

Annual report 2021

unimos Personas



Tu sistema de transportes



Prologue



2021 saw demand for public transport in the Madrid Region bounce back, in particular after the summer, in the wake of the severe restrictions with regard to mobility put in place following the outbreak of the COVID-19 pandemic in 2020.

We closed 2021 with 1.065 billion passengers, a 20.5% increase compared to 2020, although some restrictions were still in place in terms of occupancy levels on the different modes of transport. The fastest recovering passenger volume was seen in the suburban bus service and, to a lesser extent, the railway (metro and Cercanías).

Another stand-out event this year was Storm Filomena at the turn of the year, an extratropical cyclone, bringing unusually heavy snowfall to parts of Madrid, putting all public services under immense pressure, in which public transport played a decisive role in guaranteeing mobility in the aftermath.

In this regard, it should be noted that, despite the negative effect that the COVID-19 pandemic had on mobility starting in March 2020, the supply of the region's public transport system as a whole was similar to 2019 levels (+0.3%), in an effort to improve the level of service quality provided while passenger demand was progressively getting back on track.

In this context, in 2021, the production of services for the public transport system as a whole stood at 348.5 million cars-km of rail, and 276.6 million cars-km of road, on a 11,000-km network serving the region's 179 municipalities.

With regard to fares, the prices in force since 1 February 2013, when the last fare review took place, were maintained, with the exception of the fare for Senior Citizens, which was reduced from €9.30 to €6.30 for the 30-day ticket as of 1 January 2021.

Personal transport card requests gradually recovered to a total of 775,181 by the end of the year, a 48.8% increase compared to 2020. Monthly averages were back at pre-pandemic figures of approximately 100,000 cards per month by the end of the year.

The public transport network in Madrid is among the world's most competitive, one of Europe's four most extensive networks and has the highest coverage rate.

The contributions of the different Administration-led consortiums mean that over 60% of the cost of public transport is subsidised.

Our public transport system is also the main engine around which the entire region is structured. It is a tool geared towards social cohesion as we reach all 179 municipalities in the Community of Madrid.

David Pérez García

Minister of Transport and Infrastructures
of the Community of Madrid

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1 · The CRTM

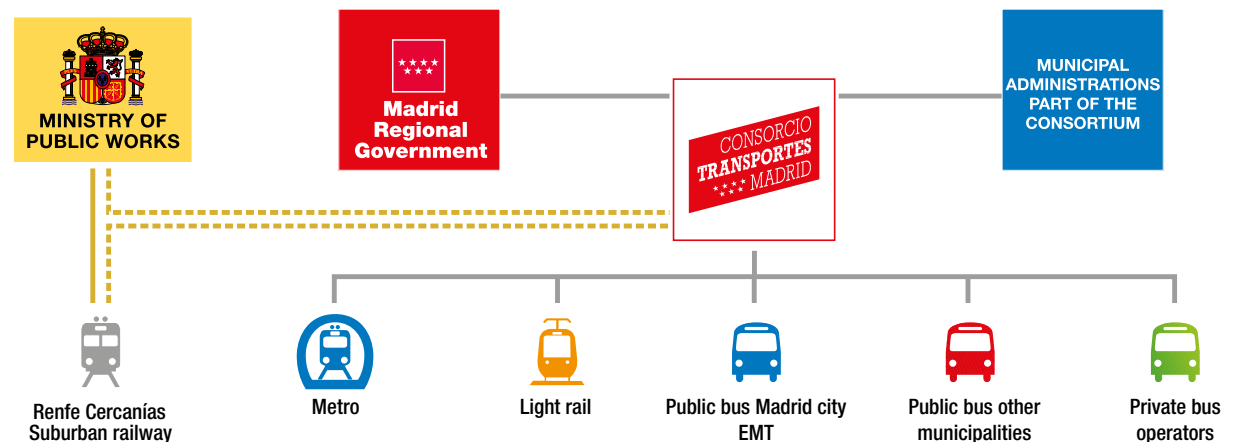


The Regional Consortium of Transportation for Madrid (CRTM) is the Community of Madrid's Public Transport Authority. It was founded in accordance with Law 5/1985, of 16 May 1985, of the Assembly of Madrid, as an Autonomous Body of the Community of Madrid, bringing together the competences of the region and all its local councils 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 of public transport infrastructure.
- Planning services and overseeing the operating programmes for all forms of public transport.
- Definition of a comprehensive fare system for the transport as a whole.
- Establishment of a stable funding framework.
- Controlling and monitoring of the financial management of operators.
- Creation of a general overview of the system, bringing external relations and users together.

INSTITUTIONAL FRAMEWORK OF THE MADRID REGION PUBLIC TRANSPORT SYSTEM



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 2021 was as follows:

a. The Board of Directors

	Chair	David Perez García
	Board Members	Carlos Díaz-Pache Gosende M ^a Teresa Barcons Marqués
Community of Madrid		Miguel Núñez Fernández Jose Luis Fernández-Quejo Del Pozo José Ramón Menéndez Aquino Miguel Angel García Martin
	Vicepresident	Francisco de Borja Carabante Muntada
Madrid City Council	Board Members	Engracia Hidalgo Tena Mariano Fuentes Sedano
State Administration	Board Members	Jaime Alberto Moreno Garcia Elena Bernardo Llorente
Member councils	Board Members	Ivan Fernández Heras Francisco José Recover Lorente José Luis Alvarez Ustarroz
CC.OO. / U.G.T	Board Members	Rosa Palomar Cepa (U.G.T.) Luis Mercado García (CC.OO.)
Business associations	Board Members	Rafael Barbadillo López Jaime Rodríguez Medal
Consumer associations	Board members	Gustavo Samayoa Estrada
	Non-board member Secretary	Pablo Bodega Herráez
	Non-board member Managing Director	Luis Miguel Martínez Palencia
	Renfe-Cercanías (suburban train)	Ricard Ribé Piñol *

*Voice, but no vote

b. The Executive Committee

Chair	David Pérez García
Board Members	Carlos Díaz-Pache Gosende José Ramón Menéndez Aquino Francisco de Borja Carabante Muntada Engracia Hidalgo Tena Mariano Fuentes Sedano
Secretary	Pablo Bodega Herráez
Non-board member Managing Director	Luis Miguel Martínez Palencia





c. The operational framework

The operational framework of the public transport system of the Community 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.

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.



Underground 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 y ML3 (Metro Ligero Oeste) y ML4 (Tranvía de Parla).

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

1.2 Funding the system

System requirements and funding

The financial requirements of the transport system consist of remuneration by the CRTM to operators for the services provided, funded through public contributions from the different levels of government and contributions from users.

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 system's so-called 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 hold-

ers 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 the underground 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 Travel Passes and the payments arising therefrom.

User contributions come 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 Community of Madrid and this Autonomous Region also contribute, although substantially less.

The State Administration contributes with a nominative subsidy, which is applied to the funding requirements of the system in the following distribution:

- 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, which was extended in 2021.
- 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 the 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 has a role, 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 operating expenses and commercial expenses of the CRTM.

It also pays 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 municipal services of the member councils.

- Councils with an urban passenger transport pay 50% of their operating deficit.
- The Castile-La Mancha Regional Government contributes to the funding of the fare subsidy corresponding to exterior Travel Passes (zones E1 and E2) in accordance with the criteria set forth in the partnership agreement between the two authorities.

€2.21
average
need per
passenger*

€0.65
average
revenue per
passenger*

€1.56
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

2021 Budget and financial result

The commercial nature of the CRTM 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. As regards expenses, this budget includes the necessary credit for the funding of the personnel working for the body, running expenses for goods and services and their investments, as well as the fare subsidy paid to operators.

In 2021, the total amount of revenue settled from both budgets amounted to €2.2675 billion and, in terms of expenses, the amount at 31 December represented a total of €2.2842 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 €669.4 million in 2021. The difference between revenues – entitlements – and expenditure – obligations – places the budgetary result for the year at a deficit of €16.7 million, according to the figures below.

BUDGET LIQUIDATION CRTM 2021 Limited and Estimated Budget	
REVENUE	Entitlements
Chapter 3.- Fees and other income	€1,323,669
Chapter 4.- Current transfers	€1,590,538,465
Chapter 5.- Equity income	€0
Chapter 6.- Alienation of real estate investments	€350
Chapter 7.- Capital transfers	€0
Chapter 8. - Financial assets	€4,190
TOTAL LIMITED REVENUE	€1,591,866,673
Collection revenue	€611,571,319
TOTAL ESTIMATED REVENUE	€611,571,319
TOTAL REVENUE	€2,203,437,992
EXPENSES	Obligations
Chapter 1.- Personnel expenses	€6,768,396
Chapter 2.- Running expenses	€4,585,867
Chapter 3.- Financial expenses	€190,263
Chapter 4.- Current transfers	€1,568,630,766
Chapter 6.- Real estate investments	€1,597,178
Chapter 7.- Capital transfers	€0
Chapter 8. - Financial assets	€5,400
TOTAL LIMITED EXPENSES	€1,581,777,870
Raw materials in service operations	€913,508
Other external work	€24,705,253
Collection repayment	€612,726,942
TOTAL ESTIMATED EXPENSES	€638,345,703
TOTAL EXPENSES	€2,220,123,573
	D.REC-O.REC.
I.- LIMITED BUDGET OUTTURN	€10,088,803
II.- ESTIMATED BUDGET OUTTURN	-€26,774,385
FINANCIAL YEAR INCOME(LOSS) (I-II)	€-16,685,582

ACTUAL FINANCIAL	
I.- REVENUES	€2,267,546,151
Contributions to CRTM	€1,590,172,540
Fare revenue applied	€668,337,019
Own CRTM and commercial income	€9,036,592
II.-EXPENSES	€2,284,231,733
Internal CRTM and commercial operations	€38,765,865
Fare payment to transport operators	€2,164,157,221
Administrative concessions	€81,308,648
III.- DIFFERENCE (I-II)	-€16,685,582












This budget result takes into account revenue and expenses irrespective of the actual year in which they are accrued. Their accrual leads to the financial result for the year, which for 2021 is equal to the budgetary result.

The financial flows of the source and application of funds for the financial year 2021 can be seen in the following recap, which presents all revenue and expenses, and the economic results for 2021. Finally, the Profit and Loss Account and the Balance Sheet at 31 December 2021 are published as an annex.

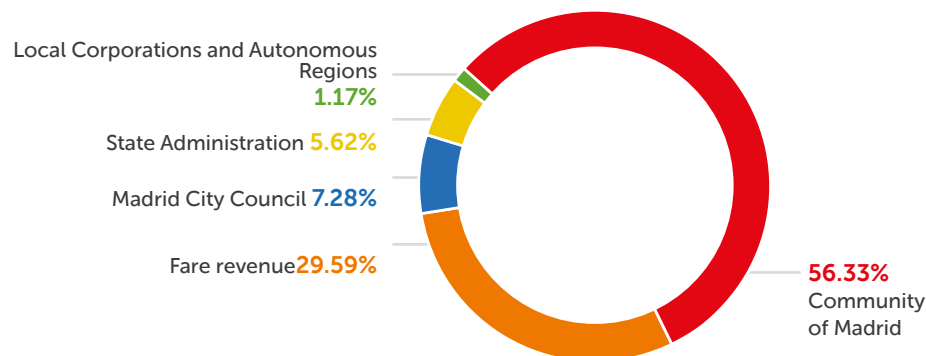


FUNDING SCHEME FOR CONTRIBUTIONS FROM THE CRTM TO THE REQUIREMENTS OF THE TRANSPORT SYSTEM. 2021

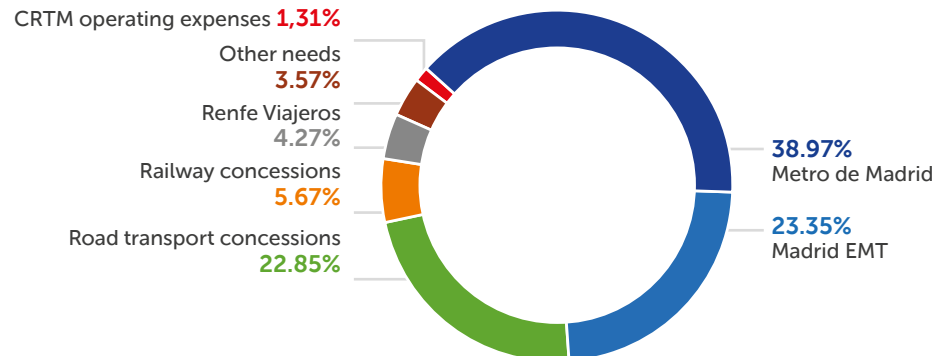
Financial result

SOURCE OF FUNDS			APPLICATION OF FUNDS / ACTUAL NEEDS			
	STATE ADMINISTRATION	€126,894,000	 CONSORCIO REGIONAL DE TRANSPORTES DE MADRID TOTAL REQUIREMENTS: €29,729,273		METRO DE MADRID, S.A.	€886,729,532
	Community of Madrid	€1,272,292,496			EMPRESA MUNICIPAL DE TRANSPORTES DE MADRID, S.A.	€531,357,188
	MADRID CITY COUNCIL	€164,498,165			RENFE VIAJEROS	€97,207,904
	LOCAL CORPORATIONS AND AUTONOMOUS REGIONS	€26,487,879			RAILWAY CONCESSIONS (TFM, TRANVIA PARLA, LIGHT RAIL)	€128,936,631
	FARE REVENUE APPLIED	€668,337,019			ROAD CONCESSIONS (CITY AND SUBURBAN BUSES)	€519,925,965
					OTHER NEEDS (ADMIN. CONCESSIONS, OPERATORS RUNNING/CAP EXPENSES)	€81,308,648
TOTAL SOURCE OF FUNDS		€ 2,258,509,559	TOTAL APPLICATION OF FUNDS		€2,275,195,141	
2021 FINANCIAL RESULT						-€16,685,582

SOURCE OF FUNDS



TOTAL APPLICATION OF FUNDS



BALANCE SHEET 2021

ASSETS	2021	2020	EQUITY AND LIABILITIES	2021	2020
	€263,545,532.19	€282,520,133.68		€263,545,532.19	€282,520,133.68
A) NON-CURRENT ASSETS	€14,553,474.10	€18,733,494.61	A) EQUITY	€129,236,995.77	€172,394,919.09
I. Intangible fixed assets	€8,885,051.35	€10,936,118.95	II. Generated equity	€129,236,995.77	€172,394,919.09
2. Industrial and intellectual property	€202.85	€405.75	1. Profit/loss brought forward	€172,384,339.11	€158,125,646.74
3. Computer software	€2,487,892.25	€1,595,782.10	2. Profit/loss for year	-€43,147,343.34	€14,269,272.35
4. Investments in assets under lease	€134,112.01	€70,921.62	B) NONCURRENT LIABILITIES	€40,211,795.10	€28,344,301.88
5. Other intangible fixed assets	€6,262,844.24	€9,269,009.48	I. Long-term provisions	€40,016,096.43	€28,055,518.85
II. Property, plant and equipment	€980,175.13	€1,067,428.04	II. Long-term debts	€195,698.67	€288,783.03
2. Buildings	€80,418.69	€81,265.21	4. Other debts	€195,698.67	€288,783.03
5. Other property, plant and equipment	€899,756.44	€986,162.83	C) CURRENT LIABILITIES	€94,096,741.32	€81,780,912.71
V. Long-term financial investments	€4,688,247.62	€6,729,947.62	II. Short-term payables	€2,937.50	€2,937.50
2. Credits and representative debt values	€4,679,711.11	€6,729,711.11	4. Other debts	€2,937.50	€2,937.50
4. Other financial investments	€8,536.51	€236.51	IV. Creditors and other accounts payable	€88,801,670.54	€76,844,300.00
B) CURRENT ASSETS	€248,992,058.09	€263,786,639.07	1. Creditors from current budgetary operations	€192,685.80	€241,419.30
III. Debtors and other receivables	€153,050,032.13	€150,368,696.25	2. Other accounts payable	€88,042,576.45	€75,974,637.62
1. Debtors through management operations	-€322,387,994.93	-€327,947,052.22	3. Public Administrations	€566,408.29	€628,243.08
2. Other accounts receivable	€6,268,692.87	€4,333,551.40	V. Accrual adjustments	€5,292,133.28	€4,933,675.21
3. Public Administrations	€469,169,334.19	€473,982,197.07			
V. Short-term financial investments	€10,570.16	€11,360.00			
2. Representative credits and securities	€10,570.16	€11,360.00			
VII. Cash and other cash equivalents	€95,931,455.80	€113,406,582.82			
2. Cash-flow	€95,931,455.80	€113,406,582.82			

