



Tu ritmo, tu transporte

CONSORCIO  
TRANSPORTES  
\*\*\*\*\*  
MADRID

# Preface

Publishing the Consorcio Regional de Transportes de Madrid report for 2023 gives us the opportunity to provide an overview of the work carried out and the results obtained. This is a snapshot taken at the end of the journey, after having corroborated the number of passengers and kilometres travelled.

Knowing how much and how we get about helps us to determine what we, as **Madriileños**, want and need which, to a certain extent, also reveals something about ourselves.

Looking to the past is not a nostalgic and fruitless exercise; but a way for us to improve the present and shape the future of public transport provision which accounts for 20-25% of all trips taken.

The data provided herein give a precise insight into supply and demand, fares and financing, transport tickets, satisfaction and complaints. However the transparency and completeness of the information makes it virtually impossible to get a sense of the effort made, day in day out, by thousands of people, of just how difficult it is to design more than 700 urban and suburban lines, the complexity of scheduling trains and buses that serve even the smallest of the 179 municipalities.

We have succeeded in building a system capable of responding to a wide range of criteria: reliability, safety, punctuality and economy, to name but a few. And although the number of passengers in 2023, 1.607 billion, speaks for itself, when more than 81% of trips are taken using the Travel Pass, we are certain that, on a quantitative level, we also meet the real mobility needs of **Madriileños**.

The widespread and virtually exclusive use of this ticket is proof of how loyal **Madriileños** are when it comes to using public transport and a guarantee that our complex, integrated and coordinated system offers a service that brings them back time and time again...so there must be a reason for this. As a matter of fact, single tickets were barely used for 4% of trips.

The system's needs, the investment required to keep this fleet in operation, exceeds €2.945 billion euros, representing an average trip value of €1.69 euros; 18% of which is contributed by users, with the rest being subsidised by the Community of Madrid (66%), Madrid City Council (9%), the State (5%) and other administrations (2%).

These 1.607 billion passengers, equivalent to the combined population of China and the United States, is an almost 18% year-on-year increase and, at last, an improvement on the pre-pandemic figure of 1.6 billion recorded in 2019.

Production, which measures the sum of the trips taken by all buses and cars during the year, was 645.3 million car-kilometres, an improvement on the 2019 and 2022 data.

This report is a paradoxical attempt to freeze a service that is, in essence and by definition, dynamic, and not just down to the circulation of trains and buses: the Metro network is expanding, the Consortium is reviewing its more than 400 suburban routes and new urban and business developments are looking to become part of the public transport network.

Facilitating citizen mobility means responding to one of our inherent qualities; our natural inclination to move around, whether due to necessity, obligation or vocation.

Every day, we all leave our own footprint on the map of the region at some stops used regularly, and others that are more sporadic and some that may even be out of the ordinary for us. Sometimes we travel with others, sometimes alone.

Each of these lines tells us something about ourselves and, to a certain extent, defines who we are. If we were to superimpose them we would see points of contact dotted all over that surprise us and provide us with opportunities, but this is something that cannot be captured in a graph and is virtually impossible to explain in this report.

What is certain is that, while someone is analysing the information set out in this document, thousands of buses and trains, not to mention tens of thousands of **Madriileños**, are right now writing the history of mobility for yet another year.



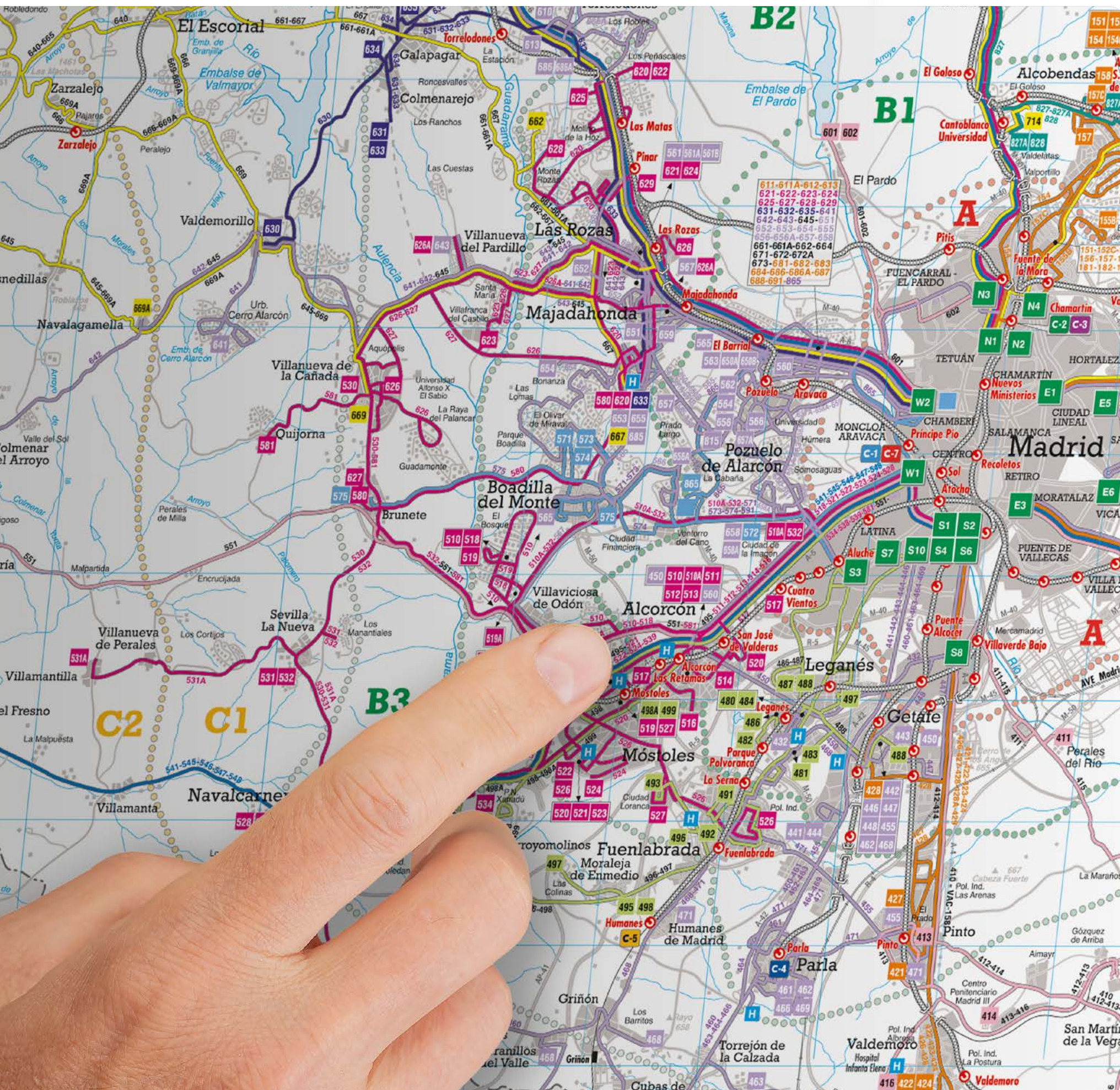
Jorge Rodrigo Domínguez

Regional Minister for Housing, Transport and Infrastructure

<b>1 EI CRTM</b>	<b>7</b>
1.1 The Institution	8
1.2 Funding the system	11
<b>2 The offer</b>	<b>23</b>
2.1 Metro de Madrid	24
2.2 EMT	28
2.3 Road-transport concessions	33
2.4 Renfe-Cercanías (commuter train)	39
2.5 Light rail	42
2.6 Other railway concessions	42
<b>3 The fare system</b>	<b>42</b>
3.1 Zoning	42
3.2 Ticket types	42
3.3 Social fares	42
3.4 The distribution network	42
3.5 Fares	42
3.6 The technology	42
<b>4 Passengers</b>	<b>45</b>
4.1 Evolution of passenger demand by operator	46
4.2 Evolution of demand by transport ticket	48
4.3 Ticket sales	49

<b>5 Strategic lines</b>	<b>57</b>
5.1 Intermodality	57
5.2 The CITRAM	61
5.3 Innovation Hub	62
5.5 Relevant activities	64
5.6 Universal accessibility	71
5.7 The environment	72
5.8 Service quality and customer service	74
5.9 Studies	76
5.10 European projects	80
<b>6 Citizen relations</b>	<b>83</b>
6.1 User information	83
6.2 Customer service	89
6.3 Complaints	91
6.4 Communication campaigns	92
<b>7 Institutional relations</b>	<b>95</b>
7.1. International presence	96
7.2. Other initiatives	97
7.3. Institutional events	98
7.4. Acknowledgements of the Consorcio Regional de Transportes Madrid	99





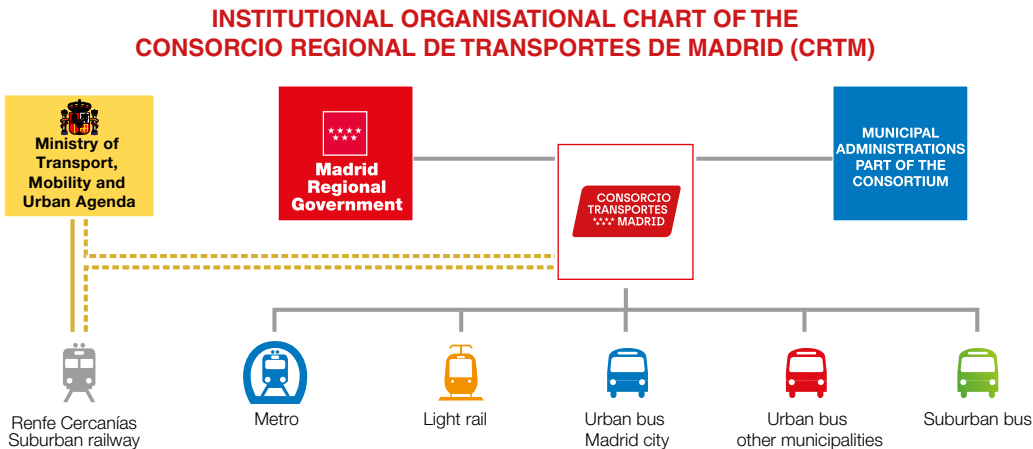
# The CRTM

The Regional Consortium of Transportation for Madrid (CRTM) is the Community of Madrid's Public Transport Authority. It was founded in accordance with Law 5/1985, of 16 May 1985, of the Assembly of Madrid, as an Autonomous Body of the Community of Madrid, bringing together the region and all its local councils' competences in the field of regular public passenger transport, assuming the integrated management of the public-transport system in the region.

Its main functions and goals can be summarised as:

- Planning public-transport infrastructure for passengers.
- Planning services and coordinating operating programmes for all forms of public transport.
- Implementing an integrated fare system.
- Establishing a stable funding framework.
- Controlling and monitoring the financial management of operators.
- Creating a general overview of the system, bringing external relations and users together.





1.1 The Institution

The CRTM is a group of public authorities that transfer their powers to a joint authority. As a result, the transport operators do not form a direct part of the Consortium, but are answerable to it due to the adherence of the authority owning the service they provide.

The Board of Directors of the body includes representatives of both the Community of Madrid and Madrid City Council, and the member local authorities, as well as the State Administration, which also helps to fund the system. The Board is therefore made up of a range of representatives of society, with members of business and consumer associations as well as trade unions.

The Consortium is led by a Board of Directors that performs its duties either directly or through an Executive Committee. The composition of these bodies at 31 December 2023 was as follows:

A. THE BOARD OF DIRECTORS

Autonomous Region of Madrid	Chairman	Jorge Rodrigo Domínguez
	Board Members	Jose María García Gómez
		M <sup>a</sup> Teresa Barcons Marqués
		Miguel Núñez Fernández
		Luis Miguel Torres Hernández
		Juan Revuelta González
Madrid City Council	Vice President	Jose Antonio Sánchez Serrano
	Board Members	Francisco de Borja Carabante Muntada
		Engracia Hidalgo Tena
State Administration	Board Members	-
		Jaime Alberto Moreno García-Cano
		Elena Bernardo Llorente

Member Councils	Board Members	Francisco José Recover Lorente
		Jose Luis Álvarez Ustarroz
		Iván Fernández Heras
CC.OO. / U.G.T	Board Members	Luis Mercado García
		Rosa Palomar Cepa
Business Associations	Board Members	Rafael Barbadillo López
Consumer Associations	Board Member	Jaime Rodríguez Medal
Non-Board Member Secretary		Gustavo Samayoa Estrada
Non-Board Member Managing Director		Pablo Bodega Herráez
Renfe-Cercanías (commuter train)		Pablo José Rodríguez Sardinero
		Ricard Ribé Piñol


B. THE EXECUTIVE COMMITTEE

Chairman	Jorge Rodrigo Domínguez	Board Members	Jose María García Gómez
Secretary	Pablo Bodega Herráez		Juan Revuelta González
Non-Board Member	Pablo José Rodríguez Sardinero		Francisco de Borja Carabante Muntada
Managing Director			Engracia Hidalgo Tena
			Mariano Fuentes Sedano


C. THE OPERATIONAL FRAMEWORK

The operational framework of the public transport system of the Autonomous Region of Madrid is summarised in the following diagram:


ROAD PASSENGER TRANSPORT



**Empresa Municipal de Transportes de Madrid (EMT)**  
A Madrid City Council state-owned company that provides urban transport services in the city of Madrid.



**Urban transport in other municipalities**  
6 urban-transport concessions serve 6 municipalities and 1 municipal company in the municipality of Fuenlabrada. In addition, 29 municipalities have urban services operating under suburban concessions.



**Suburban transport**  
27 operators run 30 suburban concessions serving all municipalities in the region.


TRANSPORT INTERCHANGES

5 public-works, operating and maintenance concessions for the transport interchanges in Madrid: Avenida de América • Plaza de Castilla • Plaza Elíptica • Moncloa • Príncipe Pío

RAIL PASSENGER TRANSPORT




**Metro de Madrid**  
A Community of Madrid state-owned company that runs in 10 municipalities.



**Renfe Viajeros**  
A state-owned company answerable to the State Administration that operates the Renfe-Cercanías commuter-rail network in Madrid.



**Metro railway concessions**  
2 public-works concessions to extend line 8 (Barajas - Airport T4) and line 9 (Puerta de Arganda - Arganda del Rey) operated by Metro Barajas S.C. and TFM (Transportes Ferroviarios de Madrid), respectively.



**Light-rail concessions**  
3 public-works and operating concessions for light-rail lines: ML1 (Metros Ligeros de Madrid), ML2 and ML3 (Metro LigerO Oeste) and ML4 (Tranvía de Parla).



## 1.2 Funding the system

### SYSTEM REQUIREMENTS AND FUNDING

The financial requirements of the transport system consist of the CRTM remunerating operators for the services provided, and are funded through public contributions from the different levels of the Administration and from user contributions. The difference between the economic needs incurred and the revenue collected from ticket sales is covered by public contributions from the different administrations, constituting the so-called system fare subsidy.

The remuneration of Metro de Madrid and the Empresa Municipal de Transportes de Madrid (EMT) are governed by annual agreements, based on the approval of a break-even fare per passenger in the case of Metro, and on a production agreement for EMT, both including the agreement of certain service quality targets.

The financial relations with the different private road transport operators are set forth in the administrative contracts for the management of public services, as provided in Land Transport Law 16/1987 of 30 July, subsequently validated under Road Transport and Mobility law 5/2009 of 20 October by the Assembly of Madrid.

The CRTM remunerates light rail concession holders and those of the section of line 8, Barajas-Airport T4, in line with the actual level of passenger demand, using the technical fare offered, whereas the deficit between the break-even fare and the revenues from Parla Tramway is paid equally between the CRTM and Parla Town Council, similarly to the system established with the Empresa Municipal de Transportes in Fuenlabrada.

Transportes Ferroviarios de Madrid (TFM), the concession holder of the section of Metro line 9 between Puerta de Arganda and Arganda del Rey, is paid by the passengers using the Travel Pass in accordance with the price set forth in the contract, receiving an additional contribution per passenger until a certain level of demand is met.

The interchanges are funded through the application of the fare set forth in the concession contracts, which is updated in the manner set forth out therein.

The CRTM has an agreement with Renfe Viajeros that governs the use of multimodal tickets -Travel Passes-and the payments arising therefrom. In 2023, compensation was governed by Royal Decree-Laws 20/2022 of 27 December 2022 and 5/2023 of 28 June 2023.

User contributions are derived from revenue from transport ticket sales.

The Community of Madrid, the State Administration (AGE) and Madrid City Council are the main partners in funding the system. The city councils of the Autonomous Region with an urban transport service, as well as the Autonomous Region of Castile-La Mancha under the passenger-transport financing agreement signed between the Autonomous Region of Madrid and said Autonomous Region also contribute, though substantially less.

The State Administration contributes with a nominative subsidy, which is applied to the system's funding requirements and distributed as follows:

- 34% goes towards covering the operating deficit of the EMT de Madrid, in accordance with the Regulatory Agreement on the conditions of Madrid City Council's membership of the CRTM for the period 2017-2020.
- The remaining 66% funds the fare subsidy for Metro de Madrid and for the services operating in zones B and C.

The contribution of the rest of the public authorities, once the State contribution has been deducted as indicated, is distributed as follows:

- Madrid City Council covers 50% of the deficit of the EMT; 50% of the fare subsidy corresponding to road concessions and Renfe services in zone A; 35% of interchange requirements; and 35% of the CRTM's operating expenses and commercial expenses.
- The Community of Madrid pays the entire fare subsidy corresponding to Metro de Madrid. It also covers the part not funded by Madrid City Council for the rest of the services and expenses in which it participates, i.e. the remaining 50% of the fare subsidy for road concessions and Renfe services in zone A; 65% of interchange requirements; and 65% of the CRTM's operating expenses and commercial expenses. It also assumes the entire fare subsidy generated in zones B and C, corresponding to the road concessions and Renfe services, and that of the railway concessions. Lastly, it also pays 50% of the operational deficit of member-council municipal services.
- Councils with an urban passenger transport pay 50% of their operating deficit.
- The Regional Government of Castile-La Mancha contributes to the funding of the fare subsidy corresponding to exterior Travel Cards (zones E1 and E2) in accordance with the criteria established in the partnership agreement between the two authorities.

**€1.69**  
average  
need  
per passenger\*

**€0.31**  
average  
revenue  
per passenger\*

**€1.38**  
average  
subsidy  
per passenger\*

\* These values are obtained without including passengers with tickets from Renfe-Cercanías (single ticket, 10 trips and others), as these do not affect the CRTM budget



## 2023 BUDGET AND FINANCIAL RESULT

The CRTM's commercial nature requires the management of two types of budget:

- An estimated budget covering commercial activity, made up on the income side by revenue from the collection of fares, and on the expenses side by the reimbursement of this revenue to the transport operators, along with the expenses involved in the distribution and sale of the different tickets.
- An administrative budget consisting of income relating to fares and other public revenue, as well as contributions from partners corresponding to the fare subsidy. With regard to expenses, this budget includes the necessary credit for the funding of the body's own staff, running expenses for goods and services and their investments, as well as the fare subsidy paid to operators.

In 2023, the total amount of revenue settled from both budgets amounted to €2.4445 billion and, in terms of expenses, the amount at 31 December represented a total of €2.5512 billion. The total revenues of the system from fares, including those received from operator tickets, which do not form part of the CRTM budget, amounted to €491.0 million in 2023. The difference between revenues – entitlements – and expenditure – obligations – places the budgetary result for the year at a deficit of €106.7 million, according to the figures below.

### 2023 FINANCIAL RESULT (€)

<b>I.- REVENUES</b>	<b>2,510,641,966.96</b>
*.- Contributions to the CRTM	2,005,599,237.74
*.- Fare revenue applied	490,990,080.13
*.- Own CRTM and commercial income	18,052,649.09
*.- MRR Funds	-4,000,000.00
<b>II.-EXPENSES</b>	<b>2,617,339,285.63</b>
*.- Internal CRTM and commercial operations	57,666,441.72
*.- Fare payment to transport operators	2,461,280,358.02
*.- Administrative Concessions	98,392,485.89
*.- Other operating and capital expenses	0.00
<b>III.- DIFFERENCE (I-II)</b>	<b>-106,697,318.67</b>

The financial flows of the source and application of funds for the financial year 2023 can be seen in the following recap, which presents all revenue and expenses, and the economic results for 2023.

