  
Cargoroo launches 350 cargo bikes
-  Madrid (ES)  
Dott & TIER launch in Madrid following tender
-  Seville (ES)  
Cooltra launches 400 mopeds in the city
-  Stockholm (SE)  
Citybike scheme cancelled due to defective bikes

### JULY

-  Paris (FR)  
Moped tender selects Cityscoot, Cooltra & YEGO
-  Marseille (FR)  
Police to remove shared scooters and bikes due to riots
-  Lisbon (PT)  
Frog launches with a fleet of 300 scooters
-  Vienna (AT)  
Court validates rules in favour of scooter tender decision after TIER appeal
-  Milan (IT)  
Voi collaborates with city to find new parking areas for scooters
-  Dublin (IE)  
Work begins on drafting a tender as scooters become road-legal in Ireland



# MADRID

## SPAIN



### OVERVIEW

Q2 2023

Population density

**5,300/km<sup>2</sup>**

Urban population

**3,223,000**

Fleet size

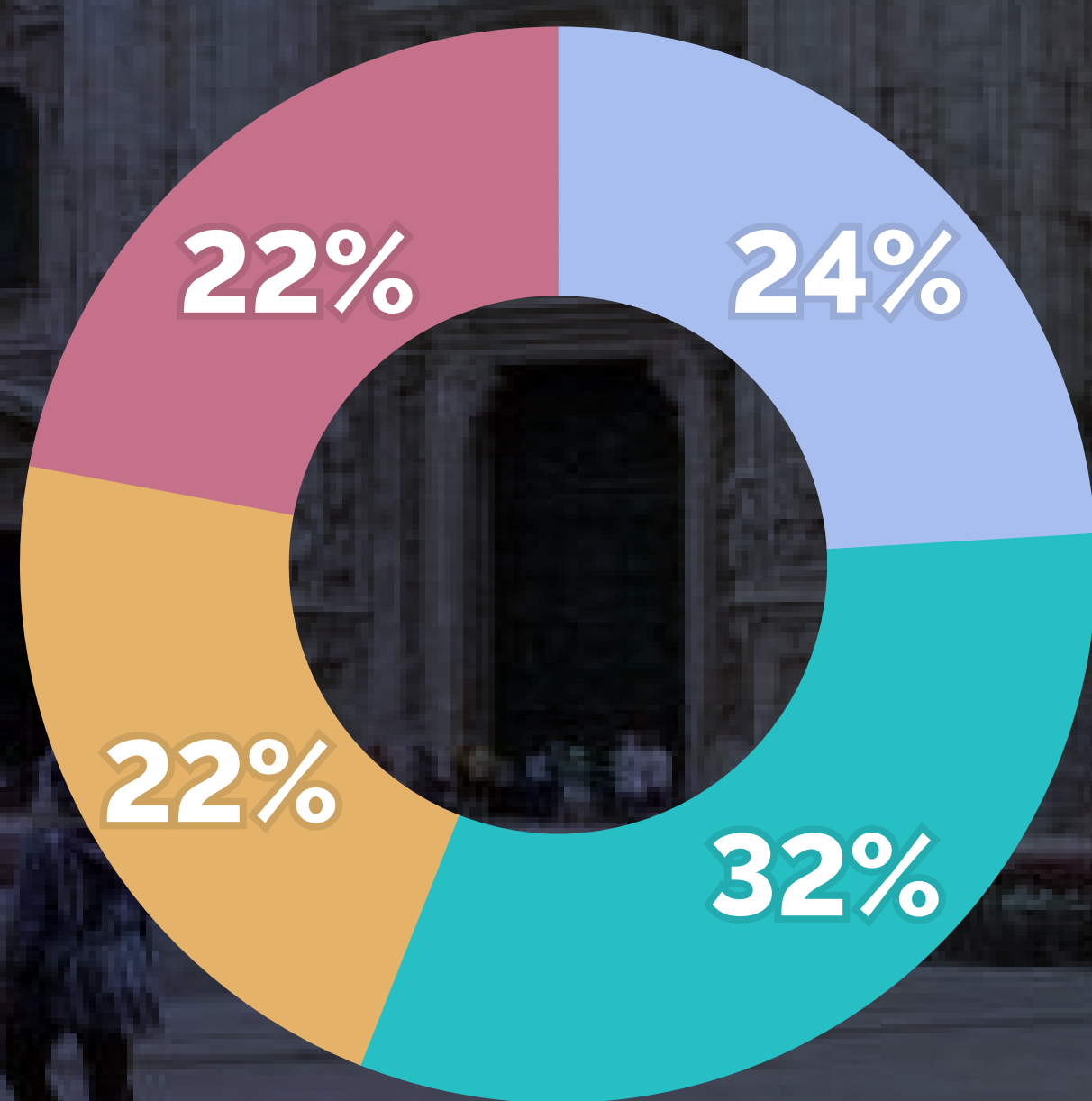
**16,500**

Number of services

**18**

### SHARED MOBILITY BREAKDOWN

Q2 2023



In May, Dott, Lime & TIER launched scooter fleets following a successful tender response. This meant that there was no longer space for Bird, Bolt & Voi, who all operated at the start of 2023. Each company will manage 2,000 scooters. This won't significantly decrease the number of scooters that were on offer before, but it should make it easier for the reduced number of companies to turn a profit and provide a high quality service.

The public bike system BiciMAD was completely overhauled with 7,500 new bikes from PBSC in March 2023. The service has been available for free since May and will continue to be free until the end of 2023. As a result, we expect to see an increase in ridership for this service in the coming months.

Madrid is home to the second-largest shared car fleet in Europe (across the 33 cities monitored). It places third in most shared car trips, and fifth for trips per capita, which is impressive for a city of this size.