ECONOMIC OUTTURN ACCOUNT 2021		
	2021	2020
2. Transfers and subsidies received	€1,586,992,819.27	€1,687,697,140.63
a) For the financial year	€1,586,992,819.27	€1,687,697,140.63
a.1) Subsidies received to fund expenses for the financial year	€365,924.32	€66,995.46
a.2) Transfers	€1,586,626,894.95	€1,687,630,145.17
3. Net sales and provision of services	€611,579,897.46	€546,209,642.68
a) Net sales	€611,579,897.46	€546,209,642.68
6. Other ordinary management revenue	€906,803.23	€556,611.30
7. Excess provisions	€85,085.36	€5,927,951.33
A) TOTAL ORDINARY MANAGEMENT EXPENSES (1+2+3+4+5+6+7)	€2,199,564,605.32	€2,240,391,345.94
8. Staff costs	-€6,768,396.13	-€6,985,452.87
a) Wages, salaries and similar	-€5,137,065.91	-€5,344,847.12
b) Employee welfare expenses	-€1,631,330.22	-€1,640,605.75
9. Transfers and subsidies granted	-€1,582,149,073.11	€1,646,273,614.72
10. Supplies	-€627,745,996.98	-€552,990,462.54
a) Consumption of goods and other supplies	-€627,745,996.98	-€552,990,462.54
11. Other ordinary management expenses	-€22,498,461.08	-€10,806,329.10
a) External supplies and services	-€22,426,863.82	-€10,720,466.88
b) Taxes	-€71,597.26	-€85,862.22
12. Amortisation of PP&E	-€3,776,973.88	-€3,481,888.81
B) TOTAL ORDINARY MANAGEMENT EXPENSES (8+9+10+11+12)	-€2,242,938,901.18	-€2,220,537,748.04
I Result (saving or dissaving) of ordinary management (A+B)	-€43,374,295.86	€19,853,597.90
13. Impairment and gains or losses on disposal of non-financial fixed assets and assets held for sale	€350.00	€0.00
b) Retirements and disposals	€350.00	€0.00
II Result of non-financial operations (I +13+14)	-€43,373,945.86	€19,853,597.90
15. Financial income	€416,865.33	€189,845.76
b) From other marketable securities and long-term loans	€416,865.33	€189,845.76
b.2) Other	€416,865.33	€189,845.76
16. Financial expenses	-€190,262.81	-€5,526.46
a) Others	-€190,262.81	-€5,526.46
20. Value impairment, disposals and sales of financial assets and liabilities	€0.00	-€5,768,644.85
b) Other	€0.00	-€5,768,644.85
III. III Result of financial operations (15+16+17+18+19+20+21)	226,602.52	-€5,584,325.55
IV. Net results (saving or dissaving) for the financial year (II + III)	-€43,147,343.34	€14,269,272.35

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 this regard, in 2021 it should be noted that, despite the negative effect that the COVID-19 pandemic had on mobility starting in March 2020, the supply of the region's public transport system as a whole was similar to that of 2019 (+0.3%), in an effort to improve the level of service quality provided while passenger demand was progressively getting back on track.



In this context, in 2021, the production of services for the public transport system as a whole stood at 348.5 million cars-km of rail, and 276.6 million cars-km of road, on a network of 11,000 km serving all the municipalities in the region.

The following table summarizes the main figures of the supply in 2021 by type of transport operator, in order to provide an analysis of the system as a whole.

2021 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	220	468	5	11
Length-network (km)	269.5	1,628.8	8,651	54.8	361.4
Length-lines (km)	269.5	3,972.5	22,080	54.8	714.0
No. of stations/stops-network	237	4,779	8,529	62	95
No. of stations/stops-lines	287	11,320	22,408	63	203
No. of vehicles (cars/buses)	2,320	2,095	2,068	241	1,056
Vehicle-km (millions)	191.3	93.1	183.5	16.7	140.5

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

** Data provided by Renfe Viajeros

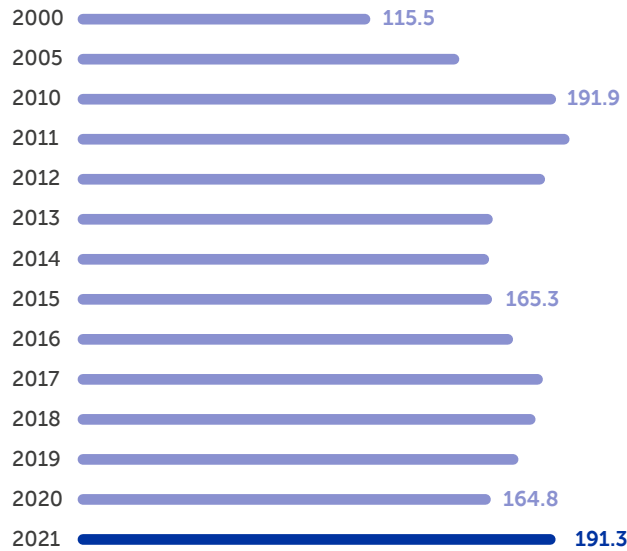
2.1 Metro de Madrid



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 287 stations-line.

Production in 2021 stood at 191.3 million cars-kilometres, 16.1% more than in 2020, mainly due to the recovery in demand following the return to normality in the wake of the COVID-19 pandemic.

EVOLUTION OF PRODUCTION (millions of vehicles-km)



On a business day, during the morning rush hour there are 312 trains in service, with the average interval of 4.1 minutes (3.6 if weighed by number of trains), the average speed being 27.4 km/h (26.5 if weighted).

The rolling stock in service during 2021 is made up of 2,320 carriages, with an average age of 21 years.

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	23.9	68	2.4
4	26	4	21.7	79	3.0
5	32	6	22.6	119	3.7
6 ₁	20	6	24.3	58	2.9
6 ₂	14	6	25.1	56	4.0
7	20	6	27.0	85	4.2
7 _b	6	3	32.7	32	5.2
8	12	4	35.5	53	3.8
9	23	6	25.4	97	4.2
10	34	6	29.9	94	2.8
10 _b	14*	3 and 4	30.0	61	3.8
11	5	3	28.4	29	5.6
12 ₁	11	3	40.6	60	5.5
12 ₂	10	3	40.6	60	6.0
R	2	4	11.6	10	5.0

* 10 triples and 4 quadruples

2.2 EMT



The Madrid urban bus network, operated by Empresa Municipal de Transportes de Madrid (EMT), is made up of a total of 220 lines, of which 192 are day lines and 27 are night lines, to which the 24-hour Airport Express line should be added.

In 2021, the following one-off projects were implemented across the EMT network:

- Creation of 3 new EMT lines to improve the public transport service in 3 peripheral urban areas:
 - Line 167 connecting Alsacia and the main services in the San Blas-Canillejas district with Colonia Fin de Semana (Rejas neighbourhood).
 - Line 163, connecting El Plantío and the axis of Avenida de la Victoria (Aravaca) with the Aravaca cercanías station.
 - Express line E5 that connects the new neighbourhood of El Cañaveral with Vicálvaro, O'Donnell and Manuel Becerra.
- Extension of line 74 in Parque de las Avenidas to reach the new Baviera health centre.

- Route changes on lines 25, 39, 74 and 138 due to the remodelling of Plaza de España and its surroundings, on line 3 to accommodate the pedestrianisation of Puerta del Sol and the completion of work in Plaza de España, on lines 82 and N20 to bring the routes closer to the Arroyofresno metro station, on lines 83 and 133 due to the remodelling of the traffic lights at the junction between Isla de Arosa and Fermín Caballero streets and on line 77 due to the reorganisation of Calle Diciembre. Furthermore, the railhead of line 161 inside the Moncloa interchange has been restored following the lifting of the COVID-19 restrictions in the Community of Madrid.
- The names of 10 EMT lines with a railhead at Estación de Atocha, which is no longer called Atocha-Renfe due to the liberalisation of the passenger rail sector, have been changed.
- Extra staff deployed on line 165 to the Ramón y Cajal Hospital to adapt the service to passenger demand.
- Furthermore, two special temporary EMT shuttle services have been put into operation: one connecting the Villaamil health centre with the Dr Ramón Castroviejo health centre due to works being carried out at the former, and a pilot project between the Islazul shopping centre Park-and-Ride and Plaza Elíptica.



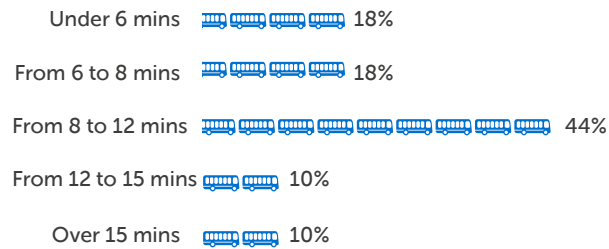
The total number of kilometres travelled in 2021 stood at 93.1 million, 6.1% more than the previous year's production, as a result of the progressive lifting of the mobility restrictions imposed in the wake of the COVID-19 pandemic and the resulting increase in the service offer. It is worth highlighting that the kilometre figure is similar to 2019, the year before the outbreak of the pandemic. In this regard, car-hours (7.25 million) and journeys (10.6 million) also show a similar relative increase compared to 2020, at similar levels to those recorded in 2019.

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. During rush hour, 36% of the lines run at frequencies of less than 8 minutes.

The average operating speed in 2021 was 12.8 km/h, similar to that seen in the previous two years.

In 2021, the EMT vehicle fleet consists of 2,095 active vehicles, with an average age of 5.9 years, of which 1,643 run on natural gas, 44 are hybrids, 130 are electric, and the remainder run on biodiesel. During the year, 150 new units (104 natural gas and 56 electric buses) were added to the fleet and 131 vehicles were written off. All buses have low floor and ramp for People with Reduced Mobility (PRM).

% EMT LINES BY INTERVAL AT RUSH HOUR



EVOLUTION OF PRODUCTION (millions of vehicles-km)



2.3 Road transport concessions



The bus network of the road transport concessions of the Community of Madrid comprised 468 lines at 31 December 2021, with 309 day suburban lines, 119 urban lines and 40 night suburban lines.

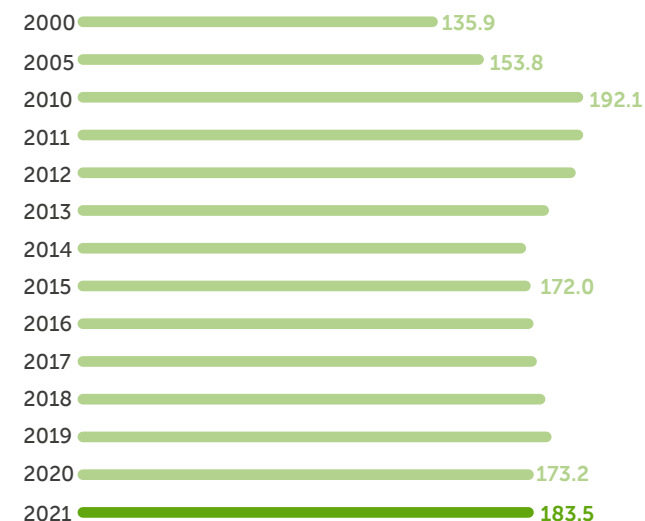
The following changes were made in 2021:

- **Urban line 5** Aranjuez:
Estación de Aranjuez - Hospital del Tajo
- **Urban line 3** Arganda del Rey
Circular Recintos Feriales
- **Line 498A** Móstoles (Móstoles-Central) -
Arroyomolinos (Parque de Nieve)
- **Line 517** Madrid (Cuatro Vientos) -
Alcorcón (Fuente Cisneros)
- **Line 658A** Madrid (Moncloa) -
Pozuelo (P.E. La Finca – Ciudad de la Imagen)
- **Line 692** Los Molinos – Cercedilla - Valdesquí

The system of lines is operated by 29 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 vehicles-km)

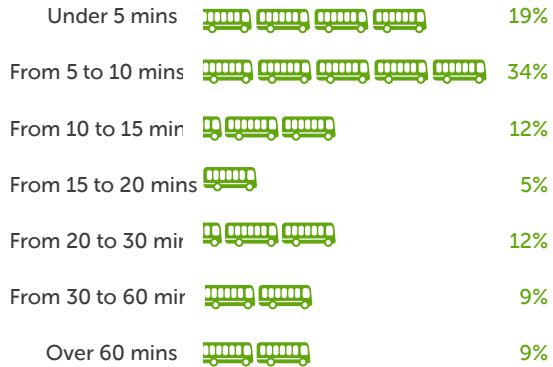


As a result, the actual supply of urban transport is much higher than that derived from the urban networks themselves. The specific network of urban lines in peripheral zones B and C reaches a total of 35 municipalities, although in only 6 of them is there an administrative concession for an independent urban service. In addition, in the municipality of Fuenlabrada, the urban service is provided directly by the city council, through a municipal company. The supply of services scheduled for the whole network amounts to 28,597 trips on a business day in winter.

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 graph below that indicates

the percentage of lines distributed according to the rush hour interval on a business day, in minutes.

% ROADWAY CONCESSION LINES BY RUSH HOUR INTERVAL



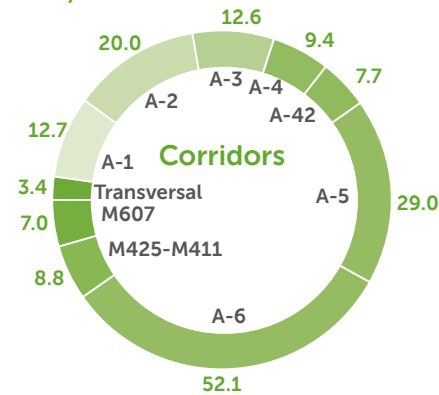
NOTE: Night lines have not been taken into account in this calculation, as they do not operate at rush hour. The busiest direction on each line at rush hour is taken into account.

The vehicle fleet of road transport concessions comprises 2,068 buses. 115 buses were renewed in 2021, with the average age of 4.98 years. As a result of this fleet renewal and improvement, 250 vehicles that work with compressed or liquid natural gas are available, with 366 hybrid vehicles and one electric. Likewise, 100% of the bus fleet is adapted for People with Reduced Mobility (PRM).