### BUDGET LIQUIDATION (€)











<b>REVENUE</b>	<b>Entitlements 2023</b>
Chapter 3.- Fees and other income	2,396,892.61
Chapter 4.- Current transfers	2,004,443,623.49
Chapter 5.- Equity income	1,365,250.33
Chapter 6.- Alienation of real-estate investments	150.00
Chapter 7.- Capital transfers	-2,694,850.00
Chapter 8.- Financial assets	7,591.71
<b>TOTAL LIMITED INCOME</b>	<b>2,005,518,658.14</b>
Collection revenue	439,029,620.14
<b>TOTAL ESTIMATED INCOME</b>	<b>439,029,620.14</b>
<b>TOTAL INCOME</b>	<b>2,444,548,278.28</b>
<b>EXPENSES</b>	<b>Obligations</b>
Chapter 1.- Staff Costs	7,474,714.56
Chapter 2.- Running expenses	6,631,139.42
Chapter 4.- Current transfers	2,075,370,852.09
Chapter 6.- Real estate investments	2,590,439.37
Chapter 8.- Financial assets	4,500.00
<b>TOTAL LIMITED EXPENSES</b>	<b>2,092,071,645.44</b>
Raw materials in service operations	6,095,262.00
Other external work	34,870,386.37
Collection repayment	418,208,303.14
<b>TOTAL ESTIMATED EXPENSES</b>	<b>459,173,951.51</b>
<b>TOTAL EXPENSES</b>	<b>2,551,245,596.95</b>
<b>ENTITLEMENTS–OBLIGATIONS 2023</b>	
<b>I.- LIMITED BUDGET OUTTURN</b>	<b>-86,552,987.30</b>
<b>II.- ESTIMATED BUDGET OUTTURN</b>	<b>-20,144,331.37</b>
<b>FINANCIAL YEAR INCOME (LOSS) (I+II)</b>	<b>-106,697,318.67</b>

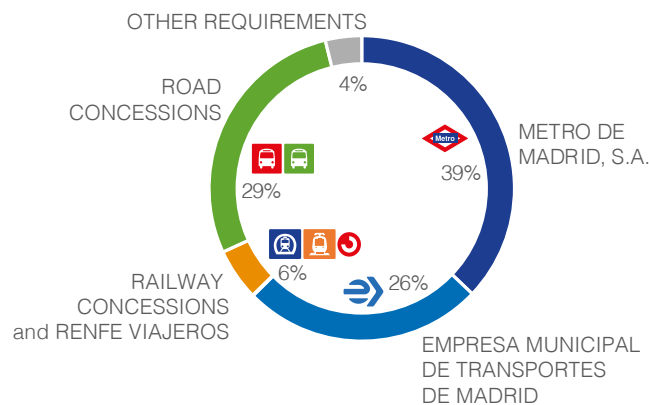
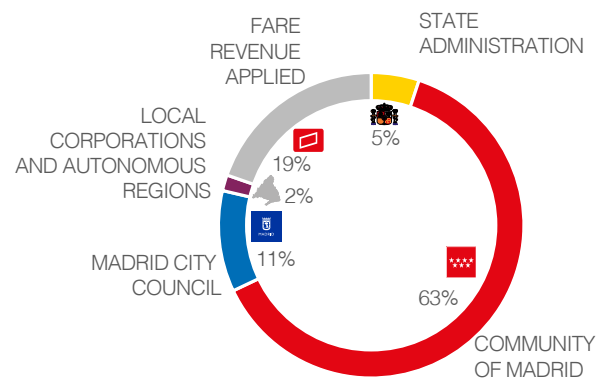
This budget result takes into account revenue and expenses irrespective of the actual year in which they are accrued. Accruals and deferrals give rise to the own economic result for the year, which for 2023 is equal to the budgetary result.



FUNDING SCHEME FOR CONTRIBUTIONS FROM THE CRTM TO THE REQUIREMENTS OF THE TRANSPORT SYSTEM.  
2023

Financial Result (euros)

SOURCE OF FUNDS				APPLICATION OF FUNDS / ACTUAL NEEDS		
	STATE ADMINISTRATION	126,894,000.00	<div>CONSORCIO REGIONAL DE TRANSPORTES DE MADRID</div> <div>TOTAL REQUIREMENTS: 30,320,141</div>		METRO DE MADRID, S.A.	950,221,079.72
	COMMUNITY OF MADRID	1,569,459,877.55			EMPRESA MUNICIPAL DE TRANSPORTES DE MADRID, S.A.	652,344,725.59
	MADRID CITY COUNCIL	267,271,439.80			RENFE VIAJEROS	1,836,255.84
	LOCAL CORPORATIONS AND AUTONOMOUS REGIONS	41,973,920.39			RAILWAY CONCESSIONS (TFM, TRANVIA PARLA, LIGHT RAIL)	140,405,770.64
	FARE REVENUE APPLIED	490,990,080.13			ROAD CONCESSIONS (CITY AND SUBURBAN BUSES)	716,429,048.88
	EUROPEAN FUNDS	-4,000,000.00			OTHER REQUIREMENTS (ADMIN. CONCESSIONS, OPERATORS RUNNING/CAP. EXPENSES)	98,435,963.24
TOTAL SOURCE OF FUNDS 2,492,589,317.87			TOTAL APPLICATION OF FUNDS (Needs) 2,599,286,636.54			
			2023 FINANCIAL RESULT -106,697,318.67			



PROFIT AND LOSS ACCOUNT FOR FINANCIAL YEAR 2023 (€)

	2023	2022
2. Transfers and subsidies received	2,003,314,008.99	1,757,966,254.86
a) For the financial year	2,003,314,008.99	1,757,966,254.86
a.1) Subsidies received to fund expenses for the financial year	-3,850,464.25	4,073,125.00
a.2) Transfers	2,007,164,473.24	1,753,893,129.86
3. Net sales and provision of services	439,029,156.50	647,845,515.03
a) Net sales	439,029,156.50	647,845,515.03
4.Variation in stocks of finished goods and work in progress	34,694.47	0.00
6. Other ordinary management revenue	2,373,637.28	2,170,557.93
7. Surplus provisions	0.00	29,184,504.20
A) TOTAL ORDINARY MANAGEMENT EXPENSES (1+2+3+4+5+6+7)	2,444,751,497.24	2,437,166,832.02
8. Staff costs	-7,474,714.56	-6,937,673.22
a) Wages, salaries and similar	-5,759,853.36	-5,300,552.19
b) Employee welfare expenses	-1,714,861.20	-1,637,121.03
9. Transfers and subsidies granted	-2,097,711,526.38	-1,875,831,057.62
10. Procurements	-454,922,022.59	-656,429,845.17
a) Consumption of goods and other supplies	-454,922,022.59	-656,429,845.17
11.Other ordinary management expenses	-14,463,179.60	-11,667,718.02
a) External supplies and services	-14,377,709.81	-11,601,660.14
b) Taxes	-85,469.79	-66,057.88
12. Depreciation of fixed assets	-1,865,687.42	-4,194,256.06
B)TOTAL ORDINARY MANAGEMENT EXPENSES (8+9+10+11+12)	-2,576,437,130.55	-2,555,060,550.09
	EXAMPLE No.	EXAMPLE N-1
I Result (saving or dissaving) of ordinary management (A+B)	-131,685,633.31	-117,893,718.07
13. Impairment and gains or losses on disposal of non-financial fixed assets and assets held for sale	150.00	98,333,606.15
b) Retirements and disposals	150.00	98,333,606.15
14. Other extraordinary entries	57,300.82	89,593,425.70
a) Revenue	89,883.19	89,593,425.70
f) Expenses	-32,582.37	0.00
II Result of non-financial operations (I +13+14)	-131,628,182.49	70,033,313.78
15. Financial income	1,298,622.47	299,473.78
b) From other marketable securities and long-term loans	1,298,622.47	299,473.78
b.2) Other	1,298,622.47	299,473.78
16. Financial expenses	0.00	-220,212.52
b) Other	0.00	-220,212.52
20. Value impairment, disposals and sales of financial assets and liabilities	-15,995.16	0.00
b) Other	-15,995.16	0.00
III Result of financial operations (15+16+17+18+19+20+21)	1,282,627.31	79,261.26
IV Net results (saving or dissaving) for the financial year (II + III)	-130,345,555.18	70,112,575.04



**BALANCE SHEET AS OF 31 DECEMBER 2023 (€)**

	2023	2022
<b>ASSETS</b>	<b>277,292,335.96</b>	<b>290,657,942.60</b>
<b>A) NON-CURRENT ASSETS</b>	<b>10,013,993.61</b>	<b>8,628,858.93</b>
I. Intangible fixed assets	4,237,667.19	3,490,626.33
2. Industrial and intellectual property		
3. Computer software	4,082,960.86	3,409,996.35
4. Investments in assets under lease	154,706.33	80,629.98
II. Property, plant and equipment	1,077,024.05	1,008,338.27
2. Buildings	78,725.65	79,572.17
5. Other property, plant and equipment	998,298.40	928,766.10
V. Long-term financial investments	4,699,302.37	4,129,894.33
2. Representative credits and securities	4,690,765.86	4,121,357.82
4. Other financial investments	8,536.51	8,536.51
<b>B) CURRENT ASSETS</b>	<b>267,278,342.35</b>	<b>282,029,083.67</b>
II. Inventories	34,694.47	
1. Assets constructed or acquired for other entities	34,694.47	
III. Debtors and other receivables	220,327,127.32	140,236,907.46
1. Debtors through management operations	68,133,371.69	331,938,474.51
2. Other receivables	3,350,450.72	5,098,937.67
3. Public authorities	285,110,048.29	467,076,444.30
V. Short-term financial investments	10,016.85	13,108.56
2. Representative credits and securities	10,016.85	13,108.56
VII. Cash and cash equivalents	46,906,503.71	141,779,067.65
2. Cash	46,906,503.71	141,779,067.65
<b>EQUITY AND LIABILITIES</b>	<b>277,292,335.96</b>	<b>290,657,942.60</b>
<b>A) EQUITY</b>	<b>69,001,804.50</b>	<b>199,348,391.95</b>
II. Generated equity	69,001,804.50	199,348,391.95
1. Profit/loss brought forward	199,347,359.68	129,235,816.91
2. Financial year results	130,345,555.18	70,112,575.04
Profit and loss account (Earnings)		70,112,575.04
Profit and loss account (Losses)	130,345,555.18	
<b>B) NONCURRENT LIABILITIES</b>	<b>12,752,001.92</b>	<b>11,025,116.03</b>
I. Long-term provisions	12,571,500.75	10,831,592.23
II. Long-term debts	180,501.17	193,523.80
4. Other payables	180,501.17	193,523.80
<b>C) CURRENT LIABILITIES</b>	<b>195,538,529.54</b>	<b>80,284,434.62</b>
I. Short-term provisions	7,121,264.91	
II. Short-term debts	2,937.50	2,937.50
4. Other payables	2,937.50	2,937.50
IV. Trade and other payables	188,413,863.49	80,281,497.12
1. Debtors through management operations	182,039,607.89	1,051,781.53
2. Other accounts payable	5,870,598.80	78,713,144.81
3. Public Administrations	503,656.80	516,570.78
V. Accrual adjustments	463.64	







# 2

## The offer

The public transport system of the Community of Madrid comprises underground, Light Rail and Renfe-Cercanías suburban railway networks, and the city and suburban bus networks. This system includes operators, infrastructure and modes of transport, on which the CRTM performs its duties of planning and managing the transport services, with the exception of Cercanías, a mode of transport for which the CRTM has no authority.

In 2023, the production of services for the public transport system as a whole stood at 349.3 million cars-km of rail, and 284.9 million cars-km of road, on a network of 11,000 km serving all the municipalities in the region.

The following table summaries the main figures of the supply in 2023 by type of transport operator, in order to provide an analysis of the system as a whole.

	2023 TRANSPORT SUPPLY				
	Metro de Madrid	Urban bus Madrid city (EMT)	Road transport concessions	Light rail and other railway concessions	Renfe-Cercanías
No of lines	12+Ramal	223	474	5	11
Length-red (km)	269.5	1,652.0	8,741.0	54.8	361.1
Length-lines (km)	269.5	4,011.3	22,314.0	54.8	725.1
No of stations/stops-network	237	4,846	8,612	62	95
No of stations/stops-lines	287	11,557	22,714	63	203
No of vehicles (cars/buses)	2,062	2,102	2,114	241	1,046
Car-km (millions)	179.3	97.8	188.6	16.9	153.1

Light-rail vehicles and other railway concessions are recorded as cars, in total 44 trains.



2.1 Metro de Madrid



The Metro de Madrid network a total of 12 lines plus the branch between the Ópera and Príncipe Pío stations, covering a length of 269.5 km and a total of 237 network stations, of which 39 are multiple-line (with connections between 2 or more lines), and 198 are single-line stations. If counted in terms of lines, the network has a total of 288 stations-line. This does not include the section operated by the concessionary company Traspotes Ferroviarios de Madrid, S.A (TFM).

Metro de Madrid's 2023 production reached 179.3 million cars-kilometres, 3.8% less than in 2022, mainly down to service suspensions for improvement work to be carried out on lines 1, 7B and 9.

On business days, during the morning rush hour there are 309 trains in service, with the average interval of 4.1 minutes (3.7 if weighed by number of trains), the average speed being 27.1 km/h (26.6 if weighted).

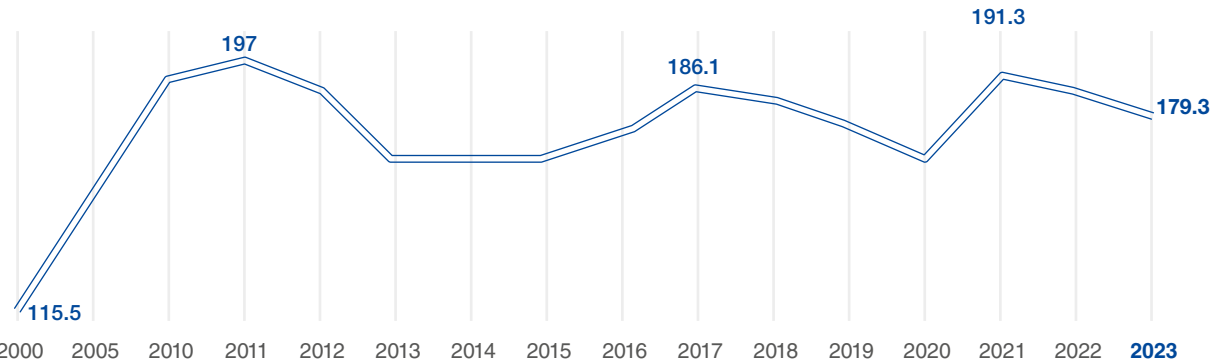
The rolling stock in service in 2023 is made up of 2,062 cars, with an average age of 23.

SUPPLY PER LINE AT MORNING RUSH HOUR ON A BUSINESS DAY

Line	Trains	Cars per train	Operating speed (km/h)	Travel time (min) (round trip)	Interval (min)
1	36	6	22.8	115	3.2
2	19	4	23.2	69	3.6
3	28	6	22.6	72	2.5
4	26	4	22.0	78	3.0
5	32	6	22.3	121	3.7
6.1	20	6	23.9	59	2.9
6.2	14	6d	24.7	57	4.1
7	20	6	26.7	86	4.3
Metro Este*	4	3	31.4	23	5.8
8	12	4	42.3	44	3.9
9	23	6	25.4	97	4.3
10	34	6	29.0	97	2.8
Metro Norte	14	3 and 4	34.6	53	4.0
11	5	3	29.3	28	5.6
12.1	10	3	41.6	59	5.9
12.2	10	3	41.1	59	5.9
Ramal	2	4	11.6	10	5.0

\* Data with the service outage between Hospital del Henares and San Fernando

ANNUAL EVOLUTION OF PRODUCTION (MILLIONS OF CARS-KM)





## 2.2 EMT



The Madrid urban bus network, operated by Empresa Municipal de Transportes de Madrid (EMT), is made up of a total of 223 lines, of which 193 are day lines and 29 are night lines, to which the 24-hour Airport Express line should be added.

In 2023, the following one-off projects were implemented across the EMT network:

In 2023, a total of 73 relevant actions were implemented across the EMT network: 4 new lines, 2 lines no longer in operation, 9 route extensions, 5 route modifications, 25 line reinforcements, 2 service offer adjustments and 1 name change, as detailed below:

- **Creation of the new BR-1** electric bus line on BRT infrastructure (“Bus Rapid Transit”) between Valdebebas, Sanchinarro and Hospital Ramón y Cajal, and extending further into the neighbourhood of Valdebebas (2 phases).



- **Restructuring of the EMT night network**, integrating the following actions:

- Increased service offer on Fridays, Saturdays and the eve of public holidays, with a 15-minute service interval on the entire **Búho** network (reinforcement of 22 lines).
- Creation of two night loop lines (one in each direction), with a route and schedule similar to the daytime loop lines.
- Route extension of 8 night lines to bolster network coverage:
  - Route extension of line N3 to Feria de Madrid.
  - Route extension of line N4 to Plaza de Pajarones (Metro Barajas) and the Timón neighbourhood.
  - Route extension of line N8 with a two-way route through the district of Moratalaz and the Valdebernardo neighbourhood.
  - Route extension of line N11 in the new urban developments on Avenida de San Diego.
  - Route extension of line N15 to Hospital 12 de Octubre.
  - Route extension of line N18 to Las Águilas.
  - Route extension of line N22 through the La Paz neighbourhood to the vicinity of Hospital Ramón y Cajal.
  - Route extension of line N28 to the Valdemarín neighbourhood.

- Start up of the **Special Príncipe Pío – Hospital Fundación San José Service**.

- **Elimination of line T-62** and the **Special Service between the Villaamil and Doctor Castroviejo health centres**.

- **Route modification of lines 42, 64 and N20** through the new development in Peñagrande, of **line 170** to serve the IES Blanca Fernández Ochoa de Montecarmelo, of **line 54** to streamline the section in Palomeras Bajas and to improve line use and the **Special Service to la Cañada Real** through the PAU de Los Ahijones development.

- **Reinforcement of the service offer of line 102** and the lines that serve the El Cañaveral neighbourhood (lines 159 and E5).

- **Adjustment of the service offer on line 160 and line 143** at weekends to adapt the offer to the increasing demand.

- **Name change of line 83** in line with the urban environment its terminal is located in.



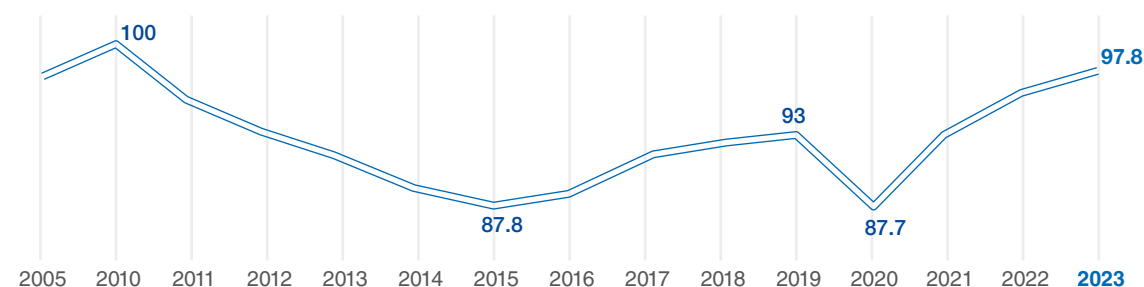
A total number of 97.8 million kilometres were covered in 2023, 1.4% more than the previous year, as a result of the increase in service offer related to the greater number of special services put into operation and the increase in the offer of night lines. Excluding special substitute services due to rail disruptions, car-km production would be 96.3 million car-km.

In this regard, car-hours (7.5 million) and trips (11.0 million) also showed a similar relative increase at similar levels to those recorded the previous year. On the other hand, the average operating speed increased by 0.3% in 2023 to 13.0 km/h, which is similar to 2022.

The characteristics of the scheduled supply vary due to the diversity of the lines making up the daytime network, although the main group consists of lines with an average daily frequency interval of between 8 and 12 minutes. At rush hour, 35% of bus routes run at a frequency of every 8 minutes or less.

The EMT vehicle fleet consists of 2,102 active vehicles, with an average age of 4.7 years, of which 1,837 run on natural gas and 265 are electric. During the year, 85 new units (all electric) were added to the fleet and 73 were written off (59 of which were natural gas and 14 of which were hybrid). All buses have low floors and ramps for People with Reduced Mobility (PRM).

#### ANNUAL EVOLUTION OF PRODUCTION (MILLIONS OF CARS-KM)



#### % EMT LINES BY INTERVAL AT RUSH HOUR

Under 6 min	From 6 to 8 mins	From 8 to 12 mins	From 12 to 15 mins	More than 15 min
17%	18%	47%	8%	11%





## 2.3 Road-transport concessions



The bus network of the road transport concessions of the Community of Madrid comprised 474 lines at 31 December 2023, with 314 day suburban lines, 120 urban lines and 40 night suburban lines.

In 2023, action was taken on the service offer (new services, timetables and routes) of 173 lines, including the following actions:

- **New suburban lines:**

- **470 Madrid (Plaza Elíptica) - Humanes - Griñón:** This line links Humanes and Griñón directly with Madrid without having to change trains. Previously it had no direct communication with Madrid.
- **624A Madrid (Moncloa) - Las Rozas (La Marazuela):** This line directly connects the La Marazuela housing development in Las Rozas with Madrid, without having to switch trains. Previously it had no direct communication with Madrid.
- **717 Madrid (Plaza de Castilla) - Nuevo Tres Cantos:** This line connects the neighbourhood of Nuevo Tres Cantos with Madrid. Previously it had no direct communication with Madrid.
- **FS1 Las Rozas (C. Comerciales) – Valdemorillo y FS2 Torrelaguna - Alcalá de Henares:** Transversal lines that operate exclusively at weekends to meet the growing demand for leisure and shopping from the smaller municipalities to the shopping centres located in other surrounding towns.



- **New urban lines:**

- **Reordering of urban lines in Arroyomolinos:** The Arroyomolinos L1 urban line was modified to transform it into a loop line with two-way traffic (1A and 1B).
- **Reordering of urban lines in Pinto:** The Pinto L1 urban line was modified to transform it into a loop line with two-way traffic (1A and 1B).