### TIMELINE

- April 2023**  
Dott, Lime & TIER become sole scooter operators
- March 2023**  
New BiciMAD system launched
- June 2022**  
Voltio launches 500 shared cars
- December 2022**  
Free2move adds 150 Jeep to 700-strong fleet

### MOBILITY LANDSCAPE - JUNE 2021

MODE	SERVICES	VEHICLES	VEHICLES PER 10K INHAB.
		<b>3,000</b>	<b>9</b>
	 	<b>4,000</b>	<b>12</b>
		<b>5,600</b>	<b>17</b>
	 	<b>2,800</b>	<b>8</b>
<b>TOTAL</b>	<b>21</b>	<b>15,400</b>	<b>-</b>

### MOBILITY LANDSCAPE - JUNE 2023

MODE	SERVICES	VEHICLES	VEHICLES PER 10K INHAB.
		<b>4,500</b>	<b>14</b>
		<b>5,100</b>	<b>16</b>
		<b>3,500</b>	<b>10</b>
	 	<b>3,600</b>	<b>11</b>
<b>TOTAL</b>	<b>17</b>	<b>16,700</b>	<b>-</b>



# ROME

ITALY



Last year, there were 7 operators with a total of 14,500 scooters on the streets of Rome. After a tender process, Bird, Dott and Lime were chosen to take the scheme forward with a maximum fleet of 9,000 vehicles.

Restrictions will be much more stringent than before, especially in the heart of the city. Speed limits have been reduced to 20km/h, and there are certain zones where strict vehicle caps will be enforced. This includes touristy areas like *Via del Corso* and *Piazza del Popolo* (max. 30 scooters per operator), and *Trastevere* (max. 70 scooters per operator, despite its size).

Rome has also set minimum fleet requirements in zones 3, 4, 5 and 6 on the map to ensure that services are more inclusive of regions beyond the heart of the city. These areas must be served by at least 12 vehicles per kilometre squared. Zone 4 relates to the area inside the A90 ring road that circles Rome, including the residential & business district of *EUR*; zone 5 covers the suburbs of the city to the south; and zone 6 serves the area around Fiumicino airport, as well as the seaside town of *Ostia*.