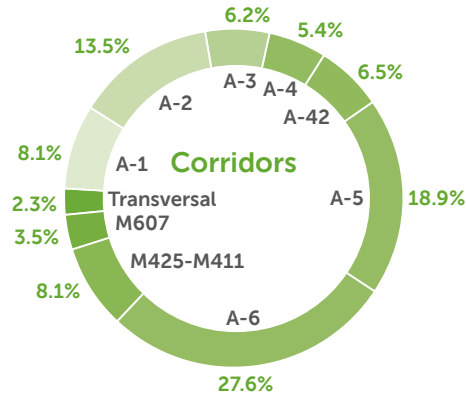
Distribution of supply by corridor

The supply generated in 2021 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.

Supply of suburban concessions by corridor (million km)



Suburban concession trips by corridor (% of trips)



2.4 Light rail



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

1 Pinar de Chamartín – Las Tablas

operator: Metros Ligeros de Madrid S.A.

2 Colonia Jardín – Estación de Aravaca

3 Colonia Jardín – Puerta de Boadilla

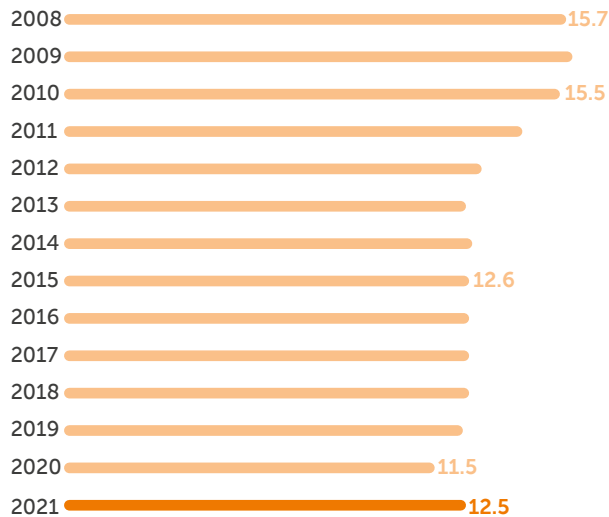
operator: Metro Ligero Oeste S.A.

4 Tranvía de Parla (circular line)

operator: Tranvía de Parla S.A.

Overall, 2021 output was 12.5 million vehicles-kilometres.

ANNUAL EVOLUTION OF PRODUCTION (millions of vehicles-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 an average age of 14.5 years, with the average interval being 6.8 minutes and an average speed 21.5 km/h.

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	7	5	19.1	34.0	5.0
2	9	5	23.5	44.0	6.0
3	12	5	25.4	64.0	6.0
direction 1 4	3	5	20.1	24.8	10.0
direction 2 4	4	5	19.6	24.8	7.0



2.5 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 Transportes Ferroviarios de Madrid, S.A.

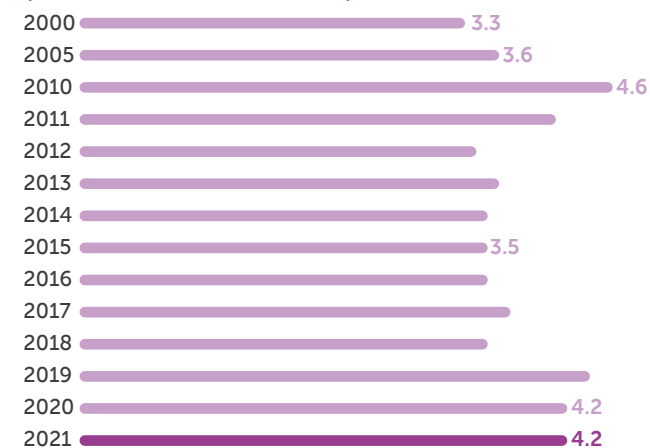
Adding this section to the Metro de Madrid section would give a network of 288.5 km, and a total of 242 stations-network and 293 stations-line.

SUPPLY AT MORNING RUSH HOUR ON A BUSINESS DAY

Line	9b (TFM)
Trains	7
Cars-train	2 double and 5 triple
Average age	19.3 years
Operating speed (km/h)	53.4
Travel time (min) (round trip)	42.8
Interval (min)	6

2021 output amounts to 4.2 million vehicles-km.

ANNUAL EVOLUTION OF PRODUCTION (millions of vehicles-km)



*Operations on line 9 began in 1999



2.6 Renfe-Cercanías (suburban train)

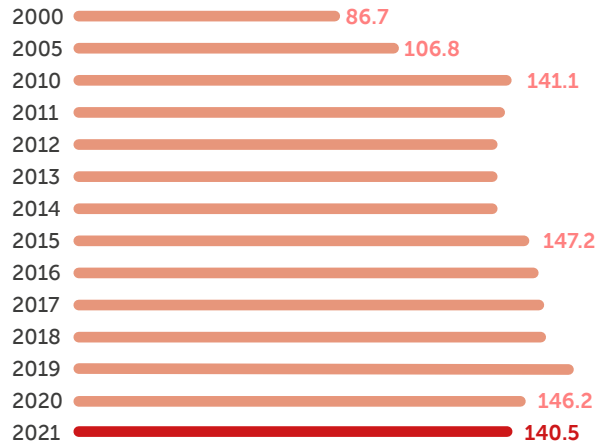


Cercanías Madrid is a railway service operated by Renfe Viajeros on ADIF infrastructure, connecting the city of Madrid with its metropolitan area and with the region's main population centres, along with the city of Guadalajara.

The Madrid Cercanías network operates a total of 11 commercial lines and 95 network stations developed over 361.4 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.

ANNUAL EVOLUTION OF PRODUCTION (millions of vehicles-km)



SUPPLY PER LINE ON A BUSINESS DAY

Line	C-1	C-2	C-3	C-3a**	C-4a C-4b	C-5	C-7	C-8	C-9*	C-10	Total
Number stations-line	11	19	13	27	30	23	24	32	3	21	203
Number of operations	75	187	113	47	264	262	80	42	-	77	1,147
Nº circulations rush hour (6:00am to 9:30am)	14	48	26	11	75	75	24	10	-	18	301
Frequency peak times	30	8	11	40	6	6	17	42	-	30	-
Cars per train	6/10	6/10	10	10	10	6	6/10	6/10	-	6/10	6/10
Operating speed (km/h)	34.9	50.0	58.2	58.3	50.2	45.7	48.2	54.1	-	47.7	49.2

* The C-9 line remains commercially closed in 2021.

**Line C3a is a commercial line rather than a branch of line C3.

The supply of scheduled transport for the Madrid Cercanías services in 2021 stood at 1,147 journeys and more than 1.7 million passengers a day, resulting in an annual volume of 140.5 million cars-km.

The vehicle fleet is made up of 278 trains, with an average age of 23.5 years, significantly lower than last year due to the temporary withdrawal of vehicles from the C-9 line, which will be closed commercially in 2021.



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 the issue and sale thereof. All modes and operators are included within this framework, ultimately forming a system with a high degree of integration.

All transport tickets, with the exceptions below, are topped-up on the Public Transport Card, which is a card with an in-built contactless microprocessor.

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

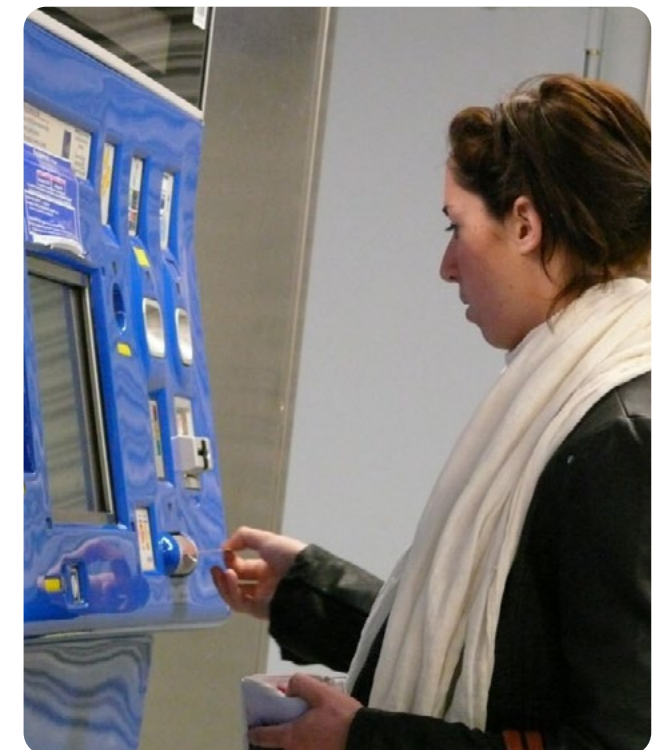
of use. In the case of Metro de Madrid and the underground and light rail concessions connected thereto, there is a combined single ticket that can be used on all these services.

- A **10-journey 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-journey 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-journey 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 related to the IPREM (Public Multiple-Effect Income indicator), with a specific pass, the Blue Card, which is valid 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-journey 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.

Furthermore, in the first six months of 2021, the network would be equipped with more than 1,600 Bankia ATMs in the Madrid region and surrounding municipalities. This distributor stopped providing service following the implementation of the Madrid Regional Transport Consortium's top-up application, which was made available, after a trial period, to all users from 1 July 2021.

Tourist tickets are distributed at the CRTM management offices located at the Airport, throughout the aforementioned external sales network, and in the automatic machines installed at the Renfe-Cercanías stations. The CRTM also sells these tickets directly to the groups and collectives requesting them, as well as the organisers of conferences and large events.

Yearly 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

The prices in force since 1 February 2013, when the last price review took place, were maintained in 2021, with the exception of the rate for Senior Citizen users which was reduced from €9.30 to €6.30 in the case of 30-day passes. The Ministry of Infrastructure Development is responsible for approving the fares corresponding to tickets of Renfe-Cercanías.

Yearly passes are valid for the calendar year, the price of which is 10 times the corresponding 30-day pass. Children under 4 can travel without a ticket.



TRAVEL PASS (30-day)

	A	B1	B2	B3	C1	C2	E1	E2
Adult (aged 26-64)	€54.60	€63.70	€72.00	€82.00	€89.50	€99.30	€110.60	€131.80
Young (aged 7-25)	€20.00							
Senior (aged 65 and above)	€6.30							
Blue Card	€6.20							

INTERZONAL PASSES (except with zone A)

	2 zones	3 zones	4 zones	5 zones	6 zones	7 zones
Adult (aged 26-64)	€47.90	€54.60	€63.70	€72.00	€82.00	€89.50

SINGLE AND 10-JOURNEY 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-journey	€12.20	€11.20	€11.20	€11.20	€12.20	€18.30

Airport supplement €3.00

SINGLE AND 10-JOURNEY 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-journey	€12.20-€18.30	-	€8.50	€12.20	€16.10	€23.00	€29.70	€37.40

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

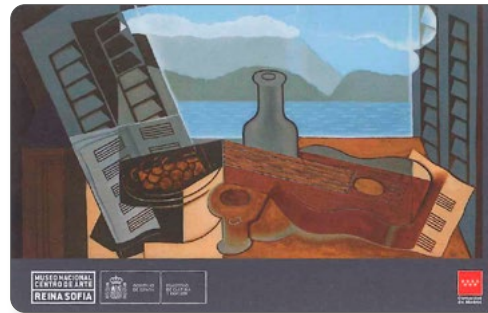
3.6 The technology

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 selling price of the personal cards is set at €4.



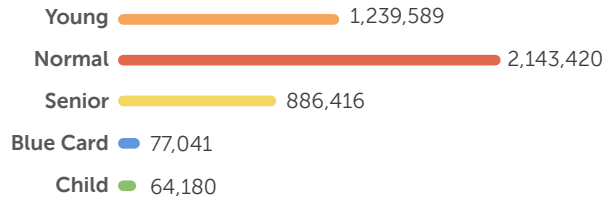
In 2021, personal transport card requests gradually recovered to a total of 775,181 by the end of the year, a 48.8% increase compared to 2020. Monthly averages were back at pre-pandemic figures of approximately 100,000 cards per month by the end of the year. 55% of the personal cards were card replacements for different reasons (damage, loss, etc.) and the remaining 45% were sold to new users.

The number of active personal cards as at 31 December 2021 stood at 4,410,646, only a 0.2% increase compared to 2020. The evolution with regard to the number of active cards by user profile is irregular: while the number of cards held by young people and normal users rose (2.6% and 1.1%, respectively), the number of cards held by other profiles went down. The number of child cards continues the sharp decline we saw in 2020, with 10.2% fewer cards at the end of the year than in the year before. The operation of this card allows media that are no longer in use to be written off more quickly (maximum duration of 3 years), whereas with other cards this only occurs after a longer period of time (up to 10 years). Blue Cards also went down by 4.4% as a result of the flow of users from this fare option to the Senior Citizen Travel Pass, that costs practically the same price this year.

The number of new cards issued stood at to 348,637, 42% more than in 2020. The following table indicates their distribution by sales channel for each user profile, except in the case of the Blue Card, which can only be requested at the Citizen Assistance offices of Madrid City Council. The percentage of cards

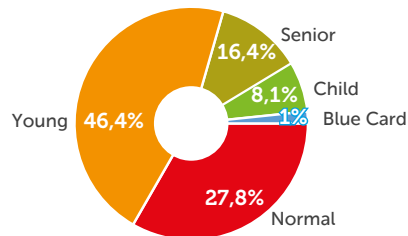
requested online increased considerably, although Management Offices remained the most used channel, issuing 71.7% of cards.

ACTIVE PERSONAL CARDS BY PROFILE as at 31 December 2021



PERSONAL CARDS ISSUED BY PROFILE/ CHANNEL (2021)

	Management Offices	Internet	Total
Young	104,357	57,412	161,769
Normal	73,569	23,264	96,833
Senior	49,583	7,568	57,151
Child	15,645	12,659	28,304
Blue Card		4,580	4,580
Total	249,890	98,747	348,637



Applicants for children and youth passes are more likely to be made online, 44.7% and 35.5% respectively, while Seniors largely prefer to obtain their card in person (86.8%). 29,053 new users applied for transport passes each month, although 68,300 requests for personal cards were made as many people need a replacement card for a number of reasons (loss, expiry, damage, etc.).

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 price is €2.50.

A total of 1,814,881 Multi Cards have been sold in 2021, 57% more than in 2020 but still a long way off the 2018 figures when more than 4.8 million cards were sold and in 2019 when almost 4 million were sold. Metro de Madrid 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 15.2 million Multi Cards put into circulation until 31 December 2021, distinguishing between those that have been sold and those that were given out free of charge in the second half of the launch year (2017).

MULTI CARDS IN CIRCULATION as at 31 December 2021

Sales	Logista	756,092
	Metro	13,248,992
Free of charge	Social services	38,000
	Provided during promotion	1,193,425
TOTAL CARDS DISTRIBUTED		15,236,509

Throughout 2021, 31 million tickets were topped-up onto Multi Cards, a little more than half of which were single Metro de Madrid tickets (53%). In the future, the introduction of new payment methods will lead to a decrease in the high card usage we have been used to seeing up until now.



The Development and Compliance Centre (DCC)

The Development and Compliance Centre (DCC) was launched in 2006 which strives to be a technological benchmark guaranteeing the compatibility of all elements, equipment and systems, hardware and software alike, which constitute or may constitute part of the Community of Madrid's Smart Ticketing System.