- **Extension of itineraries:**

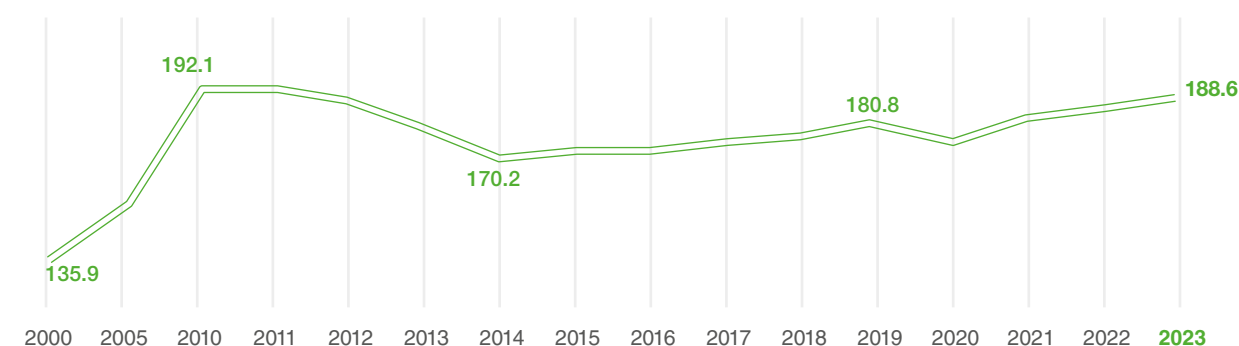
- **Route extension of 2 urban lines in Getafe:** Line Pi2 Getafe Central – P.I. was extended. San Marcos – P.I. El Lomo – P.E. La Carpetania to Polígono Industrial Los Gavilanes. Furthermore, the L5 Buenavista - Sector III section will be improved to serve the residential area of Enrique Líster.
- **Route extension of 2 suburban lines in Pozuelo de Alarcón:** The 657A Madrid (Moncloa) - Pozuelo (San Juan de la Cruz) and 657B Madrid (Moncloa) - Pozuelo (Monteclaro) lines are modified, with new stops on Avenida de Europa, in both directions, to provide a service that offers greater coverage for the residents of Pozuelo de Alarcón with that area, and to provide a direct link to Moncloa.

- **Service offer increase.**

- **Increased frequency** of lines 828 Madrid (Canillejas) - Alcobendas-UAM, 336 Madrid (Conde de Casal) - Morata de Tajuña and 337 Madrid (Conde de Casal) - Chinchón - Valdelaguna, among others.

The system of lines is operated by 27 different companies under 36 administrative concessions and an agreement with a City Council. The urban service in the municipalities of peripheral zones B and C is provided through the municipality's own urban lines or through the suburban bus network. In some municipalities, the urban service is provided through a combination of both networks.

### ANNUAL EVOLUTION OF PRODUCTION (MILLIONS OF CARS-KM)





As a result, the actual supply of urban transport is much higher than that derived from the urban networks themselves. The specific network of urban lines in peripheral zones B and C reaches a total of 35 municipalities, although in only 6 of them is there an administrative concession for an independent urban service. In addition, in the municipality of Fuenlabrada, the urban service is provided directly by the city council, through a municipal company. The scheduled service offer for the network as a whole amounts to 29,021 trips on working days in winter, resulting in an annual total of 188.6 million cars-km.

The supply of the different lines of the network is, of course, diverse and responds to the different needs in municipalities with different populations and characteristics, as shown in the table below that indicates the percentage of lines distributed according to the rush hour interval on a business day, in minutes.

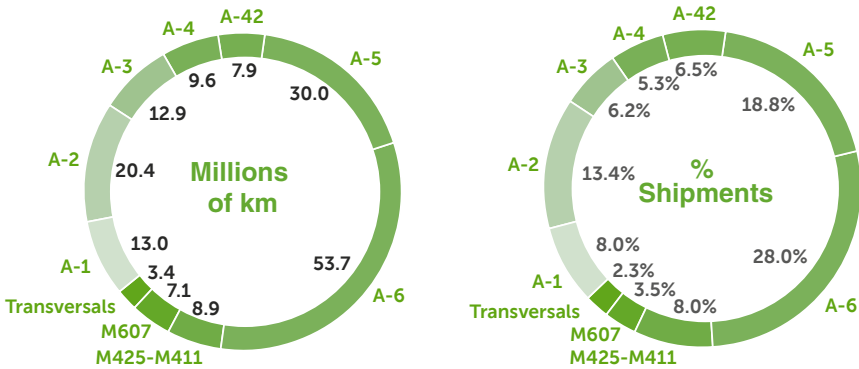
% LINES BY INTERVAL AT RUSH HOUR

Under 5 min	From 5 to 10 mins	From 10 to 15 mins	From 15 to 20 mins	From 20 to 30 mins	From 30 to 60 mins	More than 60 mins
18%	34%	13%	6%	13%	8%	8%

The vehicle fleet of road transport concessions comprises 2,114 buses. 395 buses were renewed in 2023, with the average age of 4.7 years. As a result of this fleet renewal and improvement, there are now 254 vehicles that work with compressed or liquid natural gas, with 644 hybrid vehicles, 56 electric vehicles and 3 hydrogen vehicles. Similarly, 100% of the bus fleet is adapted for People with Reduced Mobility (PRM).

DISTRIBUTION OF SUPPLY BY CORRIDOR

The supply generated in 2023 along the different corridors is shown below, these being broken down according to the dual carriageways and main access roads to the capital. This also includes a group of transversal routes which cover connections between some of these main corridors.





## 2.4 Renfe-Cercanías (commuter train)

Cercanías Madrid is a railway service operated by Renfe Viajeros on ADIF infrastructure, connecting the city of Madrid with its metropolitan area and with the region's main population centres, along with the city of Guadalajara.

The Madrid Cercanías network operates a total of 11 commercial lines and 95 network stations developed over 361 km, including the Azuqueca, Cotos and Guadalajara stations outside the territorial scope of the Community of Madrid, and the Zarzalejo, Robledo de Chavela and Santa María de la Alameda stations, as an extension of the network from El Escorial.

Of all the stations, 43 serve at least 2 Cercanías lines. Taking into account the total number of connections to other railway modes (underground and light rail), this figure increases to 54.

### SUPPLY PER LINE ON A BUSINESS DAY

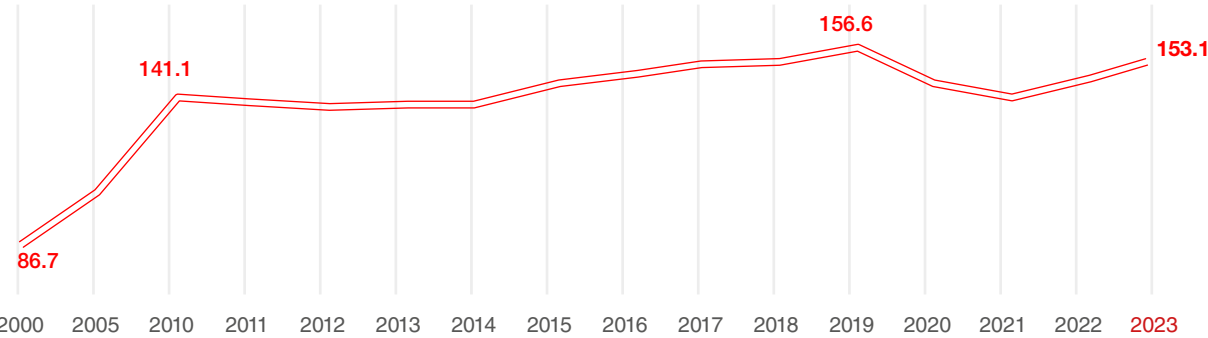
Line	Number of stations-line	Number of operations	Number of rush hour circulations (06:00 to 09:30)	Rush hour frequency	Cars per train	Operating speed (km/h)
C-1	11	75	14	30	6 / 10	34.7
C-2	19	183	43	10	6 / 10	51.7
C-3	13	110	25	17	10	58.0
C3a	27	48	14	30	10	57.9
C-4 (a-b) North*	30	200	40	20	10	49.8
C-4 (a-b) South*		248	62	6	10	49.8
C-5	23	313	93	5	6	45.4
C-7	24	84	23	18	6 / 10	49.6
C-8	32	42	10	40	6 / 10	53.3
C-9	3	10	-	-	2	12.4
C-10	21	75	16	30	6 / 10	46.6
Total	203	1,378*	340	-	6 / 10	49.6

\* 2023 saw the closure of the Sol tunnel, resulting in the service schedule for the C4 lines being divided into two zones, north and south.  
\*\* Line C-9 (Cerdedilla - Cotos). Special fares and prior booking. Circulation on line C-9 are not included in the general calculation.

The programmed transport offer for Madrid's Cercanías services in 2023 stood at 1,378 circulations and more than 1.9 million people per day, resulting in an annual production of 480,072 commercial circulations equivalent to 153.1 million car-km, 2.7% more than the previous year.

The vehicle stock comprises 276 trains, with an average age of 25.5 years.

### ANNUAL EVOLUTION OF PRODUCTION (MILLIONS OF CARS-KM)





2.5 Light rail

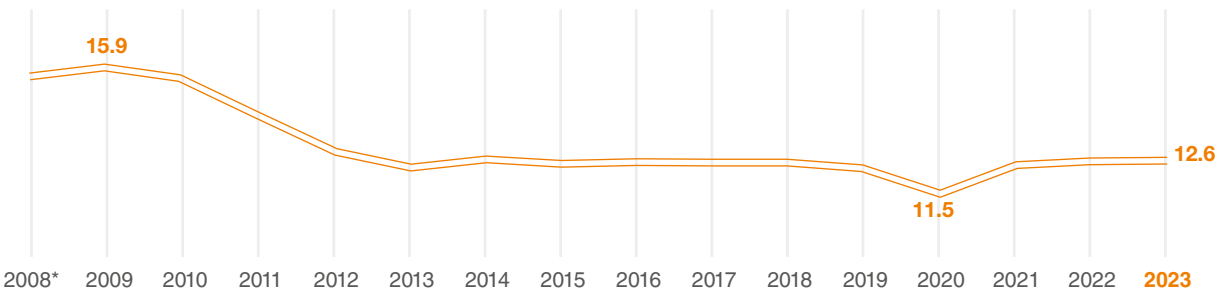


The light rail network is made up of 4 lines operated by three concessions as indicated below:

Name	Concessionary entity
ML1: Pinar de Chamartín – Las Tablas	Metros Ligeros de Madrid S.A.
ML2: Colonia Jardín – Estación de Aravaca	Metro Liger Oeste S.A.:
ML3: Colonia Jardín – Puerta de Boadilla	
ML4: Tranvía de Parla (loop line)	Tranvía de Parla S.A.

Overall, 2023 production was 12.58 million cars-kilometres.

ANNUAL EVOLUTION OF PRODUCTION (MILLIONS OF CARS-KM)



\*The light rail network started operating in 2007

On a business day, the morning rush hour supply consists of 35 trains in service, with the average interval being 6.8 minutes and the average speed 21.5 km/h.

SUPPLY PER LINE AT MORNING RUSH HOUR ON A BUSINESS DAY

Line	Trains	Cars-train	Operating speed (km/h)	Travel time (min) (round trip)	Interval (min)
ML1	7	5	19.1	35.0	5.0
ML2	9	5	23.5	44.0	6.0
ML3	12	5	25.4	64.0	6.0
ML4 (s1)	3	5	20.1	24.5	10.0
ML4 (s2)	4	5	19.6	25.1	7.0



2.6 Other railway concessions



This is the section of line 9 between the Puerta de Arganda and Arganda del Rey stations. It covers a length of 19.0 km and 6 stations-line, the Puerta de Arganda station being the link with the rest of line 9. The services are provided by the concession company Transport Ferroviarios de Madrid, S.A. (TFM).

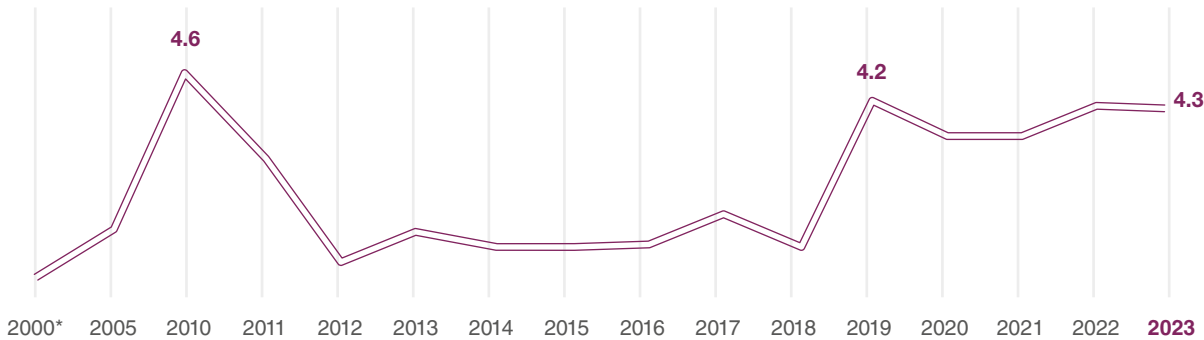
Adding this section to the Metro de Madrid section would give a network of 288.5 km, and a total of 242 stations-network and 293 stations-line.

2023 TFM production amounted to 4.3 million cars-km.

SUPPLY AT MORNING RUSH HOUR ON A BUSINESS DAY

Line	Trains	Cars-train	Operating speed (km/h)	Travel time (min) (round trip)	Interval (min)
9B (TFM)	7	2 double and 5 triple	52.4	42.7	6.1

ANNUAL EVOLUTION OF PRODUCTION (MILLIONS OF CARS-KM)



\*Operations on line 9 began in 1999



# 3

## The fare system

The fare system for public transport in the Community of Madrid is defined as a zonal system, in which the price of travel is determined depending on the zones involved, and in which there are three types of tickets aimed at three general categories of passengers.

According to the Consortium Creation Act, tickets used on more than one operator belong to the CRTM, which is responsible for their issue and sale. All modes and operators are included within this framework, ultimately forming a system with a high degree of integration.

All tickets, with the exception of those described below, can be topped-up onto the Public Transport Card, which is a contactless card with a microprocessor chip.

### 3.1 Zoning

The Community of Madrid is divided into six fare zones:

- A central area (A), almost coinciding with the municipality of Madrid.
- Three metropolitan zones (B1, B2 and B3), with 8, 14 and 27 municipalities, respectively.
- Two zones (C1 and C2) to complete the administrative boundary of the Community of Madrid, containing a population spread over the remaining 129 municipalities.
- In addition, two external zones have been defined (E1 and E2), included in the neighbouring region of Castile-La Mancha, up to a distance of 60 and 85 kilometres, respectively, from the capital city.





## 3.2 Ticket types

There are three main types of ticket:

- A **single ticket**, valid for each operator, aimed at the occasional user who purchases it at the time of use. In the case of Metro de Madrid and the underground and light rail concessions connected thereto, there is a combined single ticket that can be used on all these services.
- A **10-trip ticket**, aimed at repeat users who purchase it in advance. In zone A, there are two types of tickets of this kind: a multimodal ticket (Metrobús), valid for use whether on the underground, EMT or ML1, in addition to the concessions of the companies Prisei and Alacuber inside the municipal district of Madrid; and another, a ticket for ten trips with transfers, valid only on EMT and enabling passengers to change lines within one hour of the first validation. In zones B and C there is a 10-trip ticket for all urban and suburban road transport operators. Likewise, similarly to the combined single ticket for the connected underground and light rail services, there is a combined 10-trip ticket.
- The **Travel Pass**, a personal, multi-modal, unlimited-use ticket for regular users purchasing in advance. It remains valid for 30 days as of its first use; there is also an annual option. The passes are priced differently depending on the age of the user, with three categories: Young (up to 26), adult (between 26 and 64) and senior citizen (aged 65 and over).

Functional exceptions to this general pricing framework apply to the sections outside the underground network that, together with the Metro Ligero Oeste lines, make up a single fare area for non-personal tickets. Furthermore, the use of stations serving the airport terminals involves the payment of an additional ticket, with users of any form of Travel Pass or tourist tickets being exempt from this payment. Finally, the EMT Express Airport line has a specific ticket.



The so-called tourist tickets are also personal and unlimited-use tickets aimed at visitors to the city and tourists. They are split into two zonal forms: A and T (all zones, including external zones), each for six time periods: 1, 2, 3, 4, 5 and 7 calendar days starting from the first use.

## 3.3 Social fares

There are four types of group that benefit from a reduction in the general price established:

- **Large families:** 20% and 50% discount in general and special categories, respectively.
- **People with disabilities equal to or greater than 65%:** 20% discount. In the above two conditions are met, the corresponding discounts are added.
- **The over-65s or people with disabilities residing in the city of Madrid** whose personal income is less than a certain amount in comparison with the IPREM (Public Multiple-Effect Income indicator) can make use of a specific pass, the Blue Card, which can be used on the Metro de Madrid (zone A), ML1 and EMT services in Madrid.
- Lastly, the **Children's Public Transport Card** allows for free use of all transport services in the Community of Madrid for children aged 4, 5 and 6.

## 3.4 The distribution network

There are two main groups of distributors:

- Transport operators
- Networks outside the operators

Transport operators generally sell tickets for use exclusively on their network.

- The multi-modal and multi-operator tickets, owned by the CRTM, are sold in the metro network (more than 1,200 automatic machines), at transport interchanges (10-trip tickets for suburban road operators), in Renfe Cercanías (more than 500 self-service machines) and in an external network with customer service provided by Logista, which is made up of 1,200 points of sale including tobacconists and other authorised establishments and, finally, in the Tarjeta Transporte App. On this app, available for Android and iOS alike, passengers can load CRTM tickets onto personal and non-personal public transport cards. Tourist tickets are sold at the CRTM management offices located at the Airport and throughout the entire external sales network indicated above. Similarly, the CRTM also sells these tickets directly to the groups and collectives requesting them, as well as the organisers of conferences and large events and entities that sell them through tourist packages (MadridCard, etc.).

Annual passes purchased by companies for their employees are managed through the CRTM itself, while tickets for private users are managed through the network of tobacconists and other authorised establishments, as well as at the CRTM Management Offices.

3.5 Fares

Public transport fares in the Community of Madrid have remained unchanged since 1 February 2013. The only exceptions are the price reductions for Travel Passes in zones C1 and C2, which will be brought into line with zone B3 in 2022, and the 65+ travel pass, which in 2023, after successive reductions, became free of charge.

Nevertheless, in accordance with Royal Decree-Law 20/2022 of 27 December and Royal Decree-Law 5/2023 of 28 June, both of which are measures in response to the economic and social consequences of the war in Ukraine, support for the reconstruction of the island of La Palma and other situations of vulnerability, discounts of 60% have been applied this year to the fares in force with regard to 30-day Travel Passes, and 50% on multi-trip tickets.

The Ministry of Infrastructure Development is responsible for approving the fares corresponding to Renfe-Cercanías tickets. This operator was also subject to the measures set forth in the aforementioned Royal Decree-Laws and throughout 2023 allowed recurrent users of its services to avail of its services free of charge.



The discounted prices on the current fares are shown below.

TRAVEL PASS (30-DAY)

	ZONE	A	B1	B2	B3	C1	C2	E1	E2
Adult (aged 26–64)		€21.80	€25.40	€28.80	€32.80	€32.80	€32.80	€44.20	€52.70
Youth Pass (aged 7-25)		€8.00							
Senior (aged 65 and above)		Free							
Blue Card (*)		€4.30							

(\*) 30% Discount

INTERZONAL PASSES (EXCEPT WITH ZONE A)

		B1-B2 B2-B3 B2-C1 B2-C2 B3-C1 B3-C2 C1-C2 C2-E1	B1-B3 B1-C1 B1-C2 C1-E1 C2-E2	B3-E1 C1-E2	B2-E1 B3-E2	B1-E1 B2-E2	B1-E2
Normal	€19.10	€21.80	€25.40	€28.80	€32.80	€35.80	

Children under 4 can travel without a ticket.

SINGLE AND 10-TRIP UNDERGROUND AND LIGHT-RAIL TICKET

	Metro Zone A+ML1	Metro Norte	Metro Este	Metro Sur	TFM & MLO	Combined metro and light rail
Zone	A	B1	B1	B1-B2	B1-B2-B3	A-B1-B2-B3
Single	€1.50–€2.00	€1.50	€1.50	€1.50	€2.00	€3.00
10 trips	€6.10	€5.60	€5.60	€5.60	€6.10	€9.10
Airport supplement €3.00						

SINGLE AND 10-TRIP TICKETS ON URBAN AND SUBURBAN BUSES

	EMT	A	1 zone	2 zones	3 zones	4 zones	5 zones	6 zones
Single	€1.50	€1.50	€1.30	€2.00	€2.60	€3.60	€4.20	€5.10
10 trips	€6.10-9.10	-	€4.20	€6.10	€8.00	€11.50	€14.80	€18.70

Airport express line €5.00

TOURIST TICKET

	1 day	2 days	3 days	4 days	5 days	7 days
Zone A	€8.40	€14.20	€18.40	€22.60	€26.80	€35.40
Zone T (all zones)	€17.00	€28.40	€35.40	€43.00	€50.80	€70.80

50% discount for children under 11



## 3.6 The technology

Contactless wallet technology is a strategic project for the integrated public transport system of the Community of Madrid. Its consolidation as the medium used for 98% of transport tickets represents considerable progress towards achieving the unification of fares and technology across all transport systems and operators, benefiting public transport network users through new functionalities in terms of safety, convenience and flexibility.

In addition, this technology significantly increases CRTM management capacity for better service planning, efficiency improvements and cost reduction, and for obtaining new data that is now already used as the basis for analytical work with big data and Business Intelligence technologies. The elements forming part of this new technological development include, in particular, the ticket itself (Public Transport Card) and the test development centre (DCC) for progressive implementation and verification of successive modifications to the specifications.

### THE PUBLIC TRANSPORT CARD ('TTP')



Different tickets can be contained in two types of public transport card: personal and non-personal. The former may contain a personal ticket and two additional non-personal tickets. Non-personal cards, sold under the 'Multi' name, only contain non-personal tickets. The former cost €4.00 and the latter cost €2.50.