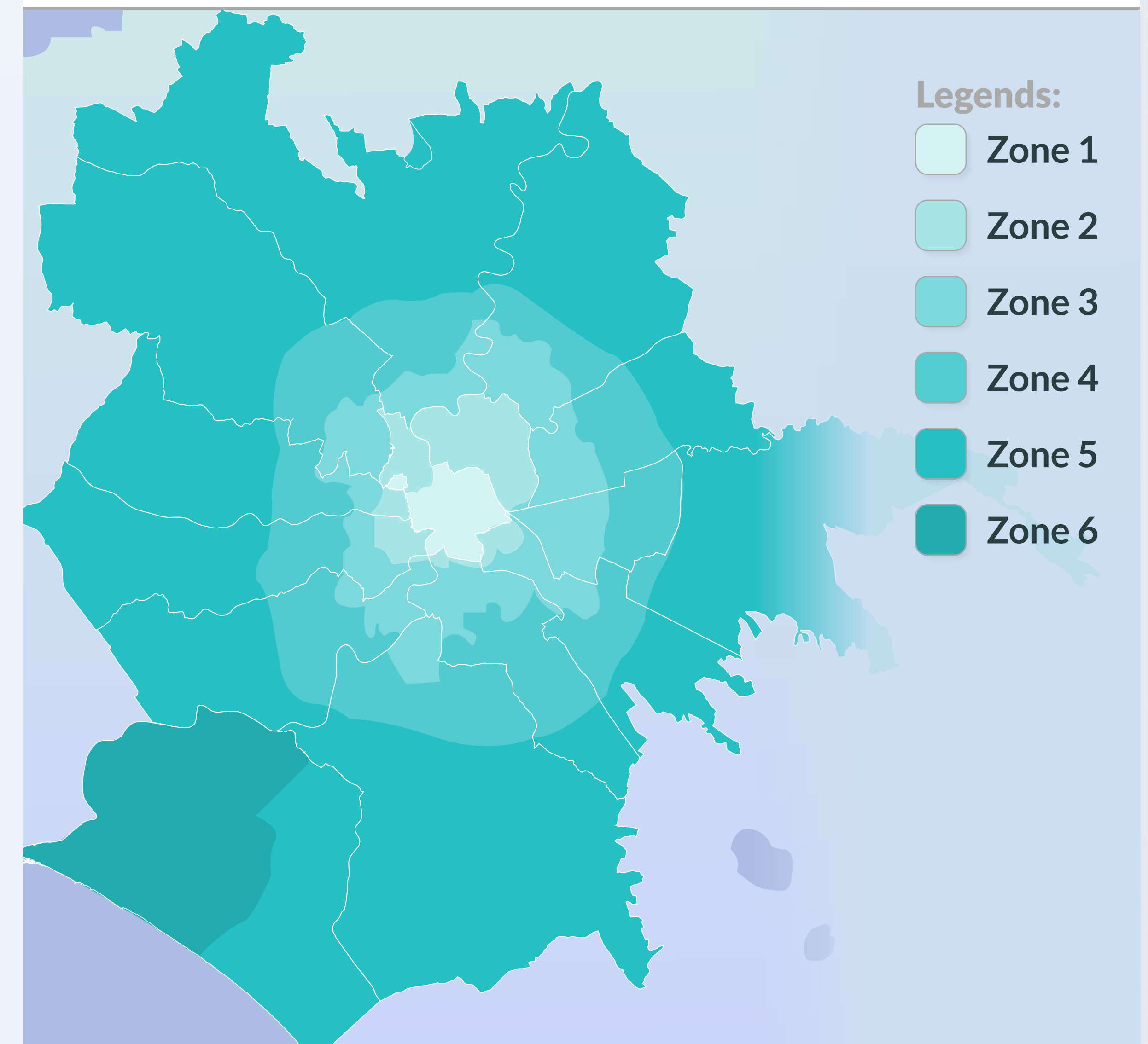
With these rules, it seems that Rome is determined to prove that scooters are an integral part of the wider transport network, and is looking to promote interconnectivity between public transport services. However, the tight restrictions on where scooters can be placed are likely to negatively impact each operators' ability to run a profitable service. With many vehicles out in the suburbs, it is almost certain that TVD will decrease.

## TIMELINE

- September 2023**  
Bird, Dott & Lime become sole scooter operators
- April 2023**  
Acciona removes mopeds from the city
- January 2023**  
Tender announced to cut scooters from 14,500 to 9,000
- May 2022**  
TIER launches electric bikes

## SCOOTER ZONES IN ROME

Vehicle density rules have been applied to each zone.