In 2021, the adapted functionality for the application of fare reductions for Senior passes was tested, both in ticket-sales machines and in validation scanners. Work has also continued with regard to topping up transport fare cards on mobile phones using two different strategies: contactless card emulation in an application on the terminal itself and emulation in the embedded secure element (Security Element) that some terminals have. Furthermore, C1 and C2 zones were unified, the fare for the 30-day Senior Pass has been changed and the balance check has been tested and adapted to the new individual annual tickets on all the related applications.



4 • The passengers



In 2021, just over 205 million journeys were recovered, coming to a total figure of 1.065 billion travellers, 23.9% more than in 2020 but still a long way off the pre-pandemic figures of 66.5% seen in 2019.

This figure implies an average of 157.7 trips per inhabitant per year, 24.4% less than in the previous year: the lowest value recorded since the creation of the Regional Transport Consortium. In 2021, there were still mobility restrictions in place for Madrid's citizens, resulting in public transport use that was well below the usual values seen in previous years, when it stood at well over 200 journeys per inhabitant.

The extension of the state of alarm until May this year, together with the time and perimeter restrictions in this and other autonomous communities, as well as restrictions on foreign travellers, have got in the way of public transport use levels bouncing back to pre-pandemic levels. As measures were gradually lifted, the monthly evolution of demand followed an upward trend over the course of the year, going from 61.6 million passengers in January to 101.3 million in December. Levels at the turn of 2021 were almost

ten points lower than at the end of 2020 in the wake of storm Filomena, negatively affecting the positive trend shown by the network at the end of 2020. In percentage terms, the year started off with 44.8% and rose to 73.7%, although in October and November it exceeded 80% of the levels seen in 2019.

4.1 Evolution of passenger demand by operator

The relative evolution by operators has shifted between the value reached by Metro de Madrid, demand for which increased by 26.4% this year, and that obtained by Renfe Cercanías, that rose by 16.7%.

Having said that, although Metro de Madrid experienced the highest growth, demand is currently at 65.3% 2019 levels, while other operators with lower growth are showing higher values. This is the case of the suburban operators that closed 2021 with 71.4% of 2019 levels, TFM with 73.4% or Tranvía de Parla with 70%. On the other hand, lower demand was experienced by Renfe Cercanías, (62.9%), Metro Ligero Madrid (58.6%) and Metro Ligero Oeste (57.6%), just like in 2020.

Empresa Municipal de Transportes de Madrid closed the year with 67.4% of 2019 passenger levels, with growth one point below the average for operators.

EVOLUTION OF PASSENGER DEMAND BY OPERATOR (millions)

	Metro de Madrid	EMT	Road concessions	Renfe-Cercanías (commuter train)	Light rail (1)	Other railway concessions (2)	TOTAL
1995	397.2	521.5	191.6	126.0	-	-	1,236.2
% VAR 95/90	-4.6%	20.3%	24.4%	30.8%	-	-	12.4%
2000	518.9	531.2	270.1	161.2	-	4.7	1,486.1
% VAR 00/95	30.7%	1.9%	40.9%	28.0%	-	-	20.2%
2005	643.6	470.2	275.6	199.0	-	6.7	1,595.1
% VAR 05/00	24.0%	-11.5%	2.0%	23.5%	-	42.9%	7.3%
2010	627.1	423.4	235.8	181.6	17.3	6.4	1,491.6
% VAR 10/05	-2.6%	-10.0%	-14.4%	-8.8%	-	-4.8%	-6.5%
2015	569.7	405.9	207.3	182.2	14.7	5.9	1,385.8
% VAR 15/10	-9.2%	-4.1%	-12.1%	0.3%	-15.0%	-7.8%	-7.1%
2018	657.2	420.2	242.8	203.4	18.2	6.6	1,548.4
% VAR 18/17	4.9%	-1.8%	4.3%	5.6%	7.8%	1.5%	3.0%
2019	677.5	439.8	254.7	203.0	18.8	6.9	1,600.7
% VAR 19/18	3.1%	4.6%	4.9%	-0.2%	3.3%	4.6%	3.4%
2020	349.8	241.6	145.3	109.4	9.5	4.0	859.6
% VAR 20/19	-48.4%	-45.1%	-43.0%	-46.1%	-49.5%	-42.1%	-46.3%
2021	442.3	296.5	181.9	127.7	11.6	5.0	1,065.0
% VAR 21/20	26.4%	22.7%	25.2%	16.6%	22.1%	25.0%	23.9%

EVOLUTION OF TOTAL DEMAND BY OPERATOR (YEAR 2021)

	Metro de Madrid	EMT	Road concessions	Renfe-Cercanías	Light rail (1)	Other railway concessions (2)
2005	40.3%	29.5%	17.3%	12.5%	0.0%	0.4%
2010	42.0%	28.4%	15.8%	12.2%	1.2%	0.4%
2015	41.1%	29.3%	15.0%	13.1%	1.1%	0.4%
2020	40.7%	28.1%	16.9%	12.7%	1.1%	0.5%
2021	41.5%	27.8%	17.1%	12.0%	1.1%	0.5%

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

(2) Includes TFM

Current demand is not far off levels seen back when this organisation was launched; in 1989 there were 1,069.9 million passengers, a figure close to that recorded this year, which gives an insight into just how significantly public transport was affected in the wake of the pandemic.

In 2021, Metro de Madrid is still the highest volume operator, recovering half of what it lost last year in terms of overall demand. On the other hand, the EMT became slightly less important, despite having experienced an upsurge in the previous year. 12.0% of the year's passengers used Renfe Cercanías, in keeping with the decline observed over the last two years. This is partly down to the labour dispute at the end of the year which led to the services being temporarily suspended. Road concessions consolidate levels seen in 2020.



4.2 Evolution of demand by transport ticket

76.7% of trips made were made using a Travel Pass, one point lower than in 2020, which fell in favour of single tickets and 10-journey tickets, a 0.6 and 0.9 point rise respectively. In fact, while multimodal journeys are up 22.2%, single tickets are up 36.6% and 10-journey tickets are up 32.2%.

By mode of transport, the greatest growth in single tickets was seen in metropolitan and urban buses, while the 10-journey ticket was in Metro de Madrid and light rail.

In line with the indicated trend of lower recovery, demand for the Travel Pass on the other hand has increased more sharply on metropolitan buses. This trend is a true reflection of the effect that the extension of the restrictions put in place in the wake of the pandemic which seemed to have a bigger effect on frequent travellers.

Ticket distribution by mode of transport shows that 59.7% of journeys were made using 10-journey tickets on Metro de Madrid. Multimodal ticket holders are more frequent with regard to road and light rail, accounting for 79-80% of the total number of tickets.

Demand by tickets has been fairly homogeneous over the course of the year, with the most significant increase in 10-journey tickets seen in January in the wake of storm Filomena.

ANNUAL DISTRIBUTION OF PASSENGERS BY TICKET TYPE 2021

		Metro de Madrid	EMT	Road concessions	Renfe-Cercanías (commuter train)	Light rail (1)	Other railway concessions (2)	TOTAL
Single	Passengers	18,160,010	17,435,295	19,878,067	13,998,830	587,521	412,094	70,471,817
	% Total	25.8%	24.7%	28.2%	19.9%	0.8%	0.6%	100.0%
10-journey	Passengers	92,560,715	36,112,798	15,142,588	9,187,730	1,511,119	562,405	154,977,355
	% Total	59.7%	23.3%	9.8%	5.9%	1.0%	0.4%	100.0%
Travel Pass	Passengers	327,860,496	235,109,161	146,003,127	94,346,440	9,396,649	3,863,294	816,579,567
	% Total	40.2%	28.8%	17.9%	11.6%	1.2%	0.5%	100.0%
Children's card	Passengers	3,718,644	2,622,211	901,519	1,078,002	123,809	41,942	8,486,127
	% Total	43.8%	30.9%	10.6%	12.7%	1.5%	0.5%	100.0%
Other	Passengers	6,268	5,212,060	77,180	9,033,723	8,441	0	14,337,672
	% Total	0.0%	36.4%	0.5%	63.0%	0.1%	0.0%	100.0%
TOTAL	Passengers	442,306,134	296,491,925	181,902,481	127,644,725	11,627,539	4,879,735	1,064,852,539
	% Total	41.5%	27.8%	17.1%	12.0%	1.1%	0.5%	100.0%

DISTRIBUTION OF PASSENGERS BY TICKET AND OPERATOR

	Metro de Madrid	EMT	Road concessions	Renfe-Cercanías (commuter train)	Light rail (1)	Other railway concessions (2)	TOTAL
Single	4.1%	5.9%	10.9%	11.0%	5.1%	8.2%	6.6%
10-journey	20.9%	12.2%	8.3%	7.2%	13.0%	14.4%	14.6%
Travel Pass	74.1%	79.3%	80.3%	73.9%	80.8%	76.6%	76.7%
Children's card	0.8%	0.9%	0.5%	0.8%	1.1%	0.8%	0.8%
Other	0.0%	1.8%	0.1%	7.1%	0.1%	0.0%	1.4%

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

(2) Includes TFM



4.3 Ticket sales

The sales of the different types of Travel Pass are analysed below. Informing regarding the sale of the remaining tickets issued by the CRTM (combined single and 10-journey tickets for the underground and light rail network and 10-journey Metrobús tickets and bus passes from suburban operators) does not offer significant added value to the distribution of the trips 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 is the main distributor, with just over half of the passes and 83.3% of Metrobús, the 10-journey ticket for zone A. In fact, six out of every ten journeys are made on the Metro using this ticket. The Logista point of sale network then plays a very important role as an external support for the transport network, with 29.8% of Pass sales, 15% of Metrobús and a majority 94.5% of suburban service bus passes. The Bankia ATM network plays a minor role (0.5%) in the sale of tickets, and is therefore included in the “Other” category. This network ceased to provide services in the second half of this year.

The CRTM is assigned a separate heading, which will be of particular importance as of 2021 following the launch of the “Travel Pass” transport app that passengers can buy tickets on. Until now, the organisation has been primarily involved in distributing annual tickets, promoting conference

tickets and selling tourist tickets to end users through its Management Offices, in particular those that go to the airport. The app will be available to the general public as of July 2021 and, despite still trying to gain a significant market share, it sold just over half a million multimodal and multi-journey tickets.

DISTRIBUTION OF THE SALE OF TICKETS BY DISTRIBUTOR

	Metro	Logista	Renfe-Cercanías	CRTM	Other
Travel Pass	49.6%	29.8%	9.7%	10.0%	1.0%
Tourist Travel Pass	70.5%	0.4%	4.9%	24.2%	0.1%
Metrobús (10 zone A journeys)	83.3%	15.0%	0.0%	1.5%	0.2%
Suburban bus pass	0.0%	94.5%	0.0%	4.3%	1.1%

15,867,025 Travel Passes were sold in 2021, 18.7% more than in 2020, with this growth being uneven between different types of ticket. On the one hand, sales to general profile passengers saw a smaller increase, which corresponds to the active sector of the population who, in spite of the positive year-on-year variation in the employment rate, has benefited to a greater extent from new ways of working, likely not needing to take as many journeys as before, not to mention the changes in their mobility needs.

Despite a significant rise in sales, the Youth Pass has not gone back to pre-pandemic values. Demand currently sits at 29.7% which is similar to the demand



for Senior Passes. The price of the Travel Pass has fallen for the second time this year which, in turn, has led to 25.9% more units sold than the last year, in spite of the fact that this is one of the population groups that has been most affected by the pandemic.

Blue Card ticket use has also risen, with a 10.9% rise in sales. Nevertheless, users of this ticket aged 65 and over have started buying the Senior Pass as both cost practically the same in 2021 and the latter has a wider scope of validity.

Variations in the evolution of each profile has given rise to a new distribution at the end of the year: while up until last year roughly 38% of sales were of normal profile Travel Passes, the figure has dropped this year to 34%. In general, throughout the years, there has been a decrease in share held by Adult users in favour of more subsidised tickets, particularly with the extension of the Young Pass at the end of 2015. Lastly, it is worth highlighting that the PAE (Employment Activation Programme) has been shelved which, in turn, has led to a decrease in sales of this ticket.

SALES OF THE TRAVEL PASS BY USER PROFILE

	Normal	Young	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
2016	7,243,501	5,794,760	4,662,945	594,615	4,669	18,300,490
2017	7,534,012	6,489,690	4,785,347	622,085	6,106	19,437,240
2018	7,838,161	7,001,096	4,909,269	646,393	9,597	20,404,516
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	-	15,867,025
% VAR. 20/19	5.0%	29.7%	25.9%	10.9%	-	18.7%



The evolution of sales by zones supplements the analysis with a regional viewpoint. However, it should be specified that, due to the importance 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

	Zone A (1)	Zone B	Zone C	Inter-zonal(2)	Zone E (3)	Senior	Young	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
2016	4,215,656	3,060,871	264,507	238,352	59,366	4,662,945	5,794,124	4,669	18,300,490
2017	4,410,108	3,157,683	268,676	256,510	63,683	4,785,347	6,489,690	6,106	19,437,240
2018	4,604,066	3,269,086	279,270	263,051	69,081	4,909,269	7,001,096	9,597	20,404,516
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	-	15,867,025
% VAR 21/20	4.4%	5.9%	6.4%	44.3%	8.3%	25.9%	29.7%	-	19.1%

(1) Includes Blue Card from 2007

(2) Passes B1-B2, B2-B3, B3-C1 y C1-C2

(3) Zone outside the Community of Madrid, the scope of which includes part of Castilla - La Mancha

Because 62.8% of tickets are sold at a flat-rate, it is difficult to conduct a zonal analysis of Travel Pass usage. The zonal distribution of sales has remained practically invariable since 2016, coinciding with the apparition of the flat-rate Young Pass at the end of 2015. Multi-zone ticket sales have skyrocketed in the last year, having fallen below average last year. Although Zone A is still the most widely used and accounts for the most sales, demand is gradually

waning, having lost one point in the distribution by zones. Travel pass usage in the metropolitan, regional and outer areas of the Madrid region has seen greater demand than in the city of Madrid itself.

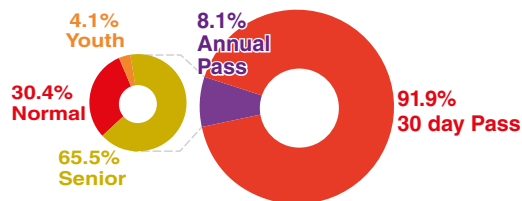
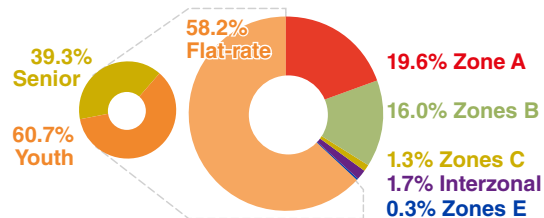
With a view to rounding off the zonal analysis, a distribution of Travel Pass users by area of residence has been conducted. The results show that roughly two thirds of Senior users (66.3%) live in zone A,

whereas only 52.6% of young people live in Madrid. Although 52.6% of normal profile tickets are in zone A, 62.9% of this group's users live in this zone. 37.9% of young people live in the metropolitan area which is double the number of those living in zones C and E when compared with the values for Senior or general profile users.