In 2023, the number of personal passes applied for increased by 17.0% compared to the number of applications registered in 2022, amounting to a total of 1,305,711 passes. Of the passes issued, 54.4% were issued to new users, reaching a figure of 97,184 applications on top of those received the previous year. This percentage (65.4%) was noted particularly in applications from users aged 65 and over. Since the price reduction of this Travel Pass came into effect, there has been a significant increase in the number of new users year-on-year. There are currently 9 active passes for every 10 residents in the Community of Madrid.

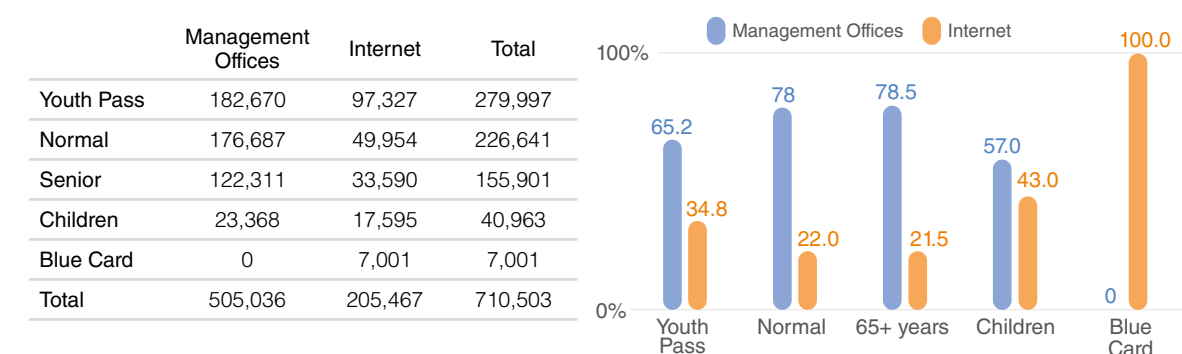
### PERSONAL CARDS ACTIVE AS AT 31/12/2023

Normal	Youth Pass	65+ years	Children	Blue Card
2,517,685	1,486,559	1,129,065	77,162	57,032
TOTAL 5,267,503				

In accordance with the importance of incorporating new users, the number of passes available increased by 10.0%. This considerable increase is very similar across all age groups, despite the fact that, even at the end of 2022, when the discounts were first rolled out, there was a high demand for Travel Passes. At the end of 2023, the total number of active passes amounted to 5,267,503.

The following table shows their distribution by acquisition channel for each user profile. The percentage of passes applied for online decreased by 3.4%. Management Offices were still the most used channel, issuing 71.1% of passes. The preponderance of this channel is down to users preferring to get their passes there and then without having to wait for them to be delivered, as is the case with online applications.

### NEWLY ISSUED PERSONALISED PASSES BY PROFILE/CHANNEL (2022)



The Blue Card can only be applied for online, hence all applications are made online. With regard to other user profiles, applications for children's passes (43.0%) and youth passes (34.8%) are more likely to be made online. However, general travel pass holders and those over 65 years of age are more likely to call into a Management Office. Nevertheless, while all groups have seen an increase in the number of people calling into the Management Offices to acquire their new pass, this has not been the case for the 65+ group, who, in 2022, applied online to a greater extent.

Every month, 108,809 users acquire a pass, of which 59,208 correspond to new pass holders. Just like every year, the number of passes that have to be replaced is worth mentioning, mainly down to the previous pass getting lost.



## MULTI CARD

The Multi Card is intended to contain the non-personal tickets of users who do not have a personal card. The single tickets of bus operators remain in paper format and are paid for on board buses at the start of the trip.

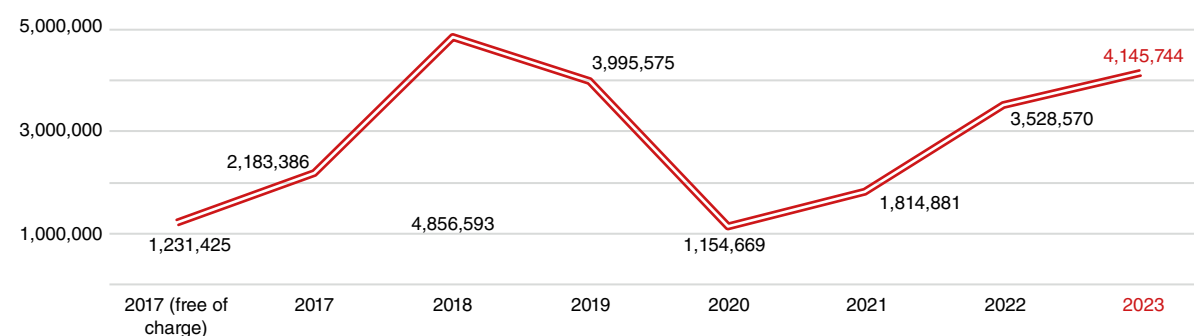
The card can be purchased from vending machines on the underground and light rail networks and at the points of sale of the Logista network, and lasts for ten years, just like personal cards.

The following table summarises the Multi Cards distributed up to 31 December 2023, differentiating between those provided during their promotion and the total of those sold through the two existing sales channels: Metro de Madrid, Metro Ligero Oeste, tobacconists and other CRTM-managed establishments and Offices.

A total of 4,145,744 Multi passes were sold in 2023, 17.5% more than in 2022. So far, the peak year for sales was 2018 with a total of 4,856,573. 2023 saw the level of sales in 2019 being exceeded, which were below 4 million units. Metro de Madrid (74.8%) card distribution is highly polarised given how easy they are to acquire and the fact that the network cannot be accessed without a card.

The following table summarises the almost 22.9 million Multi Cards in circulation until 31 December 2023, distinguishing between those that were sold and those that were given out free of charge in the second half of the launch year (2017):

### EVOLUTION OF CARD SALES



In 2023, 26.9 million tickets were loaded onto Multi cards, 8.5 million fewer than in 2022. The discounts applied this year did not affect single tickets and, in view of the high discount rate for multi-trip tickets, users opted to purchase subsidised tickets instead of single tickets.

## THE DEVELOPMENT AND COMPLIANCE CENTRE (DCC)

The Development and Compliance Centre (DCC) was launched in 2006 and its basic aim is to be a technological flagship guaranteeing the compatibility of all elements, equipment and systems, both hardware and software, which constitute or may constitute part of the Smart Ticketing System of the Autonomous Region of Madrid.

In 2023, several versions with new functionalities of the physical TTP top-up application via the NFC antenna available on mobile phones were released on Android and iOS alike. Furthermore, the new app for virtualisation of the TTP on Android mobiles (commonly known as HCE) was approved, facilitating the use of the Travel Pass without the need for a physical storage medium.

Several tests (physical and logical) of passes supplied to the CRTM were conducted to verify compatibility with existing Community of Madrid vending networks and the BIT system.

During this period, the light validation App and the inspection App were also tested, and the 65+ top-up was rolled out with the collaboration of all operators. In addition, the 365 annual ticket option was made available, applicable to all operators except Metro de Madrid.

Furthermore, a whitelist-based process was developed and validated to correct incorrect youth profile dates with a view to avoiding users from having to call into the Management Offices.







4

## Passengers

**1,607.3**  
million  
passengers

Four years after the downturn in demand for the public transport system, the number of passengers exceeded 2019 levels of demand by 0.4%. Compared to the previous year, growth was 17.9%, 244.6 million more passengers than in 2022. We can conclude that public transport use has definitely bounced back.

This figure represents a yearly average of 234 trips per inhabitant, 16.1% more than the previous year and in line with the recovery in trips recorded, not far off the level reached in 2019 (240). Throughout the year, demand gradually increased, exceeding the number of passengers in 2019 by 5.0% by the end of 2023.

As of May 2023, the number of passengers equalled or exceeded the volume of trips taken in 2019. Factors such as the impact of lower prices in attracting demand, the constantly improving economic situation, leading to a steady rise in employment and the increase in the number of visitors recorded in the Community of Madrid throughout this year undoubtedly played their part in this upward trend.



4.1 Evolution of passenger demand by operator

Passenger data reflect a recovery and growth in passenger demand in most public transport operators in the Community of Madrid, with Metro de Madrid and EMT de Madrid leading in terms of absolute passenger numbers. Increases range from 12.5% for Renfe Cercanías to 21.9% for EMT de Madrid. Transport in road transport concessions also saw an above-average increase. This sector experienced above-average growth, reflecting a growing tendency towards road transport.

By the end of 2023, rail concessions had not exceeded the level of demand seen in 2019, albeit with significant differences between them. In Metro de Madrid's case, 97.8% of trips in 2019 were taken on its network. Nevertheless, this was 92.4% for Renfe Cercanías and, 91.1% for Light Rail as a whole. With regard to the latter, differentiated behaviour was noted between the Parla Tramway, which saw a 7.3% increase in demand, and Metro Ligerio Madrid and Metro Ligerio Oeste, at 84.5% and 82.8%, respectively, of the demand seen in 2019. Also excluded from this evolution of rail transport are TFM trips, which were 13.2% higher than in 2019.

This differentiated trend in the two main rail networks was mainly down to the impact of the significant work carried out throughout the year, which affected lines 1 and 9 in particular in the case of Metro de Madrid, and lines C-3, C-3a, C-4, C-4a and C-4b in the case of Renfe Cercanías. The impact of these works on the service led to the implementation of special services and reinforcements by city buses in Madrid which undoubtedly played a part in the considerable growth seen in the use of EMT de Madrid.



EVOLUTION OF PASSENGER DEMAND BY OPERATOR (MILLIONS)

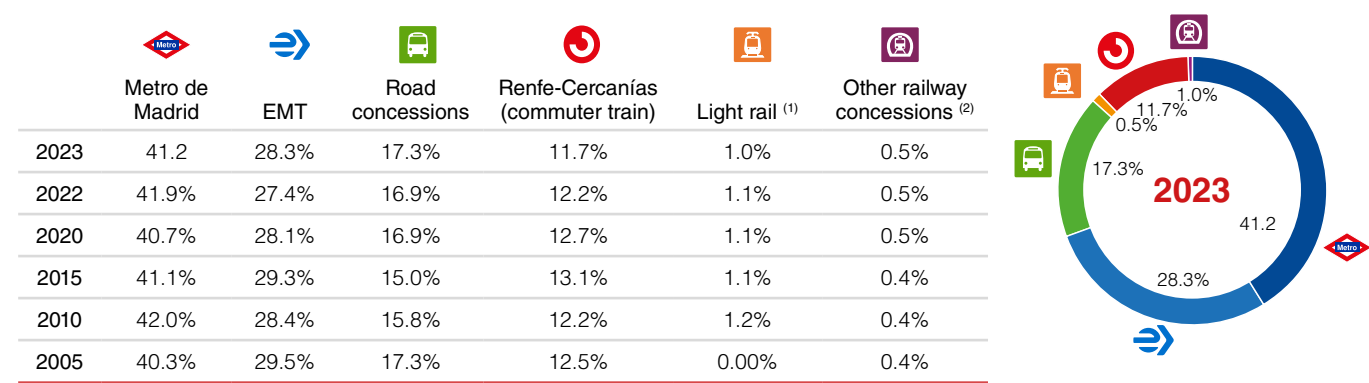
year	Metro de Madrid	EMT	Road concessions	Renfe-Cercanías	Light rail <sup>(1)</sup>	Others <sup>(2)</sup> railway concessions (2)	Total
1995	397.2	521.5	191.6	126	-	-	1,236.20
% VAR 95/90	-4.60%	20.30%	24.40%	30.80%	-	-	12.40%
2000	518.9	531.2	270.1	161.2	-	4.7	1,486.10
% VAR 00/95	30.70%	1.90%	40.90%	28.00%	-	-	20.20%
2005	643.6	470.2	275.6	199	-	6.7	1,595.10
% VAR 05/00	24.00%	-11.50%	2.00%	23.50%	-	42.90%	7.30%
2010	627.1	423.4	235.8	181.6	17.3	6.4	1,491.60
% VAR 10/05	-2.60%	-10.00%	-14.40%	-8.80%	-	-4.80%	-6.50%
2015	569.7	405.9	207.3	182.2	14.7	5.9	1,385.80
% VAR 15/10	-9.20%	-4.10%	-12.10%	0.30 %	-15.00%	-7.80%	-7.10%
2019	677.5	439.8	254.7	203	18.8	6.9	1,600.70
% VAR 19/18	3.10%	4.60%	4.90%	-0.20%	3.30%	4.60%	3.40%
2020	349.8	241.6	145.3	109.4	9.5	4	859.6
% VAR 20/19	-48.40%	-45.10%	-43.00%	-46.10%	-49.50%	-42.10%	-46.30%
2021	442.3	296.5	181.9	127.7	11.6	5	1,065.00
% VAR 21/20	26.40%	22.7%	25.20%	16.60%	22.10%	25.00%	23.90%
2022	571.7	372.9	230.2	166.7	14.5	6.7	1,362.70
% VAR 22/21	29.3	25.8	26.6	30.6	25.2	34.4	28.0
2023	662.3	454.6	278.0	187.5	17.1	7.8	1,607.3
%VAR 23/22	15.8%	21.9%	20.7%	12.5%	18.1%	16.2%	17.9%

(1) Includes the MLM, MLO and Tranvía de Parla operators. (2) Includes TFM

41.2% of public transport trips in the Community of Madrid were taken on Metro de Madrid. The second largest operator was EMT Madrid, accounting for 28.3% of trips. Together, the two operators account for nearly seven out of every ten trips taken on our network. In contrast, suburban travel, by rail and road alike, accounted for 29.4% of total trips, with no significant changes compared to 2019, with only a 0.4% percentage increase over the period. However, within these trips, there has been a more than one point variation in favour of road transport and to the detriment of rail transport. Demand for Renfe Cercanías was affected by the major construction projects carried out throughout the year, which influenced its share of total trips. To a lesser extent, demand for Metro de Madrid was affected, losing 0.7%.



EVOLUTION OF TOTAL DEMAND BY OPERATOR. YEAR 2023

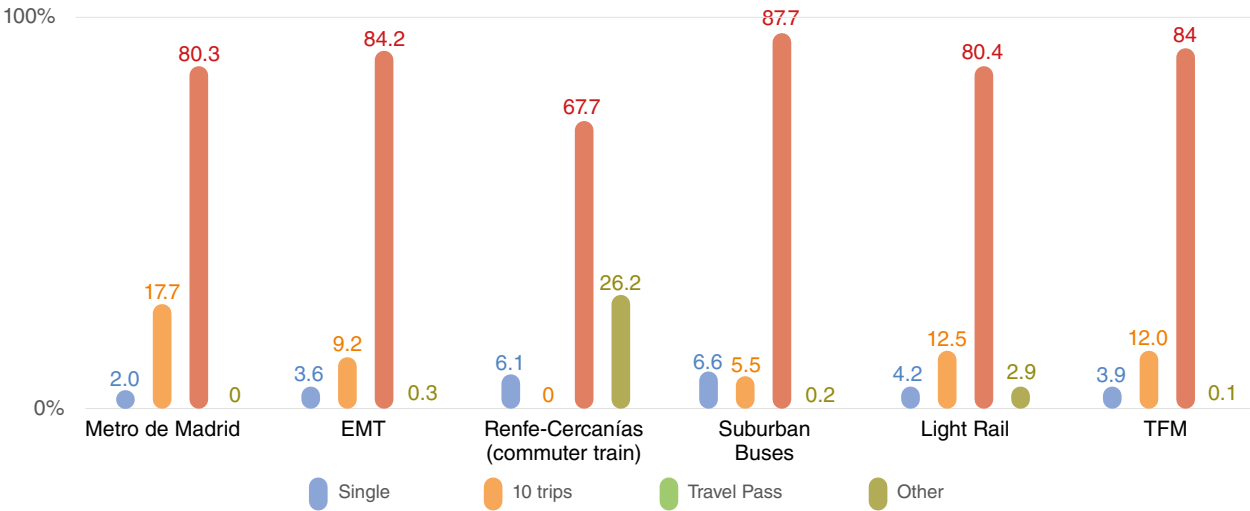


(1) Includes the MLM, MLO and Tranvía de Parla operators. (2) Includes TFM

4.2 Evolution of demand by transport ticket

The Travel Pass was the most used ticket, accounting for 81.3% of passengers, 3.2% more than in 2022. This increase was undoubtedly down to the higher percentage of discount applied to this ticket (60%) compared to ten-trip tickets (50%) or the lack thereof on single tickets (no discount). On trips taken in 2023, passengers switched from ten-trip tickets to the Travel Pass and from single tickets to ten-trip tickets. The number of passengers using multi-trip tickets decreased by 2.4%, while the number of people using single-use tickets decreased by 2.1%.

Travel Pass use increased across all modes of transport, in particular on TFM, Metro de Madrid, MLM, and road concessions. The exception to this trend was Renfe Cercanías, which decreased by 2.0% due to the increased use of the free Recurring Travel Pass, this operator's own ticket.



The most widely used transport method, with 87.7% of trips taken using this ticket, was suburban bus (road concessions). However, Renfe Cercanías services accounted for 67.7% of all trips taken. In the former, the use of suburban bus passes was also lower than that of single tickets.

4.3 Ticket sales

The sales of the different types of Travel Pass are analysed below. Information regarding the sale of the remaining tickets issued by the CRTM (combined single and 10-trip tickets for the underground and light rail network and 10-trip Metrobús tickets and bus passes from suburban operators) does not offer significant added value to the distribution of the passengers indicated in the previous chapter.

The following table shows the distribution by commercial network of the sale of all tickets sold by the CRTM. Metro de Madrid distributed 67.0% of the tickets owned by the CRTM, representing 59.3% of the total revenue from ticket sales. In the case of Metrobus, its hegemonic role is enhanced to reach 79.3% of sales. In fact, 74.0% of the trips taken with this fare option were using Metro de Madrid, which backs up the importance of having points of sale in the network itself to facilitate accessibility.

The second largest network was the CRTM itself, which, by selling annual tickets for its commercial services and multi-trip and 30-day tickets through its *Tarjeta Transporte* app, sold 20.1% of the tickets purchased in 2023. It surpassed the assisted sales network for the first time, moving up to third position in terms of importance. Nevertheless, these sales do not take into account free tickets, the main distributor of which is the external network served (Logista). This network was the main distributor of suburban bus passes, but since the app was rolled out, it has seen its sales share drop, initially to 88.0% and this year to 76.1%.

DISTRIBUTION OF THE SALE OF TICKETS BY DISTRIBUTOR <sup>(1)</sup>

	Metro	Logista	Renfe-Cercanías	CRTM	Other
Travel Pass	52.5%	14.6%	9.4%	23.2%	0.3%
Tourist Travel Pass	71.0%	0.3%	3.3%	25.4%	0.0%
Metrobús (10 zone A trips)	79.3%	10.4%	0.0%	10.3%	0.0%
Suburban bus pass	0.0%	76.1%	0.0%	23.9%	0.0%

(1) Only sales of tickets sold at more than one distributor are compared

In 2023, 20,741,789 30-day and annual travel passes were sold, 2.3% fewer than in 2022. Although there is a numeric decrease, the number of tickets sold actually went up, as this decrease is down to the fact that the 65+ Travel Passes sold have been accounted for in unit terms, since, as of 2023, they are valid for 365 days. The partial comparison explains this considerable increase, with general-profile Travel Passes increasing by 37.6% and youth passes rising by 22.5%. The sales volume recorded in 2023 exceeds the highest values ever recorded. Although this hasn't resulted in a comparable increase in travel, 17.9% more general-sector travel passes and 26.8% more youth passes were sold than in 2019.

Blue Card sales decreased again, this time by 6.5%, due to the constant flow of users moving away from this card to obtain a free 65+ Travel Pass. This shift in users from one card to another has been ongoing since the roll-out of the gradual price reduction for cards for users aged 65 and over.

The application of discounts on our ticket fares has affected the recovery of general-profile Travel Pass passengers in particular. These users had largely stopped using public transportation and have been slowly but surely coming back to it to meet their mobility needs. In 2021 and 2022, Youth Travel Pass sales exceeded General Profile Travel Pass sales; however this year, the latter outsold the Youth Travel Pass by 446,703 units. This positive development has not been seen since 2020. Lastly, it is worth highlighting that the PAE (Employment Activation Programme) has been shelved and, in turn, sales of this ticket.

#### SALES OF THE TRAVEL PASS BY USER PROFILE

	Normal	Youth Pass	Senior	Blue Card	PAE	TOTAL
1990	3,404,593	1,260,108	599,477	-	-	5,264,178
1995	5,254,389	2,248,617	1,634,361	-	-	9,137,367
2000	7,732,219	2,079,622	2,647,205	-	-	12,459,046
2005	9,075,624	1,723,581	3,091,332	-	-	13,890,537
2010	8,386,456	1,724,270	4,102,935	377,426	-	11,591,087
2015	7,545,684	3,133,459	4,560,714	565,863	503	15,806,223
2019	8,190,707	7,380,467	5,045,493	658,722	43	21,275,432
2020	5,144,388	4,666,184	3,106,657	449,053	3	13,366,285
2021	5,403,521	6,053,143	3,912,489	497,872	0	15,867,025
2022	7,125,611	7,638,706	5,977,678	493,190	0	21,235,185
2023	9,804,321	9,357,618	1,118,546	461,304	-	20,741,789
% VAR. 22/21	37.6%	22.5%	-81.3%	-6.5%	0.0%	-2.3%

The evolution of sales by zones supplements the analysis with a regional viewpoint. However, it should be specified that, due to the significance of flat-rate fares, the zonal approach is limited exclusively to adult passes, which skews the comparison.