## OVERVIEW

Q2 2023

Population density

**2,200/km<sup>2</sup>**

Urban population

**2,873,000**

Fleet size

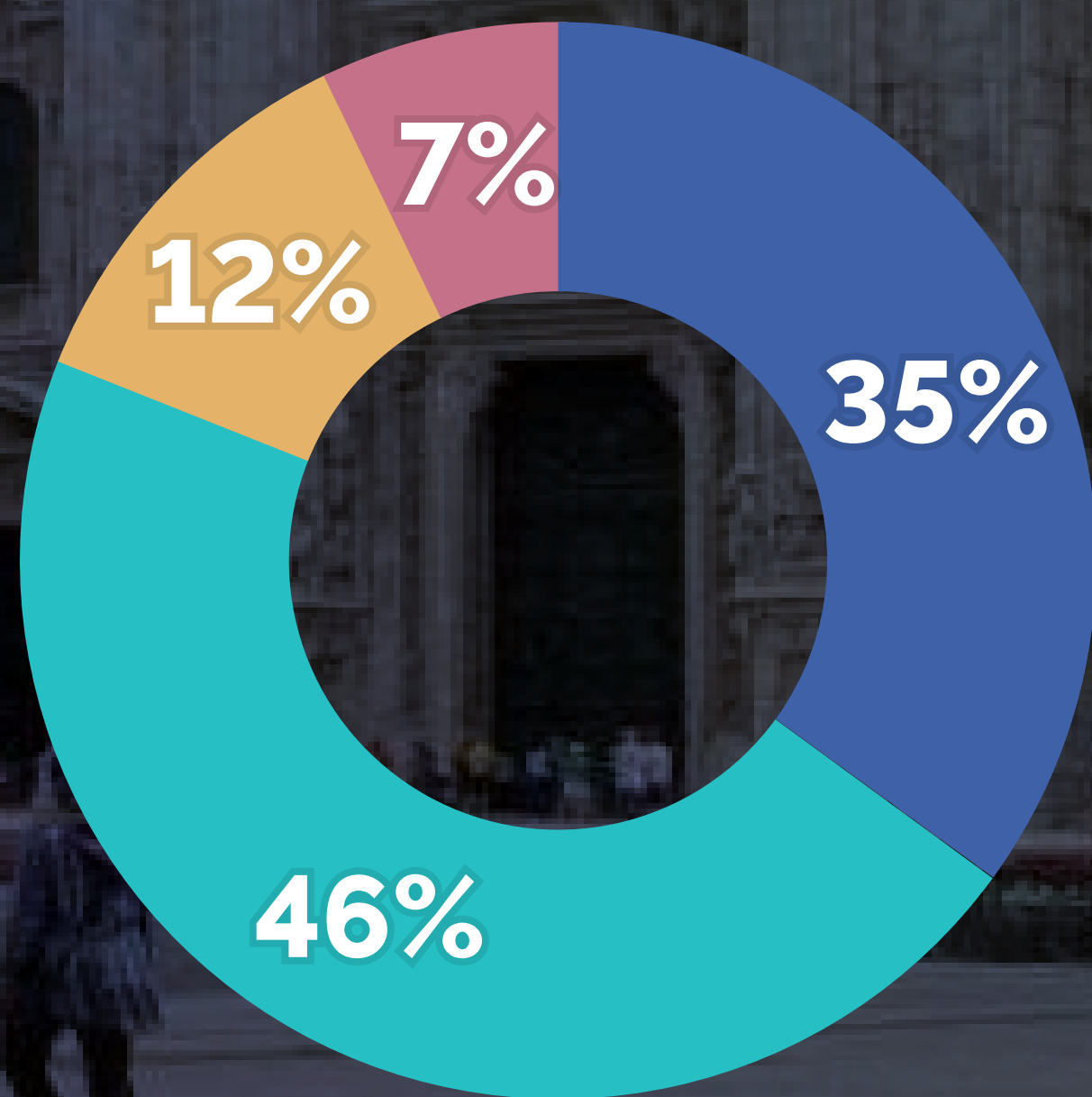
**28,000**

Number of services

**17**

## SHARED MOBILITY BREAKDOWN

Q2 2023







## METHODOLOGY

The European Shared Mobility Index gives an overview of the entire European market. An analysis of 33 European cities selected to highlight diversity in size, geography and market characteristics serves as the basis for the overall report allowing us to calculate ridership trends.

The Index encompasses shared bikes, scooters, mopeds and cars. Ride-hailing services (e.g. Uber, FreeNow), car-pooling (e.g. Klaxit, BlaBlaCar) and long-term rental services (e.g. Swapfiets) are not included. Regarding car sharing, only rentals by the minute, hour or day are included.

Multi-day rentals are not included. Vehicle and trip data was sourced directly from operators, open data sources, mobile applications and public announcements. Industry averages and some data extrapolation were used to fill remaining data gaps.

Companies who contributed financially to this report have not received any favourable treatment.

🔍 Please contact [harry.maxwell@fluctuo.com](mailto:harry.maxwell@fluctuo.com) for more



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SUSDEF (Sofia Asperti)

Bird, BIT Mobility, Cambio, Cityscoot, Cooltra, Donkey Republic, Dott, Felyx, GreenGo, Lime, MEC Sharing, MILES Mobility, Ryde, Superpedestrian, TIER, Voi

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