USER DISTRIBUTION BY AREA OF RESIDENCE

Area	Normal	Young	Senior
A	62.9%	52.6%	66.3%
B	32.9%	37.9%	30.2%
C	3.1%	6.4%	3.3%
E	1.1%	3.1%	0.2%

SALES OF THE TRAVEL PASS BY PROFILE AND ZONE



Annual passes went down by 3.5% percentage points in the wake of the pandemic, despite the fact that users of private yearly tickets purchased in 2020 could still use them until 31 March 2021 to make up for the restrictions on use that were in force in 2020. Having said that, sales of the Senior annual pass rose, mainly down to the cost of this ticket being gradually reduced.

An average of 1.2 million 30-day tickets were sold per month, peaking in November when 1,518,969 30-day Travel Passes were sold. These figures are still below the average of 1.6 million ticket sales per month in 2019. Nevertheless, just like in 2020, the summer seasonal decline was lower than in years leading up to the pandemic.

19.8% of people living in the Community of Madrid aged 7-84 are believed to have used a monthly Travel Pass on a monthly basis. The figure is even higher if we take into account the total number of different users who have purchased at least one Travel Pass; roughly 35% of the population purchased a personal ticket over the course of the year, whether it was a 30-day ticket or an annual pass.

Young, normal and senior users made 50, 72 and 27 journeys per ticket respectively using the Travel Pass in 2021, whereas in 2020 these were 47, 68 and 26 respectively.



In terms of social tickets, a total of 1,648,235 passes from the different categories were sold in 2021, 24.2% less than the previous year. Ticket sales to people with disabilities are up 12.5% although they are still well below pre-pandemic sales figures (65%), whereas large family and Blue Card holders are at 82% and 75% of 2019 usage levels. Blue Card holders acquired 10.9% more 30-day tickets, however, in this case, sales were also affected by users opting for the Senior pass instead.

Increased levels of tourism is triggering down to sales, resulting in a 43.7% rise in tourist ticket sales as well as a 33.0% increase in the supplementary airport charge, although this figure is not only made up of tourists. Having said that, figures are still far below the +740,000 tickets sold in 2019. Despite the significant downturn in sales, the 2.5-day average duration of visitors' public transport use in Madrid remained unchanged from previous years. 97.4% of the tourist tickets sold were in Zone A.

What stands out is the lack of congress and large-scale event-related tourist ticket sales, even though this year there was a threefold increase in the number of trade fairs held in Madrid compared to 2020.

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%
2016	975,660	57.8%	118,507	7.0%	594,615	35.2%	1,688,782	100%
2017	1,104,982	59.7%	122,720	6.6%	622,085	33.6%	1,849,787	100%
2018	1,203,418	60.9%	125,198	6.3%	646,393	32.7%	1,975,009	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%
% 21/20	32.6%		12.5%		10.9%		24.2%	

SALES OF TOURIST TICKETS BY PROFILE AND ZONES

	Normal	Child	Confer-ences	Total
1 day, zone A	69,111	4,038	-	73,149
2 days, zone A	23,252	925	-	24,177
3 days, zone A	26,908	902	-	20,854
4 days, zone A	19,071	564	-	19,635
5 days, zone A	13,452	385	-	13,837
7 days, zone A	8,378	223	-	8,601
Total zone A	160,172	7,037	-	167,209
1 day, zone T	1,855	60	-	1,915
2 days, zone T	586	17	-	603
3 days, zone T	772	25	-	797
4 days, zone T	453	13	-	466
5 days, zone T	442	5	-	447
7 days, zone T	278	13	-	291
Total zone T	4,386	133	-	4,519
Total 2021	164,558	7,170	-	171,728
Total 2020	114,084	5,379	-	119,463
% 21/20	44.2%	33.3%		43.7%



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. 2021 has seen slow but steady recovery to pre-pandemic levels of supply and demand after getting through the first COVID-19 waves which virtually brought the sector to a standstill in the previous year. At the same time, the development of the lines of work that got underway 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 1 out of every 2 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 2021, which, by the end of the year, had bounced back to 80% of pre-pandemic passenger numbers.

SUPPLY AT THE MAIN INTERMODAL POINTS

	Metro and light rail lines	Renfe-Cercanías lines	Suburban bus lines	Urban bus lines
Atocha	1	9	3	18
Nuevos Ministerios	3	8	-	11
Sol	3	3	-	-
Avenida de América	4	-	12	11
Moncloa	2	-	50	19
Príncipe Pío	3	3	23	13
Plaza de Castilla	3	-	33	22
Chamartín	2	8	3	2
Legazpi	2	-	9	20
Aluche	1	1	17	8
Plaza Elíptica	2	-	11	9
Conde de Casal	1	-	15	8

b Promoting the use of bicycles

Bike use in everyday mobility has skyrocketed over the last number of years, never more so than in the “de-escalation” period in the wake of the COVID-19 pandemic. CRTM has maintained several operational approaches to promote this vehicle as an additional mode to the region’s transport system. As highlighted in the study “Analysis of the integration of the bicycle in public transport in Madrid” conducted by the CRTM, 2021 saw a widespread rise in the use of bikes and

other types of personal mobility vehicles (PMV) across all types of mobility. This positive context invites us to continue and strengthen the integration and intermodality projects already launched in previous years.



Use of the TTP in public bicycle systems

The operational approaches were upheld in 2021 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.

The trend towards the increased use of BiciMad in the capital continued at the turn of 2021, although unfortunately this, in turn, led to an increase in vandalism on bicycles and stations. It is worth highlighting that a large percentage of the users of this system used one of the CRTM contactless cards as a key to unlock a bike.



Bicycle Parking Network (REB Plan)

In 2021, 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. As for their location, they are preferably installed in covered, monitored spaces. Based on numerous user reports, these parking spaces have been monitored throughout the year due to the intensive use of some stations such as Moncloa or Colonia Jardín,

whereas hardly any bikes are parked at other stations such as Plaza Elíptica.



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 looked into in 2021, holding meetings with technicians from town councils, such as Coslada and Getafe, who had expressed an interest. In fact, the CRTM is actively participating in a cycling mobility conference being held in Coslada. Despite not being put into operation until 2022, 2021 will see the completion of work on the pedestrian-cyclist crossing over the La Poveda railway bridge between Rivas Vaciamadrid and Arganda del Rey proposed by the CRTM, although it will not be implemented until 2022.



5.2 CITRAM



In 2021, the Madrid Region's Public Transport Information and Management Centre, CITRAM, continued to strengthen and deepen a management model based on mobility at the service of users, a high degree of coordination with transport operators and other organisations, and technological support as the basis for this innovative coordination model.

After things started slowly getting back to normal in the wake of the COVID-19 pandemic, 2021 will slowly bounce back to pre-pandemic levels of supply and demand.

The first special operation was carried out at the turn of the year in the wake of storm Filomena, which led to never-before-seen levels of snowfall in the Community of Madrid. Vehicles were stranded on the roads as the city came to a standstill. The following are some of the measures adopted by CITRAM worth highlighting:

- The implementation of a device to communicate with the stranded vehicles, making it easier to get their occupants out safely.
- At the same time, the Metro ran twenty-four hours a day until the storm passed, as it was the only mode of transport in operation in the city of Madrid.
- A permanent crisis committee was set up and were on hand until the storm stopped wreaking havoc on the city.

With health services getting back on their feet after the widespread cancellation of events in 2020, the special services were put into operation throughout the year; highlights include the EvAU, the Pride (MADO) festival and countless sporting events, demonstrations, Three Kings Parade, etc.

Special services were also put in place due to work being carried out on the metro: line 6 (asbestos removal), line 7 (consolidation and treatment of the tunnel and ground), line 9 (asbestos removal), line 9B (repair of track damage caused by heavy rainfall), line 12 (track bed repair) and line 7 (asbestos removal). At the same time, the special bus services needed to make up for the disruption are also being monitored.

A technological development was rolled out in 2021 in the form of GEIS, a platform to managing information on operations, incidents, service conditions and user complaints and suggestions in real time. CITRAM system-related operational developments and the new ones that emerged throughout the during the year also continued.



5.3 Innovation and Training 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.

In order to develop its activities, a number of strategic strands have been defined, such as smart transport planning and management, mobility as a service (MaaS), energy sustainability, electric, autonomous and connected mobility, new fuels and universal accessibility. In 2021, the CRTM signed new partnership protocols with companies and organisations, 40 of which have been signed since the Centre's creation. In particular, these partnerships include the agreement signed by the CRTM with the Directorate-General for Traffic, the Autonomous University of Madrid and the company ALSA, for the launch of a loop line within the university campus operated by means of 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 2021 have included:

- Smart traffic light and smart crossing solution using AI to implement a reversible lane in Valdemorillo. The system plans to control traffic lights, smart crossings and warning signals with a view to allowing a bus line to be used in the opposite direction without encountering vehicles along the way.
- Contextual information project through the "Qua-lo" app at the Moncloa Transport Interchange. Contextualised information means that the user gets direct, selective and real-time access to information related to that physical space in which BLE tags (Bluetooth Low Energy Beacons) were previously placed and are automatically picked up by the user's phone after they have downloaded the app.
- Place solar panels on the roofs of suburban buses with a view to harnessing solar energy to operate vehicles, cut down on electricity consumption of the main systems, fuel consumption and pollutant gas emissions.
- Design and roll-out a system to analyse bus stop capacity status using infrared technology to monitor their status in real time and save historical data, as well as to assess the service operator's ability to react to overwhelming passenger demand at certain key stops.
- Environmental monitoring by measuring environmental pollution indicators using sensors installed on suburban buses.
- Count the number of "hop-on hop-off" passengers per stop by installing Wi-Fi antenna detection devices, trying out a technology with a view to creating Origin-Destination matrices.
- Implementation of an electric shuttle bus service between the Islazul Shopping Centre Park-and-Ride and Plaza Elíptica.

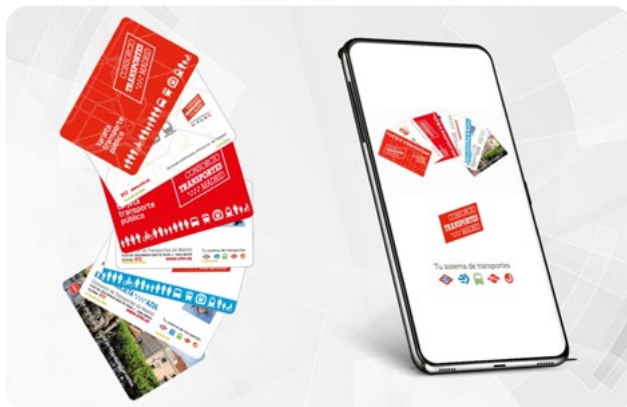
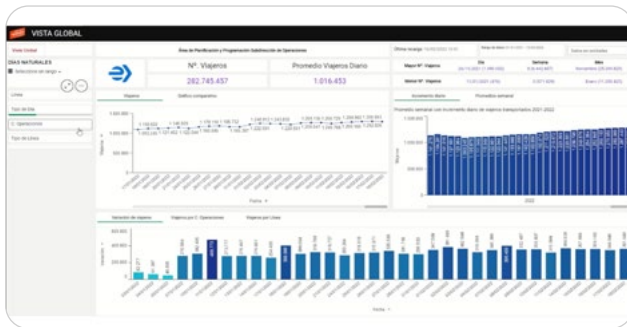
In terms of training, in 2021, a range of different sector-related courses were delivered, offered both in-person and remotely, though mainly carried out online, due to the COVID-19 restrictions in place.



5.4 New technologies

The Regional Transport Consortium continues to undertake projects focused on implementing new transport technologies:

- Big Data Platform: continuation of the execution of the contract to build a Big Data platform as well as a Business Intelligence-based data extraction and exploitation system for the CRTM.
- NFC top-up app: the final phase of this project will be completed on 6 April 2021 with the launch of the NFC top-up app for Android called “Travel Card”.



5.5 Relevant activities

a The impact of storm Filomena

Filomena, which will not be forgotten in our region any time soon, was the name given to a “European extratropical cyclone” by the State Meteorological Agency. As Filomena was crossing the Iberian Peninsula, the leading edge of the storm collided with cold air that was being channelled down from the Arctic by an area of high pressure. As it was Europe’s sixth storm of the season it was assigned the letter “F”, which is where the name “Filomena” came from.

On Thursday 7 January, the Madrid 112 Security and Emergency Agency activated Level I of the Winter Inclement Plan after the first warnings were given about the storm. However the devastation wreaked by the storm exceeded all weather forecasts. The most severe snowfall started around midday on Friday 8 January and it did not let up until the following morning, with reports suggesting between 50–60 cm of accumulated snow.

Overground modes of transport were severely affected by the intense snowfall leading to urban and suburban buses, Cercanías [commuter train network] and light rail networks being brought to a standstill between 8.30pm and 11.00pm. Nearly 300 buses were stranded as they were unable to make their way back to their depots, with no other option but to park them on the region’s streets and roads.





The Metro network, on the other hand, was virtually unaffected by the snowfall, except for the overground sections of lines 9b and 10 that could not be used. In this case, the trains were parked in the tunnels to prevent them from becoming stranded in the depots, where, in virtually all cases, the tracks are open to the elements.

On the night of Friday 8 going into Saturday 9 January, Metro line 8 kept running through the night to facilitate the evacuation of workers stranded at Barajas Airport, which had suspended all services until Sunday 10. Transport interchanges were also kept open to temporarily house those who were in need of shelter.

Given the state of emergency derived from the snowfall, on Saturday 9 January, a crisis cabinet was set up in the CRTM that authorised the opening of an uninterrupted Metro service 24 hours a day and the establishment of a basic interurban transport network between the main municipalities, while acting to achieve a rapid reopening of the rest of the modes. On 9 and 10 January the Metro network was the only one running; all others were out of service (except the special EMT service to Hospital Enfermera Isabel Zendal).

Because of the mechanisms put in place, as well as the contingent of staff who had volunteered to work overtime, all Metro lines were able to run for almost 200 hours straight (from 9 to 15 January), playing a

big part in moving key workers such as healthcare workers around the city.

With the storm subsiding, 84 CRTM suburban bus lines were put into operation first thing on Monday 11 as a basic network between municipalities in the corridors that had been cleared by snow ploughs. Getting the EMT buses back to full service turned out to be rather complex as, apart from the record-breaking snowfall, hundreds of trees had fallen and temperatures had plunged, turning the snow that covered pavements and roads into ice. 28 EMT lines were put into operation that either ran along part of usual routes or were interim routes as of Wednesday 13 January. These measures were in place until 19 January when the service was running as normal, with new lines being added on a daily basis.