#### EVOLUTION OF THE SALE OF THE TRAVEL PASS BY ZONE

YEAR	Zone A <sup>(1)</sup>	Zones B	Zones B	Interzonales <sup>(2)</sup>	Zone E <sup>(3)</sup>	Senior	Youth Pass	PAE	TOTAL
1990	2,742,169	1,828,803	93,729	-	-	599,477	-	-	5,264,178
1995	3,678,086	3,589,307	235,613	-	-	1,634,361	-	-	9,137,367
2000	4,150,359	5,273,279	388,203	-	-	2,647,205	-	-	12,459,046
2005	4,527,608	5,691,174	496,577	-	83,846	3,091,332	-	-	13,890,537
2010	4,918,640	4,696,330	438,939	354,046	80,197	4,102,935	-	-	14,591,087
2015	5,088,904	3,921,637	370,518	375,532	83,712	4,560,714	1,404,703	503	15,806,223
2019	4,807,561	3,369,597	291,568	306,584	74,119	5,045,493	7,380,467	43	21,275,432
2020	2,975,468	2,141,625	198,597	183,531	46,601	3,106,657	4,666,184	3	13,318,666
2021	3,106,658	2,268,074	211,335	264,870	50,456	3,912,489	6,053,143	0	15,867,025
2022	4,016,141	2,718,908	506,174	307,694	69,884	5,977,678	7,638,706	-	21,235,185
2023	5,187,113	3,582,368	1,072,273	327,736	96,135	1,118,546	9,357,618	-	20,741,789
% VAR. 23/22	29.2%	31.8%	111.8%	6.5%	37.6%	-81.3%	22.5%	-	-2.3%

(1) Includes Blue Card from 2007. (2) Passes B1-B2, B2-B3, B3-C1 and C1-C2 (3) Zone outside the Community of Madrid, the scope of which includes part of Castilla - La Mancha





49.5% of the tickets sold in 2023 were valid for zone A, half of which, 50.5%, corresponded to tickets valid for Zone A. Since the creation of the CRTM, Zone A ticket sales has gradually decreased in favour of Zones B and C. This past year, the number of valid tickets for Zone C has seen a two-fold increase, to the detriment of Zone B. The unification of fares for zones B3, C1, and C2 has led to this change in preferences. Nevertheless, all zones have experienced significant growth, zone C in particular, as a result of the aforementioned action taken with regard to fares. Zone E also saw a considerable increase, in spite of the fact that there are alternative free tickets offered by transport operators (central government concessions) that run inter-community trips.

With a view to rounding off the zonal analysis, a distribution of Travel Pass users by area of residence has been conducted. The results obtained indicate that users of the Standard Travel Pass are those who mostly reside in Zone A. Among young people and users aged 65 and over, the frequency of people living in Zone B is roughly ten percentage points higher than that recorded for the previous user group. Furthermore, while the distribution by place of residence among young people is very similar to 2022 data, when it comes to older people, in 2023 there was a considerable increase in residents in zones B and C. It could be concluded that free travel has helped these users get tickets and start availing of public transportation. It was also noted this year that the price reduction encouraged many users in zones E1 and E2 to purchase a Travel Pass.

#### USER DISTRIBUTION BY AREA OF RESIDENCE

Area	Normal	Youth Pass	Senior
A	69.3%	53.8%	58.5%
B	26.5%	36.9%	35.8%
C	3.3%	6.8%	5.1%
E	0.9%	2.5%	0.6%

#### SALES OF THE TRAVEL PASS BY ZONE

Zone A	25.0%
Zones B	17.3%
Zones B	5.2%
Interzonal	1.6%
Zone E	0.5%
Flat Rate	50.4%

Since 2023, all travel passes for people 65 and older are valid for a year, leading to a rise in the number of users of this type of ticket. Nevertheless, the other types of annual travel passes (normal and youth) were significantly reduced with the application of the discounts as, in 2023, travel passes for individuals were temporarily discontinued. In 2022, 153,540 tickets were sold with only 68,517 in 2023. This decrease is partly down to travel passes no longer being sold to direct users and partly due to a significant part of these tickets purchased corresponding to 65+ Travel Pass users.



An average of 1.6 million 30-day tickets were sold per month, peaking in October when 1,767,521 30-day Travel Passes were sold. The monthly average values are slightly below the average values recorded in 2019, due to the lack of sales of the 30-day Seniors Transport Pass.

34.6% of people living in the Community of Madrid aged 7–64 are believed to have used a monthly Travel Pass on a monthly basis. On the other hand, 90.5% of people aged 65 and over have a 65+ travel pass.

Travel Pass use went up for all profiles; in 2022, users of youth, adult and senior passengers took 48 and 66 trips per pass, respectively. The average number of trips decreased slightly in the case of young users and remained steady for those who use general travel passes. In this age group, the average number of trips had already declined from pre-pandemic levels. The price reduction lowered the compensation threshold for the multimodal ticket, making it more likely to be purchased by less frequent users. 65+ travel pass use did not show comparable data to previous years due to the change in the duration of the travel pass. An approximation of an average monthly usage calculation yields a figure of 13 trips per ticket, well below the 25 trips per ticket recorded in 2022.



With regard to social tickets, 5.0% more were sold in 2023 than in 2022, a much lower growth than in 2022 but which could be put down to the limited nature of the target market. The sale of tickets to people with disabilities decreased by 24.3%. This is down to many people with disabilities belonging to the profile of users aged 65 and over. The new ticket does not provide for this circumstance given that it is free. Sales of the Blue Card also decreased as users started switching over to the 65+ travel pass.

SALES OF SOCIAL TICKETS

	Large Family		Disability		Blue Card		Total	
	Sales	% of Total	Sales	% of Total	Sales	% of Total	Sales	% of Total
2010	358,286	45.5%	51,848	6.6%	377,426	47.9%	787,560	100%
2015	709,433	51.1%	112,468	8.1%	565,863	40.8%	1,387,764	100%
2019	1,293,747	62.2%	127,380	6.1%	658,722	31.7%	2,079,849	100%
2020	805,240	60.7%	73,162	5.5%	449,053	33.8%	1,327,455	100%
2021	1,068,045	64.8%	82,318	5.0%	497,872	30.2%	1,648,235	100%
2022	1,626,882	71.4%	158,226	6.9 %	493,190	21.6%	2,278,298	100%
2023	1,811,307	75.7%	119,789	5.0%	461,304	19.3%	2,392,400	100%
% 23/22	11.3%		24.3%		-6.5%		5.0%	

Tourist ticket sales increased by 14.2% in 2023 to 534,072 units sold. Although their use has been bouncing back in recent years, figures are still far below those seen in 2019, when 741,156 tickets were sold. Furthermore, sales of the airport supplement increased by 21.2% to 4.0 million.

Of particular relevance was the increase in sales of tourist tickets for congresses, with 28,106 tickets sold. However, most of these sales came from a single event and were, in any case, well below the 2019 figures (105,389).

The collaboration with Madrid Destino is worth highlighting, which purchased tourist tickets throughout the year to integrate them into the Madrid City Card sales, thereby making things easier for visitors to Madrid while fostering sustainable mobility.

SALES OF TOURIST TICKETS BY PROFILE AND ZONES

	Normal	Children	Conferences	Total
1 day, zone A	183,321	7,315	-	190,636
2 days, zone A	66,378	2,065	750	69,193
3 days, zone A	90,126	2,721	146	92,993
4 days, zone A	66,672	2,087	-	68,759
5 days, zone A	43,741	1,457	27,210	72,408
7 days, zone A	23,085	755	-	23,840
Total zone A	473,323	16,400	28,106	517,829
1 day, zone T	5,181	191	0	5,372
2 days, zone T	2,386	72	0	2,458
3 days, zone T	3,257	79	0	3,336
4 days, zone T	1,947	44	0	1,991
5 days, zone T	1,701	29	0	1,730
7 days, zone T	1,324	32	0	1,356
Total zone T	15,796	447	0	16,243
Total 2023	489,119	16,847	28,106	534,072
Total 2022	451,982	15,548	160	467,690
% 23/22	8.22%	8.4%	17466%	14.2%





# 5

## Strategic lines

CRTM activity has a strategic side to it, the main objective of which is to achieve an integrated, efficient and high-quality public transport system that is environmentally friendly and universally accessible. In 2023, public transport system supply and demand recovered, even surpassing pre-pandemic levels by the end of the year. At the same time, the development of the lines of work commenced in previous years has remained constant. These included the various relevant actions implemented in the network, the development and application of new technologies, as well as the creation and follow-up of various technical studies and the many projects promoted and participated in by this body.

### 5.1 Intermodality

The interconnection of the different modes present in the public transport system is evident in the infrastructures used for modal integration. These facilities allow for the different transport networks to be structured, facilitating intermodal mobility and connections with high-capacity modes, whether bus, light rail or Renfe-Cercanías railway, in an efficient manner and with added features for passengers.



A INTERCHANGES

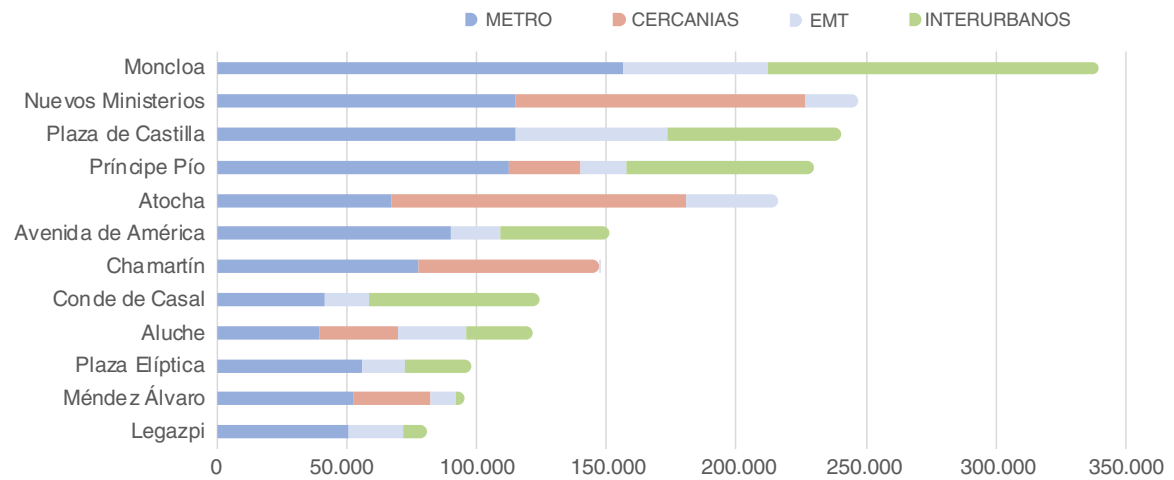
Based on the characteristics of their infrastructure, the main intermodal points are classified into three groups: interchanges, intermodal areas and points of interchange. Interchanges play a key role in accessing and dispersing metropolitan travel, whereas intermodal areas and other exchange points deal with urban travel. All in all, almost 16,000 suburban trips and more than 17,000 urban trips leave these locations each day.

There are up to twelve major metropolitan intermodal points located in the city of Madrid. Practically half of all trips by public transport throughout the region pass through one of these large nodes. Signs of recovery in the mobility sector trickled down to demand at Madrid's major interchanges in 2023, which, by the end of the year, had surpassed pre-pandemic passenger numbers by 10%.

SUPPLY AT THE MAIN INTERMODAL POINTS

	Metro and light-rail lines	Cercanías Lines	Suburban bus lines	Urban bus lines
Atocha	1	10	3	28
Nuevos Ministerios	3	9	-	15
Sol	3	4	-	3
Avenida de América	4	-	13	15
Moncloa	2	-	55	23
Príncipe Pío	3	3	29	15
Plaza de Castilla	3	-	38	24
Chamartín	2	9	3	1
Legazpi	2	-	9	23
Aluche	1	1	16	10
Plaza Elíptica	2	-	19	11
Conde de Casal	1	-	15	11

NO. OF PASSENGERS/DAY AT MAIN INTERMODAL HUBS



B PROMOTING THE USE OF BICYCLES

Bike usage as part of day-to-day mobility has risen sharply in the Community of Madrid over the last number of years, which is why the CRTM has taken several measures to promote bikes as a complementary form of public transport in the region. In 2023, the continued rise in bike use as well as other personal mobility vehicles (PMVs) for all types of mobility, including work-related mobility, was observed. This positive context invites us to continue and strengthen the integration and intermodality projects already launched in previous years as well as to participate in forums on this subject.

A significant development this year was the urgent development by the CRTM of a regulation to ban electric scooters from the public transport network. This came into force after one of these vehicles burst into flames on the metro.



Use of the Public Transport Card ('PTC') in public bicycle systems

The operational approaches were upheld in 2023 to ensure the integration of the CRTM Public Transport Card and Multi Cards and the application of benefits or discounts for their users in the public bicycle systems of the Community of Madrid, using compatible, contactless technology.

In 2023, the BiciMad bicycle model was completed with the system branching out to all the city's districts, in turn increasing its intermodal role as a feeder for other modes of transport in the so-called 'last mile'. This brought the total to 611 bases and 7,500 bicycles. It is still worth highlighting the large percentage of users of this system that used one of the CRTM contactless cards as a key to unlock a bike.





### Bicycle Parking Network (REB Plan)

In 2023, the REB plan maintained its around 200 bicycle parking spaces distributed across 26 different points of the underground, light-rail, interchanges and suburban bus shelter network. REB parking spaces are located at points with good accessibility for cyclists and that facilitate modal exchange between bicycles and public transport. Some bike parking facilities in stations such as Moncloa or Colonia Jardín have been used intensively. New REBs were implemented in suburban bus shelters at high-demand bus stops, which is the case of the pilot project carried out in Navalcarnero and Valdemoro.

### Cycle Route Network (RIB Plan)

This comprises a descriptive inventory, identifying possible actions to improve cycling routes to offer safety, speed and accessibility when travelling to or from public transport stations, along with a range of leisure and sporting routes. The feasibility of new cycle routes was maintained in 2023, holding meetings with technicians from town councils interested in these types of actions geared towards intermodality.

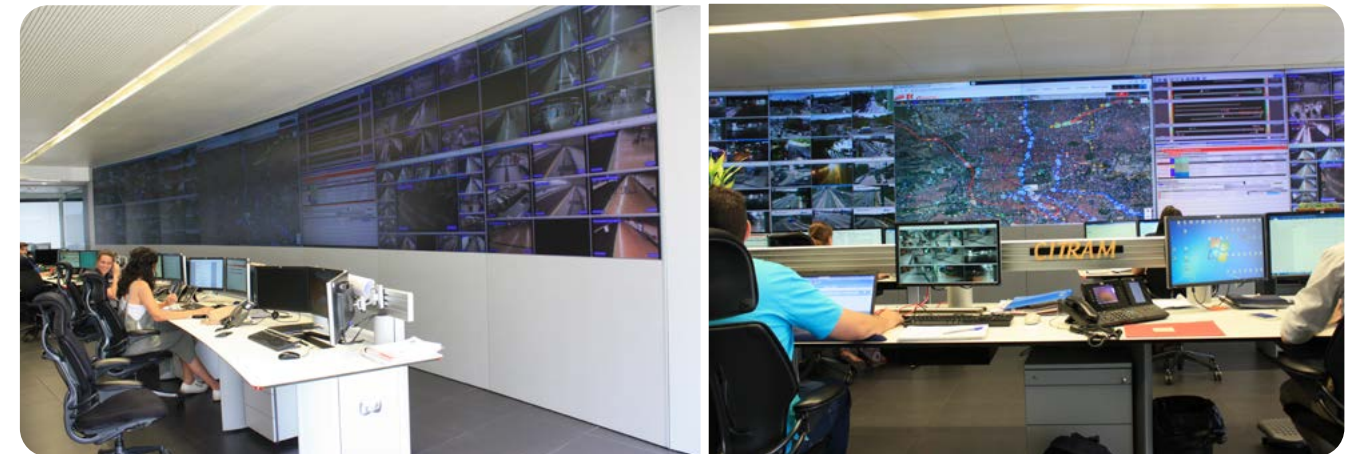
### Las Rutas Verdes (Green routes)

In September 2023, to mark European Mobility Week, two new Green Routes were published, specifically the RV-06.11 Moralarzal-Collado Mediano and RV-07.10 Manzanares el Real-Collado Vilalba. These routes were presented by the Regional Minister of Transport, the Head of the CRTM and other local authorities at the Moralarzal bus station. The Green Routes are for walking or cycling and start and end at a point along the transport network, making active leisure possible without having to resort to using private vehicles. These two new excursions bring the total number of routes to 47, with more than 800 kilometres having been completed throughout the region by 2023.



## 5.2 The CITRAM

In 2023, the Centre for Innovation and Public Transport Management of the Community of Madrid, CITRAM, offered a quality service to citizens by integrating real-time information on the infrastructures and services of the different modes of transport operating in the Community of Madrid.



The following are worth highlighting from the different initiatives carried out by this centre:

- Special real-time monitoring of scheduled events, such as the Christmas and Epiphany parades, Fitur, Easter Week, MADO, as well as different events such as Brunch Electronik, EvAU examinations, not to mention sporting events such as the Madrid Marathon, Mutua Madrid Open, Women's Race or the Vuelta a España bicycle race. The different demonstrations and races that took place over many weekends throughout the year were also monitored. The aim was to provide a quality and safe transport-system service.
- Monitoring and analysis of temporary suspensions to carry out infrastructure improvements on Metro lines 1, 9, 7 and 11 and monitoring of works on lines C3, C3a, C4, C4a and C4b between Chamartín and Nuevos Ministerios through the Sol tunnel to guarantee a good connection for users.
- Carrying out special monitoring of incidents or conditions of varying severity, such as breakdowns or accidents.
- Improvements to CITRAM's operational applications to streamline the day-to-day work of the centre's operators, as well as improving communication with transport operators.
- Development of the new CRTM real-time planner to improve information on transport services and incidents in the Community of Madrid, offering detailed information relevant to frequent and sporadic public transport users.



## 5.3 Innovation Centre

The Sustainable Mobility in Public Transport Innovation and Training Centre was launched in 2019 by virtue of a collaboration agreement signed between the CRTM and the UITP, aiming to facilitate compliance with its purposes and powers, the sharing and disclosure of its actions, training activities in the field of public transport and sustainable mobility, the promotion of innovation and practices of excellence, and any other actions considered to be of public interest within this scope. This constitutes the first centre of this nature in Europe and America, joining two UITP Regional Training Centres already in existence in Singapore and Dubai. The term of the agreement ended in May 2022, and collaboration with UITP on innovation is currently being carried out through the Technical 'Research in Mobility' Committee and in regular forums on the subject.

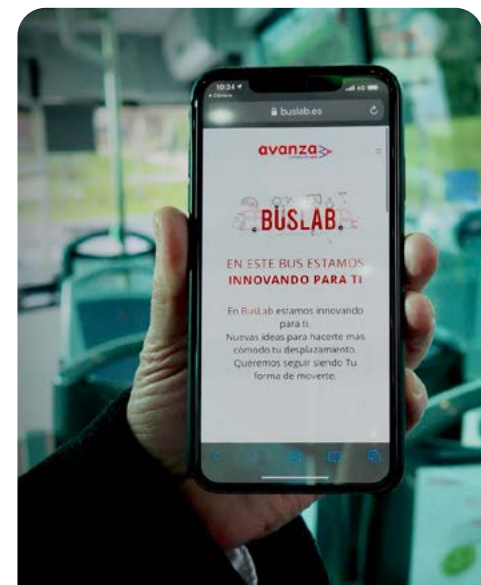
To develop its activities, since 2023 it has been supported by a technical office under a service contract with the company TEKIA, which supports the Innovation Centre, which this year drew up the Centre's strategic documents: Implementation Framework Document, the Management Plan and the Action Plan in which the strategic axes on which the Innovation Centre will work have been redefined, such as smart transport planning and management, integrated fare management, data acquisition and processing, information and user relations, mobility as a service (MaaS) and multi-modal integration in mobility, autonomous and connected vehicles, accessibility, safety and comfort, and sustainability and energy efficiency. In 2023, the CRTM signed new partnership protocols with companies and organisations, 68 of which have been signed since the Centre's creation. It is worth highlighting the renewal for four more years, in October 2022, of the agreement signed by the CRTM with the Directorate-General for Traffic, the Autonomous University of Madrid and the company ALSA, to launch a loop line within the university campus operated by an autonomous bus, the first of its kind in Spain, to be put into operation at the turn of 2020.

Other projects developed from the innovation centre during 2023 have included:

- Second wave of BUS-LAB projects, a laboratory bus that brings together all innovations in a single bus with improved operation and user comfort, used as a showcase, not just in terms of innovation, but also with a view to continuously improving customer service. In this third set of projects, the 'Line Incident Notification' pilot project was tested, which has been rolled out in all concessions in Madrid, with a view to improving the customer experience by notifying users who have given their consent to this service if there are incidents on the automated line via WhatsApp; The 'Driver facial recognition system' has also been tested, which monitors the driver to detect fatigue, eyelid closure, as well as other potential threats, such as smoking, talking on a phone or not looking at the road; the 'Digital rear-view mirror' which involves a new HD camera-based mirror system that helps and provides

safety when driving, improves night vision and in poor visibility conditions, and includes side indicators for lane changes.