Cercanías, light rail and Tranvía de Parla reopened gradually between Monday 11 and Wednesday 13, as the tracks were cleared, problems with trees falling on the catenary were dealt with and switches and other track mechanisms were cleaned.

b aParca+T Park-and-Ride Plan

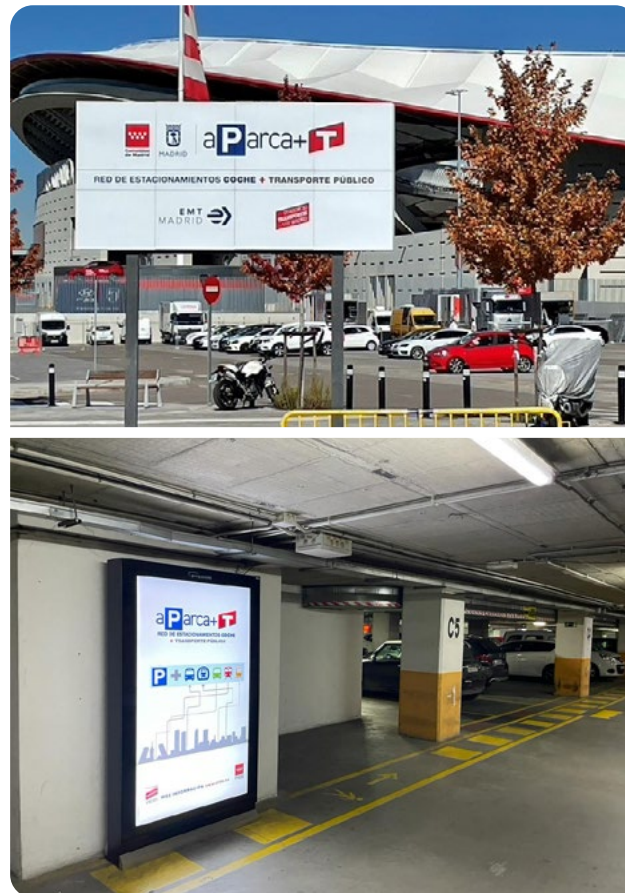
“aParca+T”, the Strategic Plan for Modal Interchange Car Parks of the Community of Madrid, is an ambitious long-term plan that strives to foster the use of public transport and intermodality through a network of smart car parks, with CRTM unifying the management thereof while making them free for users 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.

“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 the 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 more car parks have also been launched as pilot car parks in the aParca+T network: Avenida de Portugal, Nuestra Señora del Recuerdo and Wanda Metropolitano. All stations, located in Madrid, have been integrated into this service in accordance with a collaboration agreement entered into between Empresa Municipal de Transportes de Madrid (EMT) and

the CRTM to oversee a pilot test that would be free to use for public transport passengers. This pilot scheme has been monitored throughout 2021 in terms of demand and other usage parameters.

Also in 2021, the El Casar car park in Getafe has been included in the Construction Project to extend metro line 3, which is already underway. This car park is expected to become part of the integrated the aParca+T network service in 2023.



c The A-2 Bus-HOV lane

Throughout 2021, the CRTM has worked in close collaboration with the Ministry of Transport, Mobility and Urban Agenda, the Directorate General of Traffic and the Madrid City to sign the Addendum 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”, made up of three phases; the first two relating to the entrance lane and the third to the exit lane, signed by all parties on 22 September 2021. The Ministry of Transport, Mobility and Urban Agenda published the invitation to tender for the works considered in the project on 29 December 2021.

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.

This represents a very low-cost solution in comparison with traditional reserved platforms, with the added

advantage of allowing flexible management of the entire infrastructure, making it possible to adapt to the conditions of each section and to temporary incidents.

The estimate is that this initiative will benefit a total of 11.2 million passengers per year, corresponding to the 40,000 passengers along the route who would use the Bus-HOV lanes each day, with the average travel time saving compared with current figures being estimated at around 7 minutes, although this could range from 15 to 25 minutes for those passengers travelling a greater distance along the lanes.

This is a low-cost project in terms of investment (€13 million), but has major social and environmental repercussions. The main aim is to reduce the number of private vehicles, encourage public transport and shorten trip times, as well as reducing pollutant atmospheric emissions. As this is a pilot scheme, if all goes well and the results are positive, it could be applied to other routes leading into the city of Madrid over the coming years.

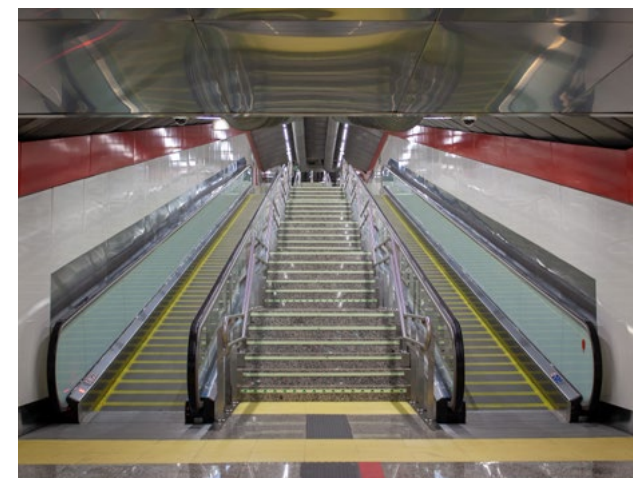
d Improvement work on the underground network

Remodelling of the Gran Vía Station

On the 15 July, after three years of modernisation work, the Gran Vía metro station, one of the network's 25 most-used stations, reopens with a brand-new design and innovative technology. €10.7 million has been invested in the works that entailed a thorough renovation of the station's architecture, including making the concourse bigger; going from 200 m² to 2,000 m², as well as the tunnel providing a direct connection to the Cercanías del Sol station that has resulted in 22,000 more passengers coming through the station each day.

The works have turned the station into a fully accessible facility - it now has 4 new lifts and 13 escalators. 14 new ticket machines and 17 turnstiles with a more modern and efficient design and features round off the station's futuristic look.

Furthermore, it has a museum space containing the archaeological remains excavated while the work was being carried out. Outside the station there is also an exact replica of the former pavilion designed by Antonio Palacios, used to access the station between 1920 and 1970.



Improvement work on 4 Metro lines

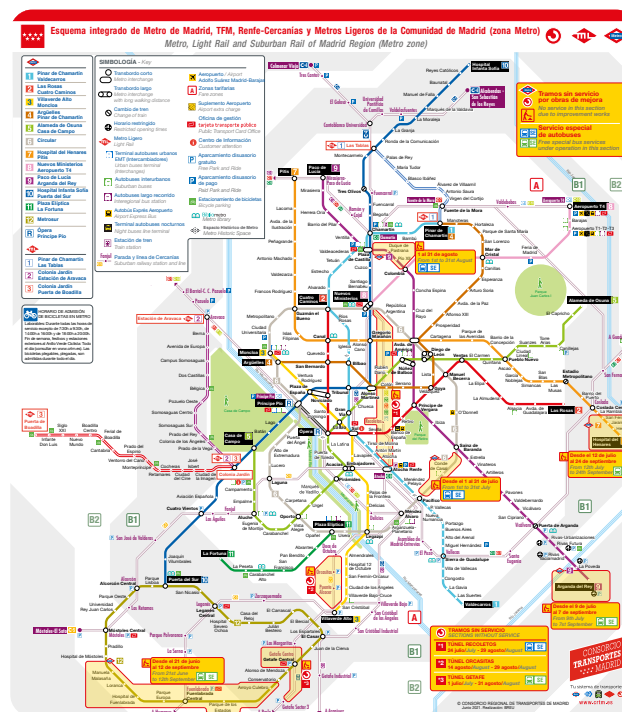
Throughout the summer of 2021, the Community of Madrid rolled out a plan to improve and modernise the facilities on 4 Metro lines, with some sections having to be closed. The objective of the works was to make safety and service quality improvements on lines 6, 7, 9 and 12 (MetroSur).

With a view to causing the least disruption with regard to the mobility of passengers on these lines, the CRTM offered different alternative and free bus services for Metro users along the routes of the sections affected by the works with a service offer that coincided with the different stops on the Metro network.

The first of the actions got underway on 21 June on line 12 (Metrosur) and lasted until 12 September; work was carried out on the track platform on the section between Hospital de Móstoles and Conservatorio, affecting the 7 intermediate stations.

Throughout the month of July, asbestos removal and modernisation work was carried out at Conde de Casal station, resulting in the service on Metro line 6 between Sainz de Baranda and Pacífico being suspended. Furthermore, the drainage and sewage networks were extended, new electrical installations and furniture were installed in the station, along with additional measures to improve accessibility. In order to cause as little disruption to passengers as possible, EMT ran 16 buses as part of a special service. Over the course of the month it carried a total of 800,000 passengers, with an average of 30,000 passengers per day.

To repair damage caused by heavy rainfall, sections between La Poveda and Arganda del Rey on line 9b were closed from 5 July until 31 August.



A special 9-service bus service ran between 12 July and 24 September while maintenance work was being carried out on the 5 affected stations of line 7b between Hospital del Henares and La Rambla.

Lastly, improvement and modernisation works were carried out at Duque de Pastrana station throughout August, (similar to those carried out at Conde de Casal), with the section of line 9 between Plaza de Castilla and Colombia being suspended. A special 9-bus EMT service ran that transported 231,000 passengers and a daily average of 8,600 passengers while the work was being carried out.

e Improvement work on the Cercanías network

This summer, Adif carried out infrastructure modernisation and facility improvement work on the Madrid Cercanías network, affecting several sections of a total of 7 lines on the network (C-1, C-2, C-4, C-5, C-7, C-8 and C-10) located in Recoletos, Getafe and Orcasitas.

In July and August, the ground in the Getafe tunnel was repaired, resulting in the train service being suspended between Las Margaritas and Getafe Sector 3 on the Cercanías C-4 line. In view of this situation, shuttle trains are scheduled to run between Parla and Villaverde, between Villaverde Alto and Atocha, and between Pinto and Atocha in mid-August.

To make up for this, the CRTM also set up a 6-bus network; 2 running between the affected stations of Getafe with Las Margaritas and Villaverde Alto, with the other 4 running between sectors of Parla with Villaverde Bajo and Parque Polvoranca. On 14th August, as a result of the train shuttle between Pinto and Atocha, bus services to Parque Polvoranca were replaced, now ending up at Pinto.

On the other hand, between 24th July and 29th August, the Recoletos tunnel between Atocha and Nuevos Ministerios had to be closed for construction work to improve accessibility at Recoletos, affecting the Cercanías lines that go through this tunnel (C-1, C-2, C-7, C-8 and C-10).

The Sol tunnel remained operational while the work was being carried out although the CRTM ran a special EMT 20-bus service between Atocha and Nuevos Ministerios used by between 4,000 - 6,000 passengers a day depending on the season.

Lastly, renovation work on the Orcasitas tunnel forced the suspension of train services on the section between Villaverde Alto and Doce de Octubre on the Cercanías line C-5 for 16 days in August. To get around this, a free shuttle train service was set up between Doce de Octubre and Atocha and, in the section with no alternative train service, holders of a valid Cercanías ticket could also use it free of charge on 6 conventional EMT lines passing through the affected

stations, in accordance with conditions set out by the CRTM and Renfe.

f Special public transport mechanisms

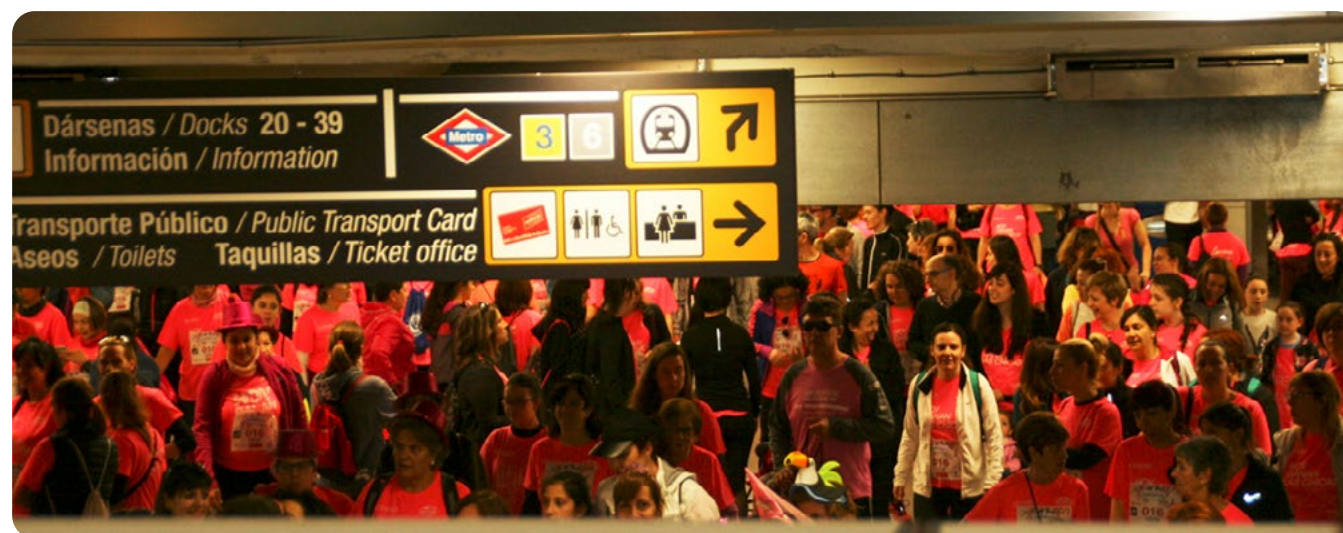
After mobility was brought to a compulsory halt in the wake of the COVID-19 pandemic and, in a changing scenario in terms of restrictions and anti-COVID measures in force at any given time depending on infection rates as well as pressure on the health system, the first large-scale events requiring special mobility measures in the city of Madrid started ramping up again in 2021, as necessary steps to go back to how things were pre-pandemic.

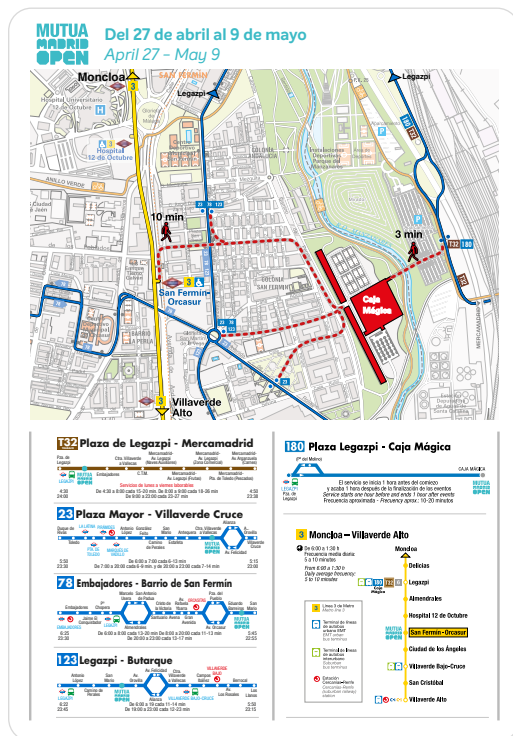
As is customary for events such as these, the CRTM, working closely with the organisers, transport operators and other agents, designed and rolled out special public transport mechanisms with a view to guaranteeing the mobility and access of those attending, in-

cluding ramping up supply and putting on extra metro and EMT staff, running special bus shuttles, detours due to traffic cuts as well as publishing specific public transport access plans, to name but a few.

In all the events, Madrid City Council collaborated in advance with the organisers to weigh up the mobility plans put forward by the organisers, and oversaw the development thereof from the Integrated Public Transport Management Centre (CITRAM), coordinated by the CRTM.

Throughout 2021, special transport mechanisms were put in place for the 17th Women's Race, the Madrid Orgullo MADO 2021 events, the Davis Cup held at the Madrid Arena, the Movistar Madrid Half Marathon, the International Festival of Light (LuzMadrid 2021), the San Silvestre Vallecana and the Three Kings Parade in the centre of Madrid.