- The "Infrared bus-stop occupancy estimation project" is still ongoing to analyse the number of passengers at bus stops to provide real-time status monitoring and adapt vehicles to demand levels.
- 'Accessibility solution for Variable Information Panels and installation of a T-loop system' project with the operator Metro Ligerio Oeste, S.A which is an accessibility solution incorporated in information panels, through which which visually impaired users can hear the information displayed on a given panel by manually pushing a button to hear the message through a loudspeaker.
- Continuation of the "Project to validate and pay for public transport tickets using Bluetooth beacons" that entails implementing an automatic and remote Bluetooth validation system to read and verify validations. The user's mobile phone is the information sender and the receiver is the *beacon* installed on the bus, which reads the ticket information and confirms that it is valid.
- 'Guidance of blind people in public transport by means of dead reckoning' Project that strives to test a technology to guide visually impaired people through an app, which can also be used by non-visually-impaired users, through the Community of Madrid's public transport network, in a comprehensive route from origin to destination passing through all the necessary infrastructure such as bus stops, vehicles, stations or interchanges.



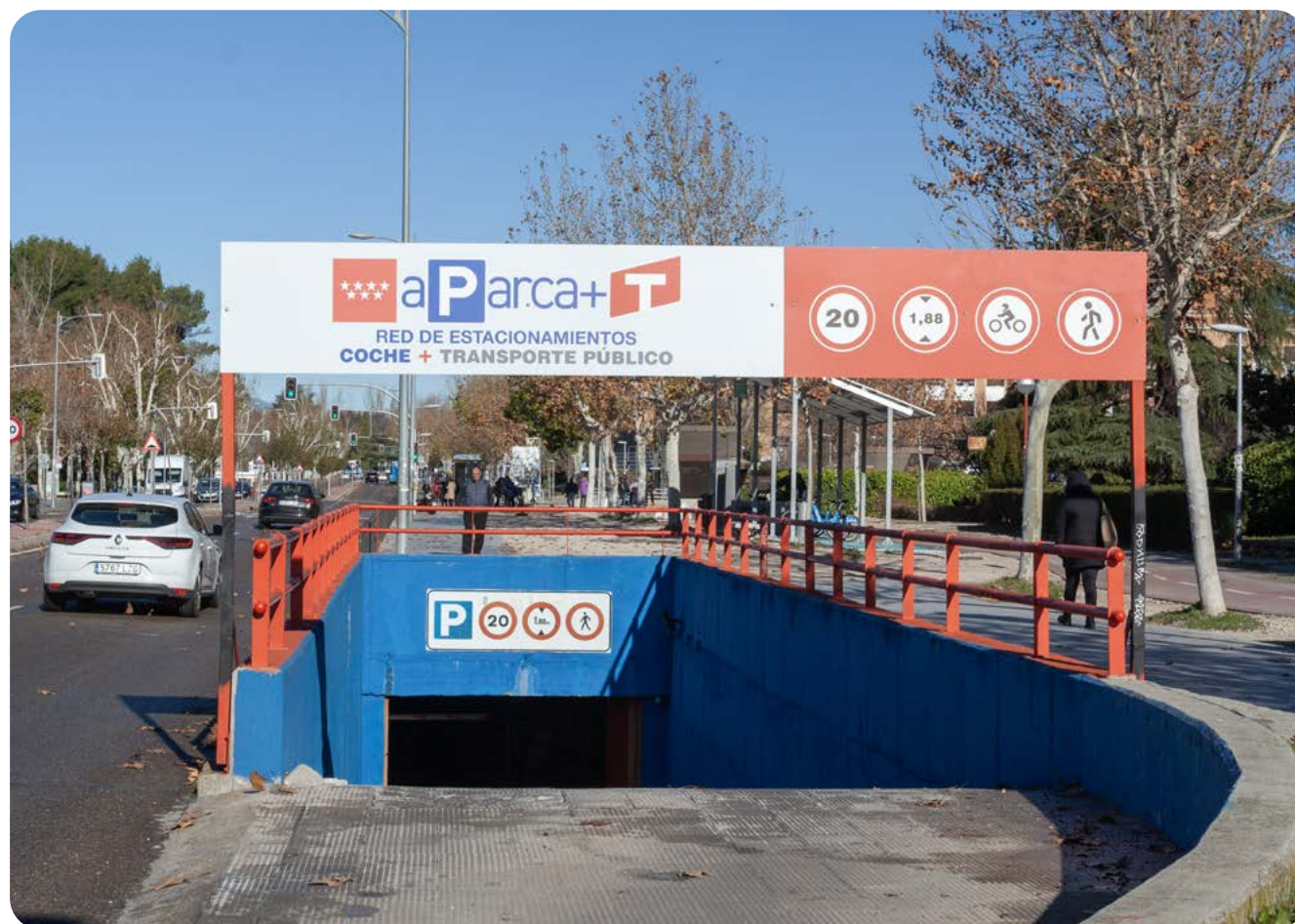


## 5.5 Relevant activities

### A. aParca+T PARK-AND-RIDE PLAN

“aParca+T”, the Strategic Plan for Modal Interchange Car Parks of the Community of Madrid, drawn up in 2018, is an ambitious long-term plan that strives to foster the use of public transport and intermodality through a network of smart car parks, with the CRTM unifying the management thereof while making them free for users whenever combined with public transport. The objective is to provide the existing network with a homogeneous image and conditions of use, extending this network with new spaces and facilities, with more than 90 car parks planned and more than €200 million earmarked for investment.

“La Estación” in Colmenar Viejo, the network’s first car park in the network, was launched in 2019 as a pilot scheme with a view to implementing the technological platform that would go on to form the basis for the future “aParca+T” network, striving to detect real needs and demand in order to, further down the line, duly set out the definitive characteristics and conditions that the future management platform would require.



In 2021, three car parks located in the city of Madrid will be added as a pilot experience: Avenida de Portugal, Nuestra Señora del Recuerdo and Metropolitano, by virtue of a collaboration agreement between the Madrid Municipal Transport Company (EMT) and the CRTM.

The Ciudad Universitaria car park, managed by the Moncloa Interchange concessionary, and pursuant to an agreement with the Complutense and Polytechnic Universities of Madrid, also continued as a pilot project in 2023. Demand was monitored throughout the year with favourable data on the use of deterrent places.

Also this year, the process got underway with Renfe Cercanías to negotiate the possibility of entering into an agreement between administrations to sign an Agreement to incorporate several car parks in the A-6 corridor into the aParca+T Network, currently operated under concession by Renfe Cercanías. These are the car parks in Las Rozas, Pinar de las Rozas, El Barrial and Las Matas, with 4,000 spaces. The draft of the corresponding Agreement was drawn up, which includes the economic and technical conditions for integration into the aParca+T Network.

### B. THE A-2 BUS-HOV LANE

With regard to fostering reserved lanes to access Madrid, in 2023, the CRTM worked in close collaboration with the Ministry of Transport, Mobility and Urban Agenda, the Directorate General of Traffic and the Madrid City to readjust the annual payment brought about by the signing, in July 2023, of Addendum number 2 to the Agreement signed in October 2019 by the parties, to execute the “Project to Improve the accessibility of public passenger transport to Madrid, Bus-HOV lane on the A-2, entrance and exit”, This year, the formalities required to definitively award the works were completed.

The proposed solution consists in reserving the left-hand lane of the highway entering and leaving Madrid for buses, motorbikes and vehicles with two or more occupants (HOV) during rush hour. The inbound lane will have a reduced number of boarding points and users will need to remain in the lane until its end in Madrid (Avenida de América). Several boarding and exiting points will be available in the outbound lane. In order to properly operate the reserved lanes, a series of ITS devices will be installed (variable signage panels, marker lights, cameras to read registration numbers, etc.) to allow for real-time management.

### C. IMPROVEMENT WORK ON THE UNDERGROUND NETWORK

In 2023, a number of projects were carried out on the Metro network with a view to improving the quality and safety of the public transport service in the region. These involved suspending important sections of the network such as those that took place on lines 1 and 9.

To make up for the lack of Metro service between the stops affected by the works, the CRTM put in place a number of special substitute bus services, with surface routes and frequencies similar to those of the Metro, at no additional cost to users, as well reinforcing other Metro and EMT lines to be able to absorb the corresponding increased demand.

In this way, Metro de Madrid had to carry out comprehensive track superstructure renewal and facility modernisation works on the section of **line 1** between **Sol and Valdecarros**, with this section being suspended for almost 4 months, between 24 June and 13 October. The actions mainly consisted of removing the track ballast and replacing it with a concrete platform track, complementary actions on track and catenary equipment, modernisation of the railway signalling systems and improving the drainage system and geometry in curves. At the same time, work continued on improving accessibility and installing lifts at the Menéndez Pelayo station.

During the period that this section of line 1 was not in operation, the CRTM implemented a special

EMT service between Atocha and Valdecarros, with a maximum of 58 buses running simultaneously. The rolling stock combined articulated buses and standard-size buses, depending on the vehicles available in each service season. The alternative services on the Sol - Estación del Arte section and at the Congosto station were covered by other existing EMT lines, and the Sol - Atocha connection was provided by Cercanías. On 27 September, line 1 was partially opened between Sol and Nueva Numancia, so the Special Service was modified from 30 September to cover the section that was not running between Nueva Numancia and Valdecarros.

The total demand for the Special Services reached 7.68 million passengers during the entire service period, with more than 70,000 passengers per day while the section between Sol and Valdecarros was not in operation, and around 50,000 passengers per day from October onwards, following the partial re-opening of the service between Sol and Nueva Numancia.

Furthermore, and in a complementary manner, another 9 EMT lines were also reinforced in the area of the section of Metro that was out of service, which saw an estimated variation in demand of some 2.6 million additional passengers during the entire period that the Metro was not in operation.

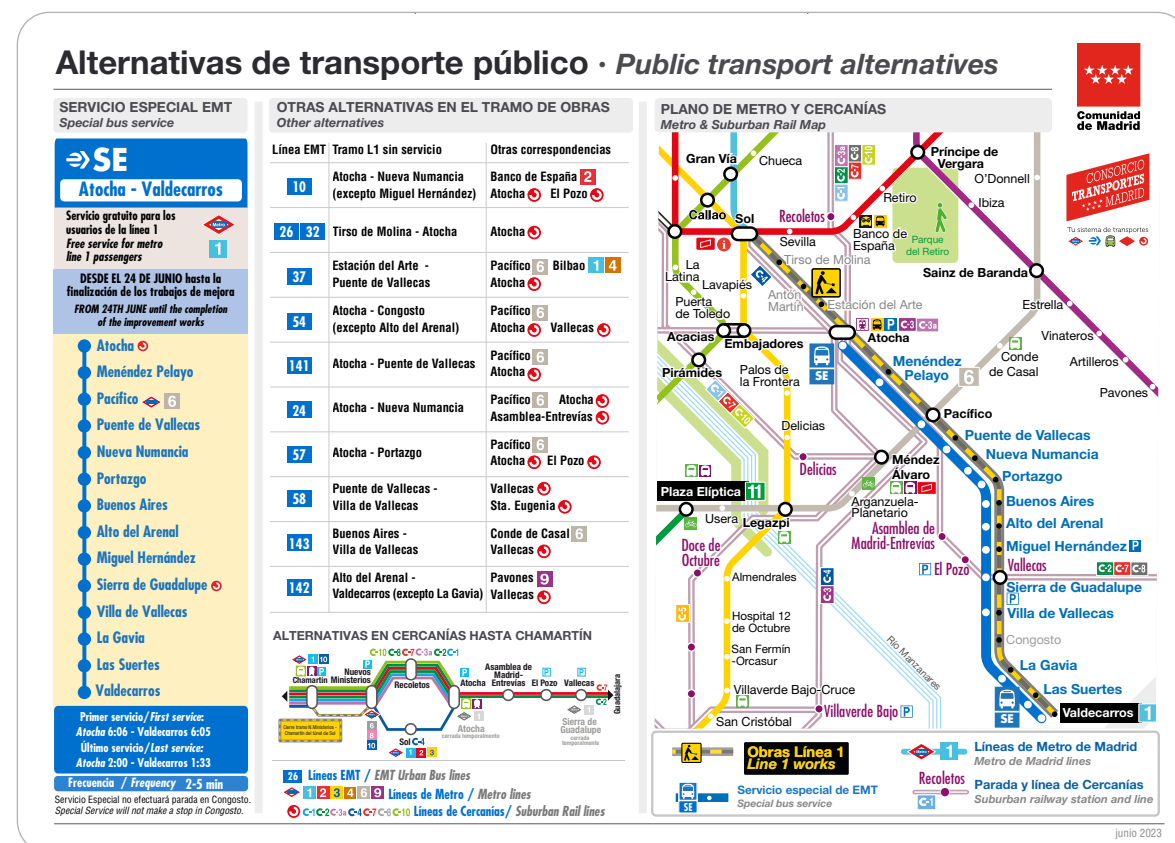
At the same time, Metro **line 9** was also suspended between 5 August and 6 September as work was being carried out to remove asbestos-containing materials in the tunnel between the Concha Espina and Núñez de Balboa stations, while also improving the roofs and waterproofing systems and modernising the stations on the affected section. As a result, the service on line 9 was temporarily suspended between **Colombia and Príncipe de Vergara**, coinciding in this case with the month of lowest passenger demand.

With a view to guaranteeing alternative mobility in the section and stations that were not in operation, and to alleviate passenger inconvenience, the CRTM put in place a special EMT bus service between Colombia and Sainz de Baranda to cover the route along the suspended section.

During the entire period, a total of 452,000 passengers used the special service. Similarly, two other conventional EMT lines running wholly or partly along the same route also saw a significant upturn in demand.

2023 saw other smaller suspensions than the ones we have just looked at, such as for example a one-off suspension on **line 7A**, for which the CRTM ran a Special Service between García Noblejas and Estadio Metropolitano with no stops along the way, with an average demand of roughly 3,000 passengers on service days.

Lastly, it should be noted that the suspension on **line 7b** between Hospital del Henares and San Fernando that commenced on 24 August 2022 was still ongoing in 2023. To make up for this, the





CRTM ran 7 suburban bus lines and bolstered the San Fernando de Henares urban line 1, as well as putting in place a special suburban bus service between San Fernando and Hospital del Henares.

#### D. IMPROVEMENT WORK ON THE CERCANÍAS NETWORK

Since 2022, Madrid Chamartín - Clara Campoamor has been undergoing comprehensive remodeling works of the entire railway complex, with a view to doubling the station's capacity for High Speed trains, remodelling the tracks and platforms for the Cercanías service, while improving signalling to make this network even more flexible. Furthermore, the project entails extending the surface area of the passenger terminal and recovering the Cercanías lobby, providing a direct connection between this service and the Metro station.

Towards the end of 2022, the planned works at the Chamartín station and its surrounding area were carried out simultaneously without affecting rail traffic. However, from 4 February to 23 December 2023 the service through the Sol tunnel on the section between Chamartín and Nuevos Ministerios was suspended, with interruptions on C-3, C-3a, C-4, C-4a and C-4b on this section.

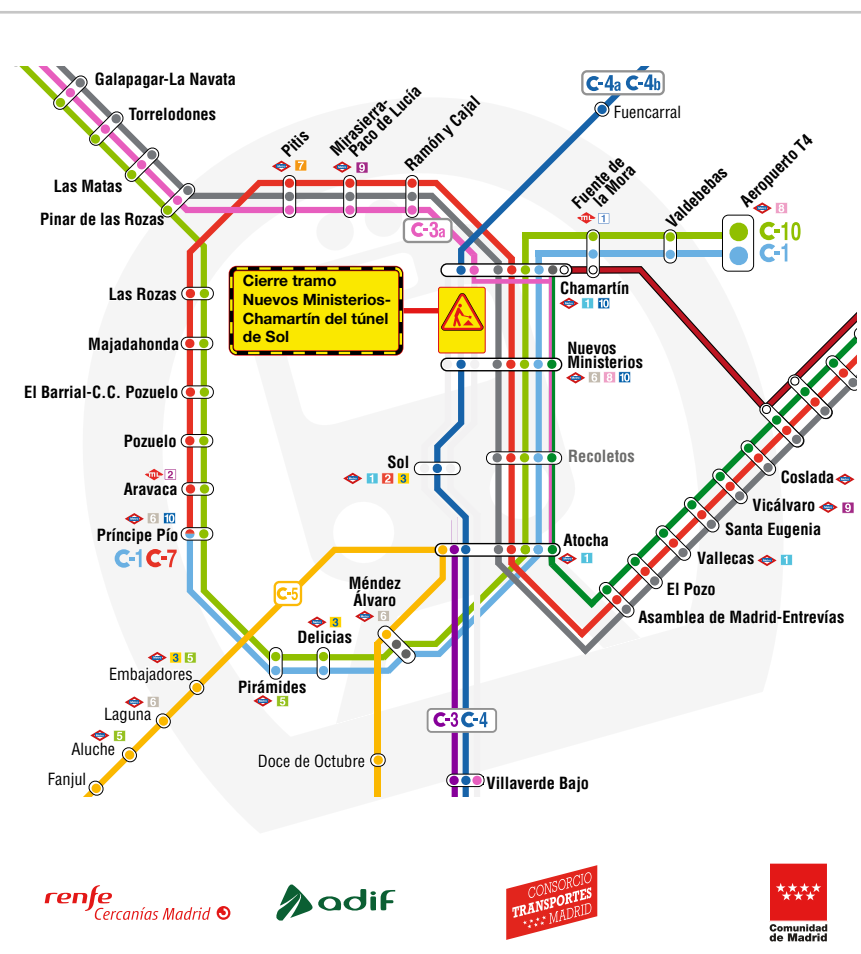
#### Corte por obras entre Nuevos Ministerios y Chamartín 4 febrero-diciembre 2023

##### LÍNEAS AFECTADAS

**C-3 C-3a C-4 C-4a C-4b**

**Líneas con funcionamiento normal**  
C-1 C-2 C-5 C-7 C-8 C-10

En los últimos meses de 2022 las obras programadas de mejora en la estación de Chamartín-Clara Campoamor se han realizado de forma simultánea y sin afectar al servicio ferroviario. Sin embargo a partir del 4 de febrero de 2023 y hasta finales de año no habrá más alternativa que suspender el servicio por el túnel de Sol en el tramo comprendido entre Chamartín y Nuevos Ministerios. De esta manera las líneas C-3, C-3a, C-4, C-4a y C-4b no circularán en este tramo. La comunicación entre Chamartín y Atocha se garantiza cambiando de tren y utilizando como alternativa el túnel de Recoletos. El acceso a la estación de Sol se puede seguir realizando utilizando la línea C4 de Cercanías. Estas obras ampliarán notablemente el número de andenes y de vías que prestarán servicio tanto a Cercanías como a Media Distancia y a la Alta Velocidad y convertirán a la estación de Chamartín-Clara Campoamor en un referente del transporte ferroviario europeo y en un importante nodo de intercambio modal con el metro y los autobuses urbanos e interurbanos.



During this period, transport between Chamartín, Sol and Atocha was covered by the Cercanías network itself after reorganising its own services. Passengers travelling to Chamartín or Atocha could get to both stations via the Recoletos tunnel, as well as to Nuevos Ministerios, while Sol remained open for the C-4 line from Parla. Therefore, all the stations would be reached from one another by adding at most a single transfer to the usual route, which would have to be done at Atocha, Nuevos Ministerios or Chamartín, depending on the passenger's origin and destination.

#### E. SPECIAL PUBLIC TRANSPORT MOBILITY PLANS

Like every year, the Consorcio Regional de Transportes de Madrid oversaw the planning and co-ordination of special public transport measures, working closely with event organisers, transport operators and other stakeholders. These measures included strengthening the offer and number of staff on the Metro and EMT, suburban transport and interchange networks, implementing special bus shuttles, additional night services and route diversions as a result of traffic disruption, carrying out campaigns to foster public transport use and publishing specific access maps to access the event on the city's public transport network, to name but a few. All events were supervised by the CRTM's Integrated Public Transport Management Centre (CITRAM).

The events in the city of Madrid were held in collaboration with Madrid City Council to weigh up the mobility plans put forward by the organisers as a condition to them being given the green light by the Madrid City Council. Throughout 2023, the mobility plans for a total of 91 festivals, sporting, artistic and/or socio-cultural events that would have a considerable effect on the general mobility in the city were weighed up with a view to ensuring that attendees could get to these events safely.

Some of the stand-out events were the Mutua Madrid Open tennis tournament, the 19th Women's Race, the Book Fair, the San Isidro meadow festival, the last stage of the Vuelta a España bicycle race and music festivals such as Primavera Sound Madrid, which was held in the City of Rock in Arganda del Rey and in the Metropolitan Stadium, the Coca Cola Music Experience, and those held at IFEMA such as Suavefest, Brava Madrid and Madrid Salvaje.

Worth mentioning is the 2023 edition of Mad Cool Festival which, after the first two editions held in the Caja Mágica and the following ones in Valdebebas, this year was held for the first time in the Iberdrola Music venue, located in the district of Villaverde. For this event, the CRTM put on a special public transport system, at the promoter's expense, which included extending the service timetable on Metro lines 3 and 12, as well as a special EMT bus shuttle service between Villaverde Alto and Atocha, with a stop along the way at Legazpi.

With regard to special measures, it is worth mentioning those put in place due to the effects of the adverse weather conditions brought about by the flash flooding that hit the Community of Madrid on 3 and 4 September. This heavy rainstorm caused extensive damage throughout the region and seriously affected communications between the Community's different urban centres. In the capital, there were heavy traffic jams and major flooding in Metro stations, leading to the suspension of some lines. The area that suffered the most damage was the southwest of the region, in particular municipalities such as El Álamo, Navalcarnero, Villamanta, Villanueva de Perales, Villamantilla and Aldea del Fresno, where several bridges collapsed that left some of these towns cut off.



Due to the latter, the suburban bus network was severely affected in this area, as the M-507 had to be closed and the lines that run along had to be changed around in order to serve the municipalities of Rozas de Puerto Real, Cenicientos, Cadalso de los Vidrios, Villa del Prado, Aldea del Fresno and Villamanta, while keeping all the resources assigned to the concession that manages these lines. These lines had to severely modify their routes and travel times to serve these municipalities for several months until temporary bridges were built and put into service, which allowed for the partial restoration of the affected routes.

### H STOP ON DEMAND ON SUBURBAN NIGHT-TIME LINES

In 2020, the stop on demand service was rolled out on all suburban night-time lines ("N" lines), allowing users to request the stop outside of those established on the route to make it easier for them to arrive at their destination, provided it is along the line's usual route.

This measure strives to increase safety in travel and minimise the risk of uncomfortable situations or possible assaults during night-time hours for certain groups of users: woman and minors. This service can be requested by women and people under 18, the stop will be included in the line route and only in urban areas, and the user must personally inform the driver of where they wish to disembark at least one stop in advance.

This service was used 4,993 times in 2023 across the 42 bus lines that made it up. 90.3% of requests came from women.

## 5.6 Universal accessibility

In 2023, the CRTM continued its regular initiatives to promote accessible mobility for all citizens, from ensuring compliance with the accessibility regulations in force to fostering best practice in this regard. The following actions stand out in this area of universal accessibility:




- Participation in the Council for the Promotion of Accessibility and Removal of Barriers (hereinafter CASB) of the Community of Madrid.
- Continuation of the Plan to prepare stops on suburban and urban bus networks in municipalities other than the capital, in terms of accessibility to modes of transport for people with disabilities (in accordance with Royal Decree 1544/2007 and Decree 13/2007).
- Online video interpreting service in sign language for the deaf and hard of hearing, located in the CRTM's customer service offices.
- Maintenance of the Geographical accessibility information System at bus stops.

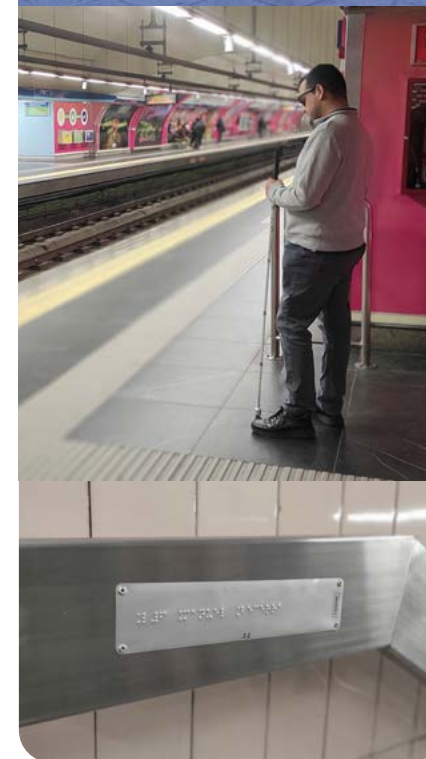
On the other hand, different training and dissemination campaigns have been ongoing:

- Community of Madrid Course on Universal Accessibility.
- Courses on cognitive accessibility at the Polytechnic University of Madrid.
- School education.
- Lectures and presentations at congresses, seminars, technical conferences, etc.

For its part, Metro de Madrid has continued rolling out its 2021–2028 Accessibility and Inclusion Plan, drawn up in collaboration with the Spanish Committee of Representatives of Persons with Disabilities (CERMI) with a view to ensuring that 84% of its stations are fully accessible by the time the plan is fully implemented. This €332-million plan encompasses 24 stations, in which 103 lifts are to be installed.

### ACCESSIBILITY OF PUBLIC TRANSPORT MODES

	Accessible Metro de Madrid stations -> <b>70%</b>
	Number of Metro de Madrid lifts-> <b>559</b>
	Accessible light-rail and other railway-concession stations -> <b>100%</b>
	Accessible city and suburban buses-> <b>100%</b>





## 5.7 The environment

The CRTM continues to uphold a firm commitment to the environment, and is one of the main players responsible for implementing the measures envisaged regarding public transport in Madrid in the “Strategy for Air Quality and Climate Change of the Community of Madrid. Plan Azul +”, highlighting its work as a member of the Air Quality Section of the Environment Council of the Community of Madrid and of the Task Force responsible for the implementation of the protocol of measures to be adopted during episodes of high nitrogen-dioxide pollution in the city of Madrid.

In the field of environmental sustainability, and in application of the Modernisation Plan for suburban buses in the Community of Madrid, one of the main measures was the incorporation of new cutting-edge vehicles in terms of atmospheric emissions to replace older models with less evolved technologies, which were therefore more polluting. The total number of vehicles renewed in 2023 was 402.

With the renewal complete, more than 92% of the fleet providing regular public transport services for suburban passengers in the Community of Madrid fulfils the most demanding levels established in the Euro VI standard, almost meeting the levels corresponding to the Euro V or EEV standards. In this way, the Madrid suburban fleet is among the country’s most modern, with an average age of 4.7 years.

Regarding EMT de Madrid's rolling stock, following the withdrawal of the last diesel vehicles in 2022, the EMT has been operating a 100% clean bus fleet in accordance with European fuel standards for urban transport. The number of “zero-emission” electric vehicles rose to 265, accounting for 12.6% of the total. On the other hand, average fleet age was reduced to 4.7 years.

As part of the fight against climate change, the CRTM, based on the data provided by the operators that make up the aforementioned organisation, has calculated the greenhouse gas emissions that were released into the atmosphere in 2023 in the course of their activity in the regional public transport system.

In doing so, the CRTM is playing its part in giving a clearer insight into the impact of public transport in Madrid on global warming and by fostering the implementation of measures to cut down on greenhouse gas emissions in the region, in line with the Community of Madrid’s Energy, Climate and Air Strategy (2023-2030).

This calculation was obtained from the Organisational Carbon Footprints of each of the operators that make up the CRTM (Metro de Madrid, light rail, EMT de Madrid, road concessions for suburban



and urban services in other municipalities and interchanges), accounting for the direct and indirect greenhouse gas emissions generated associated with the consumption of fossil fuels, fluorinated gases and electricity, both in fixed installations (offices, depots, workshops, etc.) and in vehicles providing services in the region’s regular public passenger transport system.

The guidelines set out in the ‘Guide for calculating the carbon footprint and for drawing up an organisation's improvement plan’ published by the Spanish Climate Change Office were followed, and the emission factors required to record organisations in the carbon footprint, offsetting and absorption projects register created in Royal Decree 163/2014, of 14 March were used.

The carbon footprint obtained therefore amounted to 388,963 tonnes of Co<sub>2</sub> eq. Of this figure, 53% would correspond to suburban road transport, 45% to urban road transport in Madrid and other municipalities, and the remaining 2% to emissions from railways (Metro de Madrid and light rail).

In 2023, it is estimated that the Community of Madrid’s public transport system avoided the emission into the atmosphere of more than 1.1 million tonnes of CO<sub>2</sub> eq, which would have been generated had the trips taken on it been taken in private vehicles.

### CHARACTERISATION OF BUS FLEETS

#### By emissions regulation (EU Directives)

	Euro VI	Euro V/EEV	Euro IV	Euro III	0 emissions	TOTAL
Urban buses of Madrid (EMT)	1,624	213	0	0	265	2,102
Road-transport concessions	1,946	108	0	1	59	2,114

#### By type of fuel

	Diesel	Natural gas	Natural gas/diesel	Hybrid	Electric	Hydrogen	TOTAL
Urban buses of Madrid (EMT)	0	1,837	0	0	265	0	2,102
Road-transport concessions	1,157	250	1	644	56	3	2,114

## 5.8 Service quality and customer service

The CRTM understands that service quality should be user-centred. Therefore, quality and customer service are addressed by the Consortium together. This ensures that user expectations and satisfaction play their part and are compared with the criteria and indicators adopted when measuring service quality and adopting improvement initiatives. In recent years, control and supervision procedures have been refined for the different operating, supply and service contracts and the service provided by the different transport operators. This involves the development and measurement of quality indicators in accordance with objectives in line with the demands of users and those established contractually with these operators.

The service is monitored and controlled using in-house resources, through the body's inspection team, as well as by contracting technical support implementing specific measurements and studies. The work carried out directly by the inspection staff resulted in 3,495 reports being drawn up. This work involves actions to check legal obligations and to keep on top of assessment indicators. To achieve greater development and depth in the evaluation of various indicators, specific work is outsourced.

Perception studies of different modes of transport are used to incorporate and compare the user perspective. In 2023, the CRTM conducted more than 15,600 surveys on users of the public transport system of the Community of Madrid in order to ascertain their level of satisfaction with the service. This research showed that the overall average weighted rating per passenger was 7.94 points out of 10 for the Madrid public transport network managed by the Community of Madrid. The overall score is derived from the general rating given to the service by each survey respondent.

Mode of transport	Overall Rating	
EMT	7.87	<p>EMT, Metro Ligero Oeste, suburban and urban-related data in other municipalities come from studies directly overseen by the CRTM.</p> <p>The data relating to Metro, Cercanías Madrid and Tranvía de Parla have been provided by the respective operators who have overseen the corresponding studies.</p> <p>The data shown for Cercanías Madrid corresponds to the Perceived Quality Index, obtained by aggregating the quality attributes weighted by importance.</p>
Metro	8.08	
Suburban/urban other municipalities	7.69	
Metro Ligero Oeste	8.31	
Cercanías Madrid*	6.99	
Tranvía de Parla	8.14	



Meanwhile, an analysis of the complaints and suggestions received serves to focus and weigh up specific issues, by subject-matter, mode of transport, operators or even line, identifying aspects for strategic or short-term involvement, as applicable, and incorporating swift improvements.

In addition, the extensive network of in-person support offices, as well as telephone and online information services, are an additional element of great utility in relation to service-quality control and the early detection of anomalies, especially in terms of issues relating to tickets and cards. It should be borne in mind that, in 2023, 2,060,000 people were attended to in person and just over 1,170,000 by telephone or online, representing a total of 3,230,000 customer-service interactions.







### C. INDUCED DEMAND SURVEY

This report strives to present the results of the passenger survey conducted at the 5 interchanges in Madrid and the Cercanías de Atocha station in November 2023. The survey's primary objective was to ascertain the possible effects on mobility of the public transport fare rebate from September 2022.

37.8% of respondents had not made the same trip before September 2022. With regard to Cercanías, this accounted for almost half of the passengers (47.3%). The most common reason was a change of place of work or study (56%) or residence (27%), which together account for 85% of the cases.

Bus users make up the highest percentage (64.5%) of passengers who still take the same trip. The majority of the segment of passengers who already used public transport used the Travel Pass (around 90%). In other words, they would be loyal users of the system. The remaining 10% is split between multi-trip tickets and single tickets.

With regard to suburban bus, a rate of 3.3% could be estimated as induced demand over the daily volume of bus passengers, with 2.1% of passengers not making the same trip, citing 'cheaper' and, to some extent, parking issues as the main reasons for switching.

### D. VERIFICATION STUDIES FOR INDICATORS ESTABLISHED IN THE SUBURBAN TRANSPORT QUALITY PLAN

The data used to monitor and control the Quality Plan for suburban road transport in the Madrid Region comes from a range of different sources. Systematic service operation records, audits and control mechanisms based on specifically contracted studies are used.

In 2023, different measures were undertaken with external support to check the telephone support and online information services provided by transport operators, the functioning of dynamic passenger information points and various aspects regarding the cleanliness and upkeep of vehicles, as well as how comfortable the vehicles are and the information provided by the driver via the mystery customer.

### E. SERVICE FOR THE ANALYSIS OF MOBILITY IN THE COMMUNITY OF MADRID APPLYING BIG DATA TECHNOLOGIES (2023)

The purpose of the contract is the daily characterisation of mobility in 2023 and its modal split, at regional and municipal level, using Big Data technologies with a view to adopting measures on the public transport supply of the Community of Madrid and the subsequent decision-making in this regard.

The study was developed based on data from the CRTM's own sources, cross-referenced with others, such as the geolocation of anonymised mobile data. Through the use of Big Data - Business Intelligence tools, the necessary integration is ensured to obtain the results required for all mobility in the Autonomous Region of Madrid, in a short space of time, such as:

- Origin – destination matrices (large territorial scopes) segmented by period, type of demand, distance and modal distribution.
- Dashboard with information compared with main mobility data (number of trips, modal distribution, timetable distribution, etc.).
- Demand-evolution summary sheets.





## 5.10 European projects

Since its creation, the CRTM has participated in various European projects focused on research and technological development in the field of transport and mobility, fostering cooperation and the exchange of experiences with its European counterparts.

As part of the Horizon 2020 programme, the European SCALE-UP *“User-centric and data driven solutions for connected urban hubs”* project kicked off in mid-2021, in which three major urban hubs [Antwerp (Belgium), Madrid (Spain) and Turku (Finland)] started working towards a common goal: to develop data-driven, user-centric strategies for clean, inclusive and smart mobility through multi-use and well-connected urban hubs that reach the levels needed to meet European climate and transport targets. This is achieved by rolling out 28 scalable mobility solutions within the participating cities, 8 of which will be in Madrid.

Within the project, the CRTM shall oversee the implementation of measures related to improving and putting in place new and effective forms of governance, integrating park-and-ride with public transport, integrating data and MaaS (*Mobility as a Service*), while managing major multimodality-focused events.


To carry out all the work, roughly €9 million has been earmarked, co-financed by the European Commission, with a view to getting the 48-month project off the ground.

More information at [www.scale-up-project.eu/](http://www.scale-up-project.eu/)

On the other hand, October 2022 saw the commencement of the SUNRISE project, *“Strategies and Technologies for United and Resilient Critical Infrastructures and Vital Services in Pandemic-Stricken Europe”*, to facilitate close collaboration between European Critical Infrastructures (CIs) and help them to be better prepared and equipped to properly assess and manage future risks in the wake of pandemics. This project will develop access control, remote inspections, and demand forecasting technologies and tools to handle these situations. The project focuses on the health, water, energy, digital infrastructure and, in the case of the CRTM, transport industries, and will roll out a pilot for each of them.

To carry out all the work, the 36-month project has 41 partners from 15 countries and a budget of €11.6 million, co-financed by the European Commission.

More information at [www.sunrise-europe.eu/](http://www.sunrise-europe.eu/)





**3 stunning cities.**

**3.9 million active citizens.**


**28 urban mobility strategies.**

**23 committed partners.**






**Antwerp**  
Belgium's largest economic hub





**Madrid**  
Spain's capital & most populous city



**Turku**  
The oldest city in Finland

---





**1 STRATEGY**


The SUNRISE strategy will improve CI awareness and resilience, and business continuity by building a precise model of pandemics and their common influences on CIs. It will also enable pandemic-specific risk assessment and mitigation.


**2 COLLABORATION**


SUNRISE will host a series of national workshops with critical infrastructure operators and authorities in Spain, Italy and Slovenia.

**3 TECHNOLOGY**

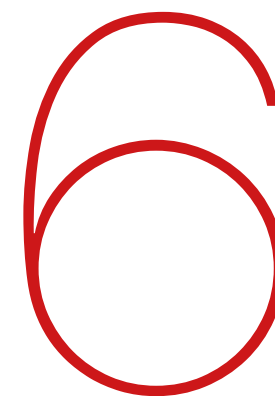
SUNRISE will develop four innovative tools for improved CI resilience and continuity including tools for Risk-Based Access Control, Resource Demand Prediction, Cyber-Physical Resilience and Remote Physical Infrastructure Inspection











## Citizen relations

In 2023, the CRTM kept up its fundamental work as coordinator of user information, rolling out communication campaigns and actions with a view to getting demand levels back to pre-Covid-19 pandemic figures.

The CRTM institution website and the multitude of communication campaigns carried out were the most important elements in this mission.

Customer service and, in particular, the Management Offices, which are a direct point of contact for users, are of utmost importance when it comes to providing a comprehensive and high quality service.

### 6.1 User information

**A LA WEB [WWW.CRTM.ES](http://WWW.CRTM.ES)**

The CRTM corporate portal ([www.crtm.es](http://www.crtm.es)) is the largest source of information on the public transport system of the Autonomous Region of Madrid thanks to the constant work in updating its contents (service modifications, new developments in transport network design, maps and publications, etc.). Proof of this are the visits received by the website, more than 700,000 in 2023, as well as the more than 109,000 visits to its public transport card management module.

<https://tarjetatransportepublico.crtm.es/>





With regard to the website, great lengths have been gone to with a view to providing the media with information on the most notable actions being carried out by the institution and all its latest news. To this end, during 2023, the institutional website published 61 press releases and 882 warnings, with their respective photographic support.

#### **B THE “TARJETA TRANSPORTE” APP**

The app for users to top-up transport tickets on their mobile phones, available on Android and Apple, under the same conditions as any other distribution network (tobacconists, etc.), topping up transport cards, whether personal (PTC) or Multi, via mobile. Furthermore, the number of transport cards that may be used with each mobile phone is unlimited, with each card being topped-up separately.

Users find this app to be extremely useful, backed up by the almost 1 million downloads by the end of 2023, more than 50% of which were from repeat users.

#### **C THE OPEN DATA PORTAL**

With the aim of spreading information about the Community of Madrid’s public transport system, over the course of this year, the CRTM continued with its roadmap for progress in its open-data policy. This is a trailblazing initiative in the Community of Madrid, the fruits of which can now be seen in the

CRTM Open Data platform (<https://datos.crtm.es>); in the re-use of this information by companies, non-profit organisations, universities and the entire general public; and in the Multimodal Mobility Portal (<https://datos-movilidad.crtm.es>), a portal allowing users to explore and download mobility data, discover and create applications, and involve others in resolving major problems connected with mobility and transporting people.

These data generated by the CRTM are being used as a raw material, providing value-added services and innovative products to citizens.

#### **D INFORMATION AT STOPS**

Providing real-time user information at bus stops is of the utmost importance when it comes to keeping up to date with any possible incidents or delays in the service and improving their travel experience.

“Pide Tu Bus” is a smartphone “Stop on Demand” bus service installed at a bus stop in Valdemorilla, through which “Pide Tu Bus” users inform buses that they are waiting at the stop so that they can pick them up. To do so, they can scan a QR code or send an SMS, which will alert vehicle drivers of the need to stop at that point, while the system informs users of the waiting time for the service to arrive. In 2023, nearly 10,600 requests for the service were received (16% more than the previous year) of which 49% were sent by Text Message, and 51% by scanning the QR at the stop.

The Passenger Information Points (PIV), which are panels installed at bus stops, are just one of the many significant technological innovations the CRTM is rolling out. Within the network of suburban and urban buses of the Community of Madrid, a total of 513 panels have been installed, distributed across 495 bus shelters and 1 bus stop post, 21 more than the previous year, plus another 17 devices distributed in hospitals, bus stations and control centres. In the case of the EMT network, the number of panels available is 803 devices, 3 more than the previous year, of which 220 have operational Wi-Fi.

The NaviLens codes continued to be placed at stops on the suburban network in 2023. These codes, that can be used by all users, help visually impaired people locate a bus stop and obtain information on when the next buses are due to come. To use them, simply download the NaviLens or Navilens Go app and scan the code at the stop (this can even be done if you are standing some distance away), and then just follow the verbal instructions provided by the phone. Throughout the year, 1,004 NaviLens code tags were generated and placed on bus stop posts and shelters which, added to those from the previous year, represent a total of 2,416 tags. In the case of the EMT network, this system is installed in the 4,499 bus shelters and 1,041 posts in the city of Madrid.



## E TRANSPORT MAPS

Since its creation in 1986, the CRTM has been developing a frequent Transport Information Publications Programme with different collections structured by themes and regions. This editorial programme fulfils one of the basic premises of the Law governing the CRTM, specifically article 2.2.j “Providing information to users”. In 2023, in line with this programme, the following transport information publications were published:

### Series 1a. Map of the Autonomous Region of Madrid Metro network

This map, showing the geography of the Metro and Light RAIL network WAS updated for the website.

### Series 3. Madrid Transport Map

This map, published at a scale of 1:20,000, shows the entire underground and overground transport network in the municipality of Madrid. As usual, quarterly updates are carried out to be uploaded to the CRTM website. In previous years this map has also been installed on EMT bus shelters.

### Series 4. Transport map for the Autonomous Region of Madrid

As its name suggests, this map contains all the information on the transport network of the region in two areas; one at a scale of 1:50,000 of the so-called Metropolitan Area and another at a scale of 1:200,000 for the rest of the Autonomous region of Madrid. This map also comes with an updated list of suburban-bus operating companies. As well as being posted on the website, different formats and versions of the map were placed on the planners of the more than 3,500 CRTM bus shelters.

### Series 5. Transport maps for districts of Madrid

The 1:10,000 scale district transport maps and, once redesigned, the 11 sheets will be kept up to date throughout 2023 and updated every six months on the CRTM website. The importance of this map lies in its in-depth geographic database that is easy to update based on the Consortium's corporate GIS. This cartographic base is used, among other things, to create area maps of Metro and Cercanías stations or graphic support for specific actions of transport lines.

### Series 6. Transport Maps for municipalities in the Autonomous Region of Madrid

This is without a doubt one of the Transport-Information-Publications Programme's most ambitious projects, since the function of transport mapping at municipal level is two-fold: as well as providing information on the transport network, it is used as a reference street map for residents and visitors alike. In 2023, a total of 18 maps of other municipalities were updated and the first edition of the Pedrezuela map was created. It is worth highlighting that the more than 90 published Series 6 maps are updated every time a change is made to the municipality's transport network or, in any case,

every two years. Last but not least, these maps are installed at bus stops with bus shelters in each of the municipalities, including information on the area's main public facilities.