The usual transport mechanisms were also reactivated for football matches played at the Santiago Bernabéu and the Metropolitano stadiums, as well as at other sports venues, once capacity restrictions were lifted.

A special public transport system also ran over the Christmas period. The Metro and EMT network service, with support from the Cercanías network, was expanded to make it easier for passengers to reach the Centro district with a view to responding to the surge in shopping and leisure-related mobility, as well as the measures to control private vehicle access to the centre and the partial pedestrianisation fostered by Madrid City Council.

g The accessibility improvement plan at stops in municipalities with under 20,000 inhabitants

In 2019, the Governing Council of the Community of Madrid authorised the direct awarding of grants to 110 local authorities with a population of under 20,000 to implement accessibility improvement works at suburban bus stops dependent on the Transport Consortium. The planned improvement works, totalling more than 3 million euros, affected 435 bus stops overall.

In 2021, €1,686,583.22 of the subsidy was executed, resulting in the completion of 46 projects in as many municipalities; improvements were made to 226 bus stops, including 186 actions on pavements, 6 lay-bys were constructed, 34 specific tactile paving actions were carried out, 74 existing bus shelters were relocated, not to mention the 32 new bus shelters.

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 seeks 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 6,470 times in 2021 across the 40 bus lines that made it up. 93% of requests came from women.



5.6 Universal accessibility

In 2021, the CRTM continued its regular initiatives to promote accessible mobility for all citizens, from ensuring compliance with the accessibility regulations in force to fostering good practice in this regard. The following activities, to name but a few, are included in the area of universal accessibility:

- Participation in the Council for the Council for the Promotion of Accessibility and Removal of Barriers of the Community of Madrid.
- Online video interpreting service in sign language for the deaf and hard of hearing, located in the CRTM's customer service offices.
- Geographical bus stop accessibility information System.










Furthermore, throughout 2021, the actions geared towards complying with Royal Decree 1544/2007 and Decree 13/2007, on accessibility to means of transportation for people with disabilities, have been consolidated with regard to urban and suburban bus transport stops in the municipalities of the Community of Madrid.

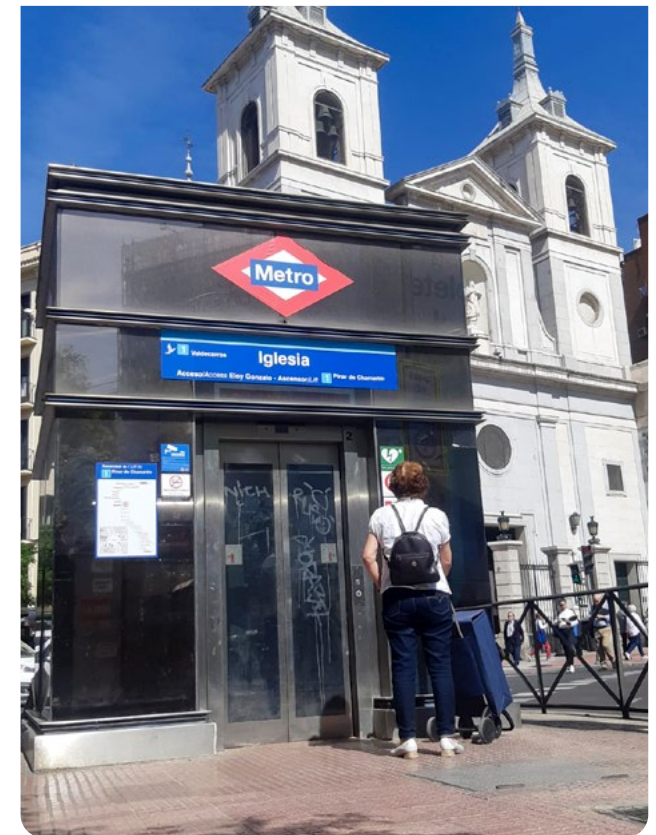
Actions such as laying tactile paving surfaces around the stop to guide blind and partially sighted people, providing information on the location of the stop, as well as making the wait for people with reduced mobility more comfortable via new seats with armrests and ischiatic support for people who have difficulty sitting down. Similarly, work has been carried

out in close collaboration with local councils, to get rid of barriers between the bus stop and the roadway by means of platforms or docks.

This year, Metro de Madrid has started rolling out its new 2021-2028 Accessibility and Inclusion Plan, 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 (31 December 2020)

 	Accessible Metro de Madrid stations	70%
 	Accessible light rail and other railway concession stations	100%
 	Number of lifts Metro de Madrid	558
  	Accessible city and suburban buses	100%



5.7 The environment

The CRM 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 2021 was 115.

With the renewal complete, more than 76% 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. The Madrid fleet is therefore confirmed to be the most modern in Spain in its category, with an average age of

less than 5 years, making it once again the benchmark in the field of environmental sustainability.

As for the EMT de Madrid fleet, we have continued in our commitment to renewal, focused on alternative fuels (natural gas and electric), with the acquisition of 160 vehicles. As such, in 2021, 89% of the fleet of EMT buses could be considered "green", including natural-gas, hybrid, electric and diesel vehicles (Euro V and VEM). The number of "zero emissions" electric vehicles rose to 130, accounting for 6% of the total. On the other hand, average fleet age is 5.9 years.



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)	1,238	505	222	0	130	2,095
CRTM Road concessions	1,577	589	0	1	1	2,068

By type of fuel

	Diesel	Natural gas	Natural gas/diesel	Hybrid	Electric	TOTAL
Urban buses of Madrid (EMT)	278	1,642	1	44	130	2,095
CRTM Road concessions	1,451	246	4	366	1	2,068

5.8 Service quality

The CRTM understands that service quality should focus on users. 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 performed directly by inspection staff exceeded 5,000 hours of effective inspection work in 2021. This work involves actions to check legal obligations, supervise studies, and to control 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 and analysis of complaints and suggestions received are used to incorporate and compare the user perspective.

Perception surveys for each mode of transport provide an overview of customer expectations and their level of satisfaction therewith. 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 usefulness in relation to service quality control and the early detection of anomalies, especially in terms of issues relating to tickets and cards. It is worth mentioning that, in 2021, despite COVID-19-related restrictions still being in place, 1,200,000 people received face-to-face customer service whereas roughly 680,000 were attended to by telephone or online.



5.9 Studies

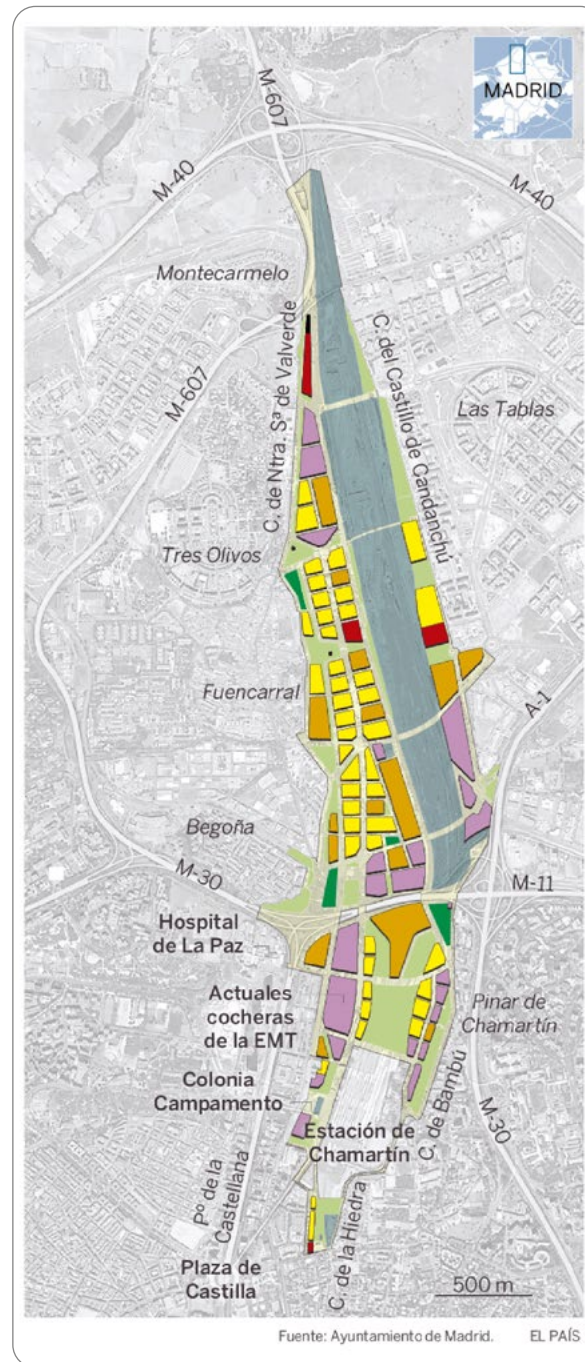
The studies and projects carried out by the CRTM correspond to the functions and objectives of the different areas of activity of this body in fulfilling its responsibilities.

a Design study of the Public Transport System with a view to the future development of Castellana Norte and its surrounding area in Madrid.

The study was conducted to look into the future public transport framework in the northern sector of the municipality of Madrid after the urban regeneration project known as “Madrid Nuevo Norte” was approved. This development has led to a radical shake up in existing land uses, to which the new high-speed terminal at Chamartín is added.

It will also entail an extension of the public transport offer, the planned modifications of which call for re-organising the public transport network in the area of action and, in turn, provide the new services between consolidated areas, with regard to urban buses in particular, with transversal links.

In addition to Chamartín, it entails building new railway stations, a new metro line as well as a new transport interchange.

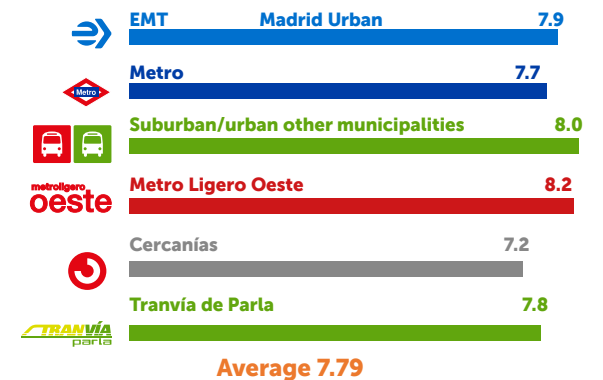


b Studies assessing the quality of transport services

In 2021, the CRTM conducted more than 17,574 surveys on users of the public transport system of the Community of Madrid in order to ascertain their level of satisfaction with the service.

The different studies conducted across the respective modes of transport reveal an overall average rating of 7.79/10 for the modes of transport that make up the Madrid network as a whole. The overall score is derived from the general rating given to the service by each survey respondent. The values obtained in the corresponding studies by mode of transport were the following:

DEGREE OF SATISFACTION (out of 10)



c Verification studies of the established indicators 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 2021, 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 shopper.

d Study to determine the average distance of journeys made with CRTM passes on the long-distance bus network (VAC)

In view of the collaboration agreement entered into between the Community of Madrid and the Junta de Comunidades de Castilla la Mancha to foster mobility

between the two regions, the use of CRTM Travel Passes is permitted in 15 concessions of the central administration that operate between towns in both communities.

With a view to getting an insight into the travel and mobility patterns of journeys taken between Madrid and Castilla la Mancha, Travel Pass holders at these concessions were asked to take part in a survey. The information gathered from the survey taken by more than 2,500 Travel Pass holders could be used to calculate the average cost to provide the service to the different concession operators. Furthermore, the data obtained provided information on the mobility needs pursuant to this agreement that cannot be ascertained in any other way.



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 will be achieved by rolling out 28 mobility solutions, 8 of which in Madrid, to be developed within the participating cities.

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.

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



3 stunning cities.

3.9 million active citizens.

28 urban mobility strategies.

23 committed partners.



6 • Citizen relations



Great lengths have been gone to with a view to restoring confidence in public transport

In 2021, the CRTM kept up its fundamental work as coordinator of user information, in a key year for restoring confidence in the public transport system, via communication campaigns and actions with this objective in mind: to make users feel safe and trust us on their journeys with us.

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 have worked tirelessly to get things back to normal and boost the economic recovery of the region.

6.1. User information

a La website www.crtm.es

The CRTM corporate portal (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.). As demonstrated by the visits received by the website, more than 14.1 million in 2021, as well as the more than 7.8 million visits to the public transport card administration 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 2021, the institutional website published 113 press releases and 252 warnings, with their respective photographic support.

b “Muévete X Madrid” pilot project

In 2019, the CRTM launched an initial pilot of the “Muévete por Madrid” app, both for web and smartphone, which makes it possible to find public-transport routes between two points in the region. In 2021, this app, in operation for controlled user testing, received 15,000 visits.

c The “Tarjeta Transporte” app

The mobile travel card top-up app, that started being beta tested in 2019 by 500 users, was extended throughout 2020 to more than 50,000 users and then became publicly available in July 2021. The app currently being tested allows users to top-up transport tickets on their card under the same conditions as any other distribution network (Bankia, tobacconists, etc.), adding credit to transport cards, whether personal (TTP) 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.

This app has proven to be extremely useful; almost 194,000 active downloads by the end of 2021.

d 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 pioneering 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.crtm.es>), published within the operational context of the European CiViTAS ECCENTRIC project,



**Más fácil
Más rápido**

Acercas la Tarjeta Transporte a la parte posterior del móvil

Carga tus viajes en la tarjeta transporte desde el móvil



Encuesta de Movilidad 2018
¿Cómo te mueves?

Encuesta Dominante de Movilidad de la Comunidad de Madrid (oM2018)



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 personal transport.

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

e 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 “Stop on Demand” smartphone service installed at a bus stop in the municipality of Valdemorillo, where the “Pide Tu Bus” users notify the buses that they are waiting at the bus stop to be picked up. To achieve this, they can scan a QR code or send an SMS, that will tell bus drivers to stop at this stop, and in turn, the system will inform users of the waiting time. In 2021, nearly 6,200 requests for the service were received, 55% of which were sent via SMS, and 45% 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 483 panels have been installed, distributed across 466 bus shelters, 5 more than the previous year, plus another 17 devices distributed in hospitals, bus stations and control centres. In 2021, the first electronic ink and multi-operator PIV screen has been installed as a new feature in accordance with the new bus stop urban furniture contract. As for the EMT network, there are currently 789 panels, 66 more than last year, of which 220 have an operational Wi-Fi connection.

Another development in 2021 are the NaviLens codes at stops on the suburban network. 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 standard some distance away), and then just follow the verbal instructions provided by the phone. Throughout the year, 766 NaviLens code tags have been generated to be placed on bus stop posts and shelters.

f Transport maps

The CRTM develops the Transport Information Publication Programme (PPIT) in accordance with one of its basic functions, “user information” (Art. 2.2.j of the CRTM Creation Act). In 2021, in line with this programme, the following transport information publications were published:

Series 1a. Map of the Community of Metro de Madrid network

In March 2021, the map of Series 1a was updated for publication on the website.

Series 1b. Map of the Community of Madrid Renfe-Cercanías network

In April 2021, the map of the Madrid Renfe-Cercanías network was updated for publication on the website.

Series 3. Madrid Transport Map

This 1:20,000 scale map in PDF format for the CRTM website was kept up to date in 2021. 3 updates were made to it throughout the year. This publication covers the entire EMT, underground and Renfe-Cercanías network in the city of Madrid.