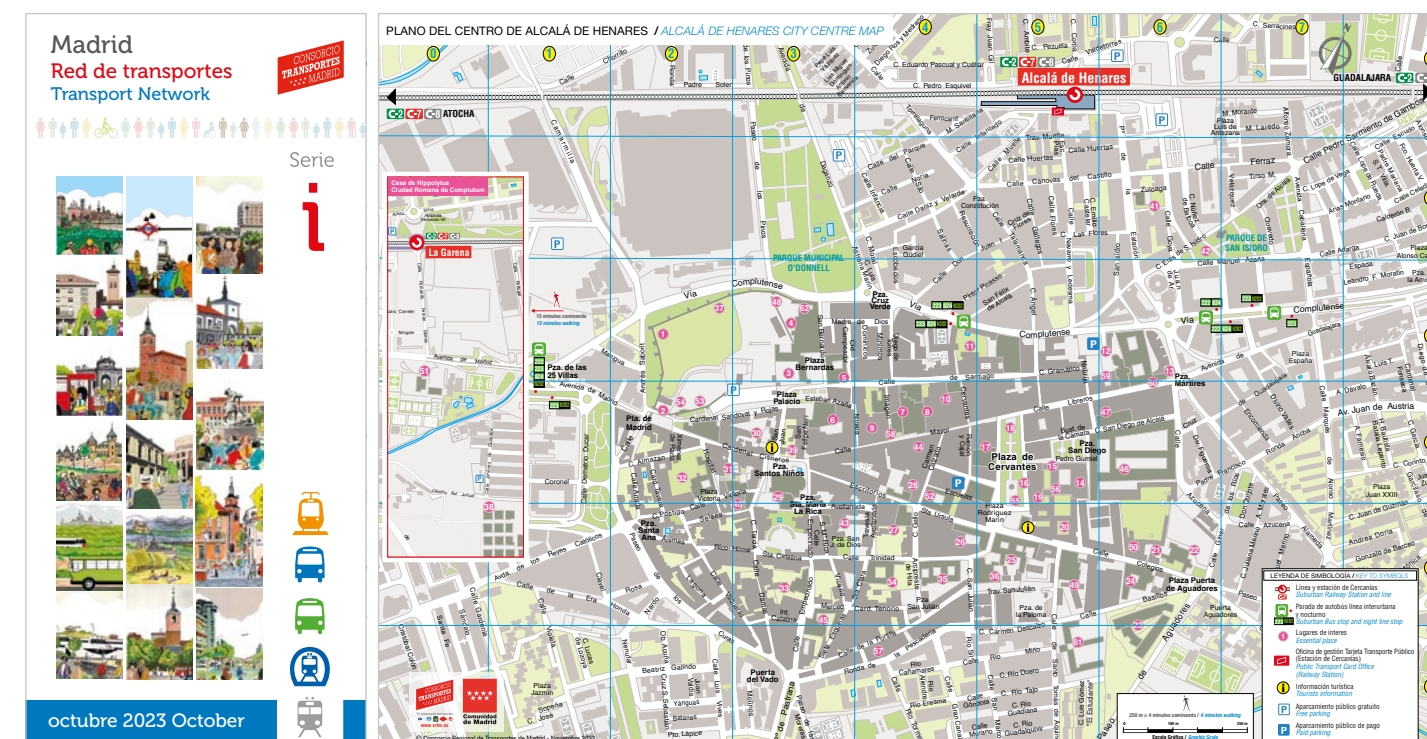
### Zone maps of Metro and Renfe-Cercanías stations

The so-called “zone maps” are proximity maps located close to the entrances at Metro, Light Rail and suburban railway stations and major transport interchanges. As well as being posted on the CRTM website, a paper version of this map is installed in the lobby and platform planners in the Metro stations and on the information sheet in the Public Transport Card Management Offices.

In 2023, a total of 55 zone maps were created, some as of which were brand new (29) while others were updated versions. The maps also feature legends in Spanish and English and the signage and labelling criteria has been improved in close collaboration with Metro Madrid. It should be noted that in 2023, coinciding with its 20th anniversary, all the zonal plans for line 12 (MetroSur) were published.

### Information brochures, publications and other graphic materials regarding actions and modifications to the network

Graphic and cartographic support is provided for a number of studies and presentations of new services throughout 2023, in particular on the website, in the city of Madrid and in suburban areas alike, for example the presentation of new lines in Getafe.





Within the city of Madrid, it is worth highlighting the large, highly visible version of the metro network map in the “mupi” box that Madrid City Council asked the CRTM to install at the exit of the city’s main metro entrances, that has gone down extremely well with users. Information leaflets have also been printed in collaboration with Metro de Madrid on the suspensions due to construction work being carried out on line L1, line 9 and the affected Cercanías lines at Chamartín railway station.

Other initiatives communicated through specific graphic materials include the unification of fares in Rivas Vaciamadrid, the ban on electric scooters, and the marking of the Madrid Half Marathon course on a totem pole.

Lastly, a special edition map is being produced for the Global Mobility Call congress. This map is a hybrid of Series 3 and Series 4, which will be distributed at the stand the CRTM shares with Metro de Madrid. This same map was custom printed for the UITP World Congress in Barcelona.

### Other publications

The 2022 CRTM Annual Report will be published in 2023 and a number of older CRTM reports that had previously only existed in paper format were digitised and uploaded onto the website. This project will be completed in 2024. PDF files of all the reports will then be available on the CRTM website.

Also throughout the year, version 3.2 of the “Standardisation Manual for the Signalling of the Community of Madrid’s Urban and Suburban Buses (MNSA-CRTM)” was updated.

In July, the book “Centenary of the Guadarrama Electric Railway” was published from the transport history collection that pays tribute to and offers a chronological review of this mountain railway that links Cercedilla with Puerto de Cotos which celebrated its one hundredth anniversary in 2023.

Another historical publication published in 2023 focuses on the evolution of the CRTM’s corporate image; ‘Origin, development and evolution of the corporate image of the Consorcio Regional de Transportes de Madrid (1985-2022)’.

Throughout the year, new tourist maps of the region’s World Heritage municipalities were published in close collaboration with the Madrid Regional Ministry of Tourism. Specifically, the maps of Alcalá de Henares and Aranjuez were published, with the El Escorial edition still pending (2024). The centre of Madrid tourist map has also been re-edited.



### CRTM photo archives

In 2023, the project to catalogue the CRTM’s photographic archive continued, adding new historical collections and current reports on various transport-related aspects in Madrid. In fact, the process of digitising and cataloguing all this graphic material had already begun years before, consisting of digitising the photos and slides previously in paper format. Each image has been catalogued with a number of descriptive words so they can be easily located in a search engine. This image bank has grown exponentially and currently houses more than 110,000 files, making it a key source of graphic reference for transport and urban planning in the Community of Madrid.

## 6.2 Customer service

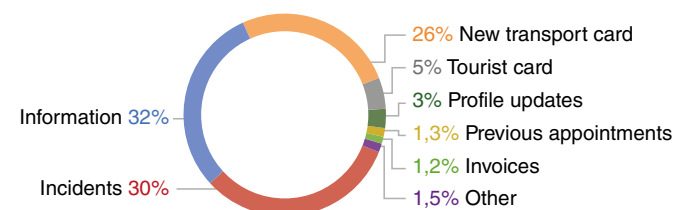
### A THE PUBLIC TRANSPORT CARD MANAGEMENT OFFICES

The face-to-face service channel comprises a network of 23 Management Offices strategically located in the Community of Madrid. In 2023, these offices received a total of 2,061,084 visits from users, providing assistance in a number of ways.

2023 saw a stabilisation in the number of users served, which remained at 2 million, virtually the same as in 2022. Furthermore, the considerable reductions in travel pass prices had a huge impact on personal Public Travel Pass purchases which, in turn, led to a rise in the number of people calling into the Management Offices.

Of all the operations performed at the Management Offices, 26% corresponded to registering new users in the system (new PTCs and tourist cards), and 74% to information and the management of after-sales services.

### TYPE OF OPERATIONS CARRIED OUT IN MANAGEMENT OFFICES (2023)



The Management Offices that attended to the largest number of users in 2023 were: Airport T4 with 266,191 users, Sol with 218,009, Moncloa with 164,273, Príncipe Pío with 151,854 and Plaza Castilla with 137,126 users.

#### B THE TARJETATRANSPORTEPUBLICO.CRTM.ES WEBSITE

988,426 users were assisted via the website, of which 64% requested a prior appointment to be assisted in an office, 25% requested a new or replacement PTC to be sent to their address and 10% requested information via the email address [tarjetatransportepublico@madrid.org](mailto:tarjetatransportepublico@madrid.org). The remaining 1% correspond to requests for invoices.

#### C TELEPHONE CUSTOMER SERVICE

In 2023, a total of 182,907 calls related to the public transport system of the Community of Madrid were received on the 012 hotline. This service works in coordination with the CRTM to meet the information needs of transport users in the Community of Madrid.

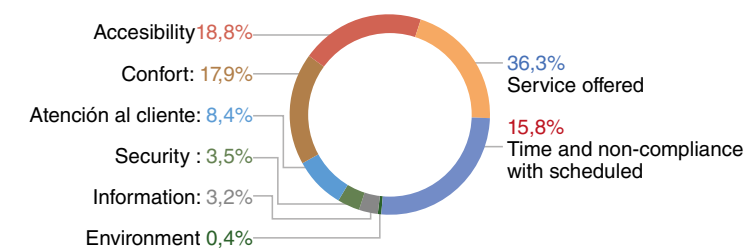
The channel provides information to users, facilitates appointments for paperwork in the Management Offices as well as receiving and recording complaints.



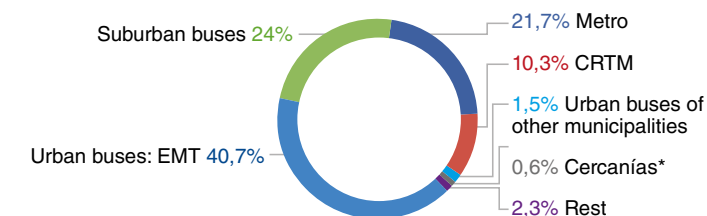
## 6.3 Complaints

In 2023, the Community of Madrid transport system recorded 50,160 complaints, an increase of 9.3% when compared with the previous year (45,875 in 2022). The ratio of complaints per million passengers stood at 31. Therefore, taking into account the rise in passenger numbers, the ratio has decreased by 9% compared to the previous year, when there were 34 complaints per million passengers. These figures include the complaints received through the different channels available to users: CRTM website and offices, complaints books and offices of the different public transport operators, 012 hotline, the general suggestions and complaints system of the Community of Madrid (SUQUE) and other bodies through their respective registers.

Below are the most significant causes and reasons for the complaints being filed and suggestions being made that could be categorised.



These complaints are split between the modes of transport as follows:



\*This figure refers to the Cercanías-related complaints received by the CRTM. It does not include those received by the company itself, the volume of which is unknown.



## 6.4 Communication campaigns

The CRTM conducts communication campaigns to foster public transport and sustainable mobility, and to inform users of the activities organised by the body, as well as communicate new services and rates. All campaigns are listed below:

- Campaign to publicise the new free Senior Pass which entered into force on 1 January 2023
- “Did you know...??” public transport dissemination campaign
- Campaign to inform users of stop on demand on night-time services – “Next stop your house”
- Campaign to publicise the launch of the mobile top-up “Travel Card” app
- Campaign to raise awareness about the ban on the use of electric scooters on the transport network
- Collaboration in publicising European Mobility Week
- Collaboration in publicising the “Take Your Books to the Streets” campaign
- Collaboration in publicising Colegio de Caminos de Madrid’s Engineering Week.
- Collaboration to raise awareness of the “Team Marrow” campaign for bone marrow donation

On the other hand, this year the CRTM continued to give talks in secondary schools on the values and benefits of public transport and its importance in the fight against climate change. This initiative kicked off in February 2021 as a pilot scheme and could be developed into a more long-term one.

In the 2022-2023 academic year, training sessions took place from November 2022 to May 2023, visiting schools in Madrid (districts of Carabanchel, Centro, Chamberí, Ciudad Lineal, Moncloa-Aravaca, San Blas and Villaverde), towns in zone B1 (Alcorcón, Getafe, Leganés, Paracuellos de Jarama, Pozuelo de Alarcón and San Fernando de Henares), zone B2 (Fuenlabrada, Las Rozas, Mejorada del Campo and Pinto) and zone B3 (Villanueva de la Cañada). Furthermore, visits were organised to CITRAM, as well as to the operators Aisa, Arriva, Avanza and Ruiz. During this academic year, a total of 107 sessions were delivered to roughly 3,300 students at all levels of Secondary Education, Baccalaureate and Vocational Training.





# 7

## **Institutional relations**

The experience of the CRTM and the integrated model of the transport system of the Community of Madrid have traditionally been the subject of international visits and, slowly but surely, numbers are rising and almost reaching those seen before the pandemic.

The most prominent associations in the sector (UITP, EMTA, the Metropolitan Mobility Observatory) fostered an exchange of experiences on the impact of COVID-19 on transport systems and the energy crisis, not to mention the challenges it has faced in the wake thereof.





## 7.1. International presence

The CRTM is present in the most prominent industry associations:



### UITP (INTERNATIONAL ASSOCIATION OF PUBLIC TRANSPORT)

UITP is an association that promotes the exchange of knowledge and experiences among different public transport agents on a European and global level, as the leading association in the sector with over 1,900 members in 100 countries. Further info at [www.uitp.org](http://www.uitp.org)

The CRTM participates in several of this association's committees and commissions, such as that of the Transport Authorities. This active presence of the CRTM has given our body relevance at both a European and global level.

In 2023, the CRTM participated in a wide range of forums, webinars and meetings to share the experience of the different industry stakeholders with regard to restoring confidence in public transport systems and deal with the challenges of the energy crisis and decarbonisation. In addition, the CRTM had a stand and gave talks at the UITP Global Public Transport Summit in Barcelona, from 4 to 7 June, the sector's largest event dedicated to public transport under the motto of "*Bright Light of the City*".



### EMTA (EUROPEAN METROPOLITAN TRANSPORT AUTHORITIES)

EMTA (*European Metropolitan Transport Authorities*) is an association that fosters the exchange of knowledge and experience between different European transport authorities. It is made up of 34 members from 21 countries representing the biggest public transport authorities in Europe, such as Paris, London, Berlin, Amsterdam, etc.

As a member of this association, the CRTM has become a key player at European level, as one of the association's objectives is to foster initiatives and recommendations to the European institutions, bringing together the interests of public transport authorities.

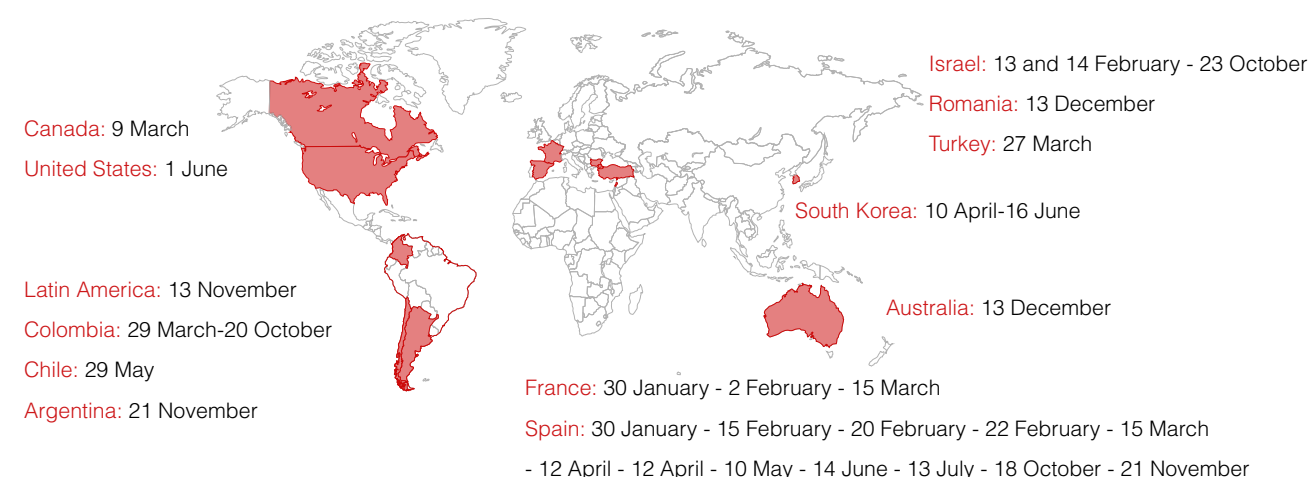
The CRTM is a member of the Board of Directors of EMTA, holds the position of Treasurer of EMTA and, since its creation in 1998, it has actively participated in the meetings, forums and working groups fostered by the association, as well as being the member responsible for drawing up the Public Transport Barometer of the European Metropolitan Areas, which includes data on the public transport systems of the 34 partners that made up the association at the end of 2023.

This year, two annual meetings of the General Assembly were held, the first one in May in Oslo (Norway) and the second in Barcelona (Spain) in October. Webinars and conferences were held alongside this, in which European transport authorities debated on the measures put in place to

restore demand and confidence in the wake of the COVID-19 pandemic and challenges that the future has in store. Further info at [www.emta.com](http://www.emta.com)

### INTERNATIONAL VISITS AND ADVICE

The experience of the CRTM and the integrated public transport management system of the Community of Madrid attract a large number of delegations interested in finding out about the planning and construction methodology of the regional infrastructure and the integrated management system for public transport in Madrid. In 2023, 29 visits were received from national and international delegations from Latin America, Argentina, Australia, Canada, Chile, Colombia, South Korea, Spain, United States, France, Israel, Romania and Turkey.



## 7.2. Other initiatives



### METROPOLITAN MOBILITY OBSERVATORY (MMO)

The Metropolitan Mobility Observatory (MMO) is an analysis and reflection initiative formed by the Public Transport Authorities (PTA) of the main Spanish metropolitan areas, the Ministry for the Ecological Transition and the Demographic Challenge (through the Institute for Diversification and Energy Savings, IDAE), the Ministry of Transport and Sustainable Mobility, and the Ministry of Internal Affairs (through the DGT), in order to reflect on the contribution of public transport to improving quality of life and sustainable development in cities. Other institutions and organisations also collaborated, such as RENFE, the Spanish Railway Foundation (FFE), the Urban Collective Transport Association (ATUC), the Spanish Federation of Municipalities and Provinces (FEMP), and trade unions.

The MMO publishes an annual report analysing the mobility of the participating metropolitan areas, which is presented at technical meetings where aspects related to sustainable mobility are also discussed.

The CRTM has been a constant presence at its annual meetings ever since this initiative was launched. In 2024, the CRTM took part in the 21st MMO Technical Seminar, held in Tarragona on 11 October under the slogan "The Challenge of Sustainability in Metropolitan Mobility". The event was divided into two thematic sessions: the first of which focused on sustainable mobility in metropolitan areas, while the second focused on public transport interoperability and ticketing.

### 7.3. Institutional events

A key aspect of the CRTM's work is the institutional representation at a number of events attended by municipal, regional or national authorities, with a view to highlighting some of the public transport-related initiatives or activities carried out.



This was the case of the "Awards for Fostering Public Transport and Sustainable Mobility in the Community of Madrid" held on March 30 at the Real Casa de Correos (Royal House of the Post Office), recognising the work of 32 employees, companies, and institutions that have played their part in making regional public transport a national and international benchmark. These awards were created in 2012, and this year's winners in the five categories were:

- Private companies category: ARRIVA, for its innovation and sustainability projects.
- Institutions category: Francisco de Vitoria University for the measures implemented to fostered public transportation and sustainable mobility from the school to the capital.

- Councils Category: Valdemorillo City Council, for the Artificial Intelligence-based reversible bus lane.
- Special category: Military Emergency Unit for its collaboration during the pandemic and Storm Filomena.
- Public transport workers category: awards were given to employees of Renfe-Cercanías Madrid, AISA, AVANZA, Madrid Light Rail, Príncipe Pío Interchange, EMT, and Metro de Madrid.

Another event worth highlighting in 2023 was the second edition of Global Mobility Call, an international congress held in Madrid from 24 to 26 October at IFEMA to foster a sustainable mobility model, while promoting cutting-edge technology and business models. The CRTM participated in a number of the congress' sessions with a view to fostering innovative mobility and public transport solutions, as well as having its own stand to showcase the technologies applied to this industry of strategic interest for the Community of Madrid.

Similarly, worth mentioning was the organization of one of the El Escorial Summer Courses, held from 3-4 July, on "Bus innovation in public transport," based around several presentations and discussion panels on public-private collaboration, new propulsion technologies, and tenders for new public transport concessions.



### 7.4. Acknowledgements of the Consorcio Regional de Transportes Madrid

The Association of Traffic Engineers and Mobility Technicians awarded the "Women and Traffic Management" prizes to those women who, whether they work for the government, universities or private companies, strive to improve traffic and mobility in Spain.

Eight CRTM women have received this award in previous editions, on top of those awarded in 2023 to Montserrat Andújar, from the Department of Suburban Transport, and Carmen Fernández, from the Finance Department. These awards recognise the unwavering commitment and professionalism of the organisation's employees with regard to mobility management, with a view to offering a quality public transport service in the Community of Madrid.



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Avenida de Asturias, 4.  
28003 Madrid  
[crtm\\_contacto@madrid.org](mailto:crtm_contacto@madrid.org)  
[www.crtm.es](http://www.crtm.es)

Tu ritmo, tu transporte

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