Series 4. Transport map for the Community of Madrid

In 2021, this publication was kept up to date in PDF format for the CRTM website, on the front side at a scale of 1:50,000 and on its reverse at a scale of



1:200,000, including the updated data on suburban transport operators. This map is also visible on the bus shelters of the suburban network.

Series 5. Transport maps for districts of Madrid

The collection of district transport maps was conceptually redesigned during 2018, with this initiative culminating in 2020 and 11 with the publication of the 11 sheets making up the project. This is one single 1:10,000 scale map of the city of Madrid, covering the entire transport network. The map draws on a geographical database with a high level of detail, which can be easily updated. Two updates were made to this map in 2021, in the months of January and May.

Series 6. Transport Maps for municipalities in the Community of Madrid

Work continued during 2021 with updates to the maps in series 6, a total of 30 municipalities being updated for inclusion on the CRTM website as PDF files. Furthermore, the first edition of the maps of the municipalities of Valdemaqueda and Fresnedillas de la Oliva have been drawn up. This update of maps responds to changes and improvements set out by the CRTM and also responds to changes and improvements in municipal and suburban transport networks. Once the maps have been updated, they are made available at bus stop shelters in each municipality.



Zonal maps of Metro and Renfe-Cercanías stations

Zonal maps are detailed maps of the area closest to the station, intended to be made available in station lobbies and platforms. They are also provided in the respective web information sheets that the CRTM provides for each station and are used to locate the Transport Card Management Offices. In 2021, this relevant project was supplemented with the publication of 20 new zonal maps in collaboration with Metro de Madrid.

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

These are brochures in various formats, paper and web-based alike, published to support different events the CRTM collaborates in or to provide information on the latest significant developments in the transport network. In 2021, web brochures were produced providing information on the EMT bus line project between Manuel Becerra and El Cañaveral, the extension of line 74 and the new line between Aracava and El Plantío. The information brochure on the special EMT service to the Isabel Zenda Hospital has also been updated.

On suburban routes, information panels were designed on the reorganisation of lines in Robledo de Chavela, on the Special Service to Valdesquí, on the new urban line 5 in Aranjuez and on the reorganisation of the Sierra Norte bus lines. The information on the map of Buitrago de Lozoya is also updated to include

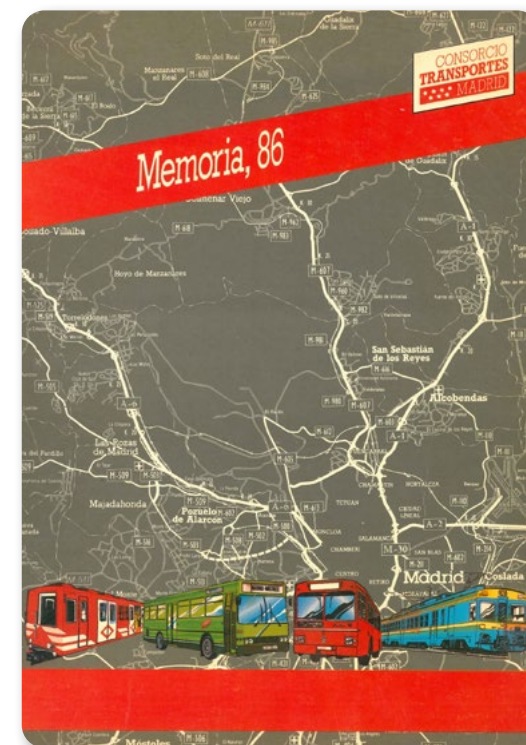
the town's new interchange stops.

In summary, more than 10 maps have been created for the website as a result of modifications to various suburban and urban bus lines.

Finally, it should also be noted that publications were created related to service cuts due to works on the metro network, specifically for lines 6, 7b, 9b and line 12 (Metrosur) in Móstoles, Fuenlabrada and Getafe.

Other information publications

The CRTM Annual Report for 2019 was published in 2021. The 35th anniversary of the publication of the first CRTM Annual Report in 1986 was also commemorated, which has now been digitised and published on the website. In January and March 2021, the publication called "The Interchange Book" has been updated with new versions. In terms of historical research publications, the "150 Aniversario del 1er Tranvía de Madrid" (150th Anniversary of the 1st Madrid Tramway) commemorating the launch of the animal-drawn Madrid tramway line between Serrano-Sol and Argüelles and finally the publication "El Ferrocarril en Madrid 1851-2021" (The Railway in Madrid 1851-2021) with a map of the network's evolution and a chronological table have been uploaded to the website.



6.2. Customer service

a The Public Transport Card Management Offices

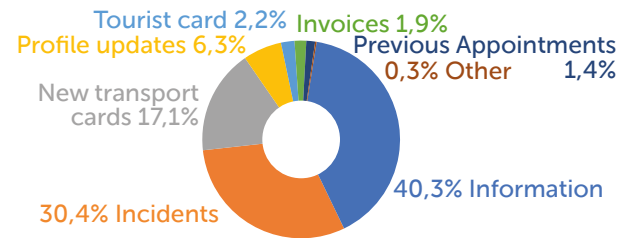
The face-to-face service channel comprises a network of 23 Management Offices strategically located in the Community of Madrid. In 2021, these offices received a total of 1,200,859 visits from users, providing assistance in various services.

2021 was a year of transition in the wake of the COVID-19 pandemic that was still affecting face-to-face customer service, not only because of periods of restricted mobility, but also because of the restrictions on citizens coming into contact with others in closed spaces. Throughout 2021, COVID-19 security and safety measures were kept in place across all Management Offices. Furthermore, cleaning and disinfection tasks were ramped up.

Furthermore, the new office in terminal T2 was opened in April followed by the new office in terminal T4 in July. Both offices were already operational, but in smaller and less convenient locations.

Of all the operations performed at the Management Offices, 17% corresponded to the incorporation into the system of new users (new TTPs and tourist cards), and 83% to information and the management of after-sales services.

Type of operations carried out in management offices (2021)



The Management Offices serving the most users during 2021 were: Airport T4 with 145,974 users, Príncipe Pio with 136,689, Moncloa with 126,566, Sol with 107,369 and Avenida de América with 96,695 users.

b Web [tarjetatransportepublico.crtm.es](https://www.tarjetatransportepublico.crtm.es)

512,625 users were assisted via the website, of which 62% requested a prior appointment, 25% requested a new or replacement TTP using this channel and 11% requested information via the email address tarjetatransportepublico@madrid.org. The remaining 2% correspond to requests for expense invoices.



c The telephone customer service

Over 2021, a total of 170,436 calls related to the public transport system of the Community of Madrid were received on the 012 hotline, with an average waiting time of 20 seconds and an average assistance time of 1 minute. This service works in coordination with the CRTM to meet the information needs of transport users in the Community of Madrid.

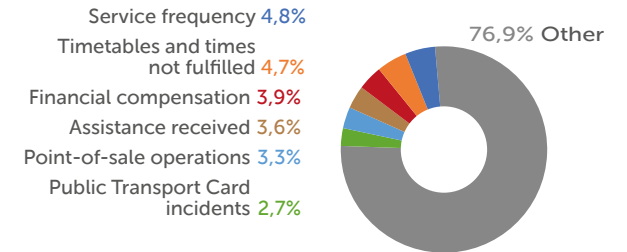
The channel provides information to users, facilitates appointments for formalities in the Management Offices and receives and records complaints.

6.3. Complaints

In 2021, the Community of Madrid transport system registered 31,995 complaints, a decrease of 15% when compared with the previous year (37,625 in 2020). The ratio of complaints per million passengers stood at 30. These figures include the complaints received through the different channels available to the user: 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.

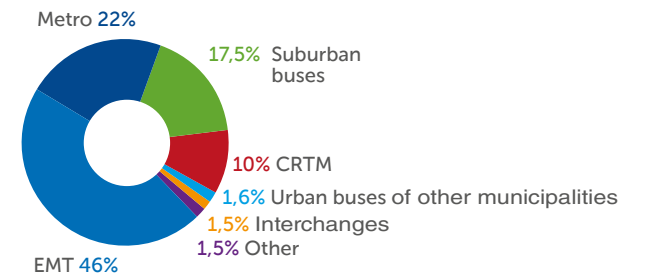
The following six reasons each exceed 2.5% of the total and, between them, account for approximately 23% of the total number of complaints received, while the remainder are split across a broad list of 68 other reasons:

Reasons for complaints



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

Distribution by mode



6.4. Communication campaigns

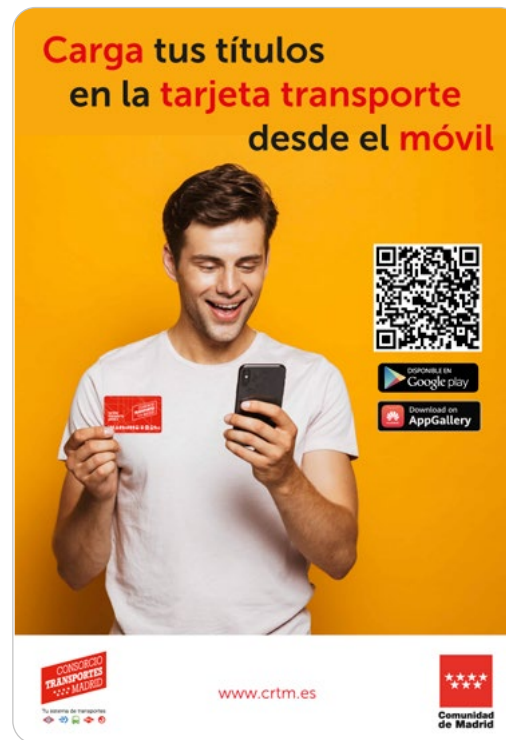
The CRTM conducts communication campaigns to promote public transport and sustainable mobility, and to inform users of the activities organised by the body. In 2021, it has gone to great lengths to keep informing all passengers about the pandemic-related restrictions in force, while trying to restore trust in the public transport system.

However, in addition to pandemic-related campaigns, other specific campaigns have been carried out in 2021 to communicate new services and fares, as well as to publicise important events. All campaigns are listed below:

- Campaign to publicise the new senior pass fare which entered into force on 1 January 2021
- Sharing of the Community of Madrid's "Me mueve estar seguro" campaign for safety in public transport
- Campaign to inform users of stop on demand on night-time services – "Next stop your house"
- World Environment Day promotion fostered by the UN and UITP
- Campaign to publicise the launch of the mobile top-up "Travel Card" app

- Raise awareness of UNESCO adding Madrid's historic Paseo del Prado boulevard and Retiro Park to its list of world heritage sites
- "Vuelve al transporte público" campaign
- Collaboration in publicising European Mobility Week
- Collaboration in publicising Engineering Week
- Collaboration in publicising the "Take Your Books to the Streets" campaign

On the other hand, this year the CRTM has launched a pilot project based around an educational campaign on the values and benefits of using public transport and its importance in the fight against climate change. From 16 February to 17 May 2021, a number of training sessions were held in secondary schools. The schools in the towns of San Martín de Valdeiglesias, San Agustín de Guadalix, Daganzo de Arriba, Chinchón, Móstoles, Paracuellos de Jarama, Alcalá de Henares and Aranjuez, in which roughly 1,100 students from all levels of Secondary Education, Baccalaureate and Vocational Training took part in 44 sessions.



7 • Institutional relations



Sharing experiences to overcome challenges in the aftermath of the COVID-19 pandemic

The experience of the CRTM and the integrated model of the transport system of the Community of Madrid have traditionally formed the subject of international visits, however, in 2021 mobility and face-to-face meetings were still limited because of the pandemic.

The most prominent associations in the sector (UITP, EMTA, the Metropolitan Mobility Observatory) served as the forum to exchange experiences on the impact of COVID-19 on transport systems and 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 1,500 members in 96 countries. Further info at www.uitp.org

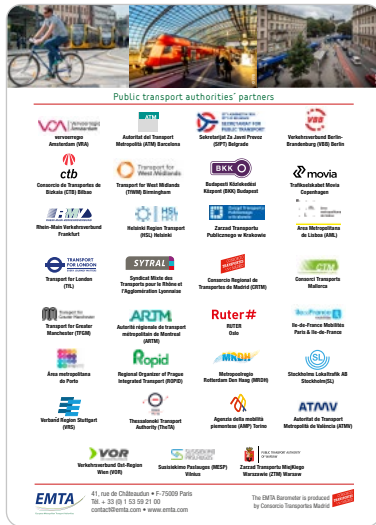
The CRTM participates in various committees and commissions of this association, such as that of the Transport Authorities. This active presence of the CRTM has given our body relevance at both a European and global level.

In 2021, the CRTM has participated in a wide range of forums, webinars and meetings to share how it went about dealing with the COVID-19 pandemic and how to restore confidence in public transport systems.

Furthermore, within the framework of the Innovation and Training Centre that the CRTM collaborates closely with UITP, it ran training sessions by videoconference (given the mobility restrictions that still had not been lifted) in Spanish on “Fundamentals of Public Transport” in April and on “Mobility as a Service (MaaS)” in October.



EMTA (European Metropolitan Transport Authorities)



port Barometer of the European Metropolitan Areas, which includes data on the public transport systems of the 30 partners that made up the association at the end of 2021.

The two annual meetings of the General Assembly have been held in 2021, the first one online, and the second in Copenhagen (Denmark) in November. 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 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 many delegations that are interested in finding out about the planning and construction methodology of the regional infrastructure and the integrated management system for public transport in Madrid. Throughout 2021, due to the COVID-19 restrictions in place, a large number of what would have been face-to-face visits were held by videoconference. Having said that, there were also 10 face-to-face visits from Latin America, Spain, South Korea, France, the Netherlands, the Czech Republic, the European Union and Ukraine.

EMTA is an association that fosters the exchange of knowledge and experience between different European transport authorities. It is made up of 30 members from 16 countries representing the biggest public transport authorities in Europe, such as Paris, London, Berlin, Amsterdam, etc.

By being 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 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 Trans-

The public transport system of the Community of Madrid, a world reference 10 visits by delegations from 8 countries in 2021



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 of Agriculture, Food and Environment, the Ministry of Development, the Ministry of Industry (through the Institute for Diversification and Energy Savings) 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.

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.

Since the launch of this initiative, the CRTM has been a constant presence at its annual meetings. In 2021, the CRTM took part in the XVIII OMM Technical Workshop, held in Cádiz, on the 22nd of October under the slogan "Integration as a response to sustainable and safe mobility". The workshop was split into two thematic sessions. The first focused on analysing how COVID-19 affected metropolitan mobility and the measures taken by transport authorities in the de-escalation phase. The second dealt with the role of public transport in the integration of the modal chain. The CRTM took

part in the latter by presenting the strategic study for a MaaS (Mobility as a Service) system project in the Community of Madrid.

New CRTM exhibition space in the Nuevos Ministerios Interchange

In September, the CRTM launched a new exhibition and training space devoted to public transport at the Nuevos Ministerios station. It is a space next to the line 8 platform that is perfectly equipped to house



exhibitions and public transport-related collections in the region. It also has a training room that can hold up to 35 people, which can also be used for informative conferences, presentations and a wide range of transport-related events.

7.3. Acknowledgements of the Consorcio Regional de Transportes Madrid

The Association of Traffic Engineers and Mobility Technicians has 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. In previous editions, five CRTM women have received this award, not to mention the one awarded in 2021 to Gora Ferrer, Head of the Commercial 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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