



Annual report 2020

unimos Personas



Tu sistema de transportes



foreword

This year, we once again present an annual report on public transport – a glossary of figures and data that reflect the operation of the different modes of transport – within these pages, allowing readers and users to learn about the activity of this fundamental public service in an organised and summarised way.

The 2020 report is inextricably linked to the consequences of the COVID-19 pandemic, which began in March with the declaration of the State of Alarm across Spain and resulted in a drastic fall in passenger demand in public transport, reaching historic lows of around 8% of total daily users.

In 2020, 859,600,000 passengers were recorded, compared to 1,600,700,000 in 2019, demonstrating the magnitude and severity of the situation we faced and which forced all parties, particularly public authorities as providers of such an essential service as passenger transport, to adapt to an unprecedented situation.

The first thing that had to change was our way of working and communicating, remotely, with meetings via videoconferencing in order to manage the day-to-day operation of essential public services.

One of the great achievements for 2020 was the maintenance of high levels of supply compared to the previous year, despite the fall in demand, which required significant effort from all operators – particularly for concessionary companies, who were able to guarantee the provision of a service with the highest quality and health-safety standards, both for users and workers.

Allowing citizens to travel to their workplace, to schools, to hospitals and to do their shopping, basic aspects of their day-to-day lives, is also crucial in order to keep socio-economic activity going.

The Autonomous Region of Madrid has one of the most extensive public-transport networks in Europe, spanning almost 26,500 km, as well as one of the most competitive thanks to its diversity of ticket options and its fare system.

Almost 60% of the cost of each trip is subsidised and we offer social fares which allow those under 7 to travel free of charge, discounts for large families and people with disabilities, or 30-day travel passes with flat-rate fares for those under 26 and those above 65 years of age.

Public transport in Madrid forms the backbone of our province, reaching all corners of the Autonomous Region of Madrid, to each and every one of its 179 municipalities, and is a determining factor in the region's social cohesion.

contents

1 · The CRTM	4	5 · Strategic lines	38
1.1 The Institution	5	5.1 Intermodality	38
1.2 System funding	7	5.2 The CITRAM	42
		5.3 Innovation and Training Centre	43
		5.4 New technologies	44
		5.5 Relevant activities	45
		5.6 Universal accessibility	53
		5.7 The environment	54
		5.8 Service quality	55
		5.9 Studies	56
		5.10 European projects	59
2 · The supply	13		
2.1 Metro de Madrid underground system	15		
2.2 EMT	16		
2.3 Road transport concessions	18		
2.4 Renfe-Cercanías (suburban railway)	20		
2.5 Light rail	21		
2.6 Other railway concessions	22		
3 · The fare system	23	6 · Citizen relations	60
3.1 Zoning	23	6.1 User information	60
3.2 Ticket types	24	6.2 Customer service	66
3.3 Social fares	25	6.3 Complaints	67
3.4 The distribution network	25	6.4 The Friends Club	67
3.5 The fares	26	6.5 Communication campaigns	68
3.6 The Technology	27	6.6 Corporate Social Responsibility	69
4 · The passengers	30	7 · Institutional relations	70
4.1 Evolution of demand by operator	31	7.1 International presence	70
4.2 Evolution of demand by ticket	32	7.2 Acknowledgements of the Consorcio Regional de Transportes Madrid	72
4.3 Sales of tickets	34		

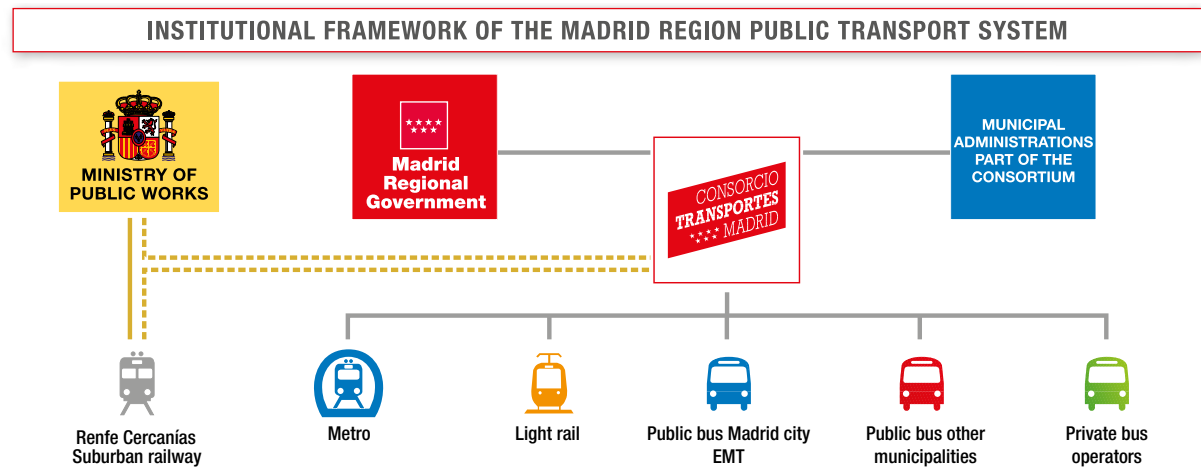


The CRTM

The Consorcio Regional de Transportes de Madrid (CRTM) is the Public Transport Authority of the Autonomous Region of Madrid. It was created by Law 5/1985 of 16 May of the Assembly of Madrid, as the Independent body of the Autonomous Region of Madrid, and it brings together the powers of this body and those of all local councils in the region with regard to scheduled public passenger transport, taking on the comprehensive management of the public transport system in this region.

Its main functions and goals can be summarised as:

- Planning of public transport infrastructure.
- Planning of services and coordination of 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 an overall image for the system, unifying external relationships with users.



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 Autonomous Region 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 thus features a variety 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 2020 was as follows:

a. The Board of Directors

Autonomous Region of Madrid	Chair	Ángel Garrido García
	Board Members	Miguel Ángel García Martín
		Consolación Pérez Esteban
		María Teresa Barcons Marqués
		Miguel Núñez Fernández
		Abel Bueno García
		María Victoria Alonso Márquez
Madrid City Council	Vice-Chair	Francisco de Borja Carabante Muntada
	Board Members	Engracia Hidalgo Tena
		Mariano Fuentes Sedano
State Administration	Board Members	Mercedes Gómez Álvarez Gómez
		Jose Luis Cachafeiro Vila
Member councils	Board Members	Francisco José Recover Lorente
		Jose Luis Álvarez Ustarroz
		Iván Fernández Heras
CC.OO/U.G.T.	Board Members	David Jabato García-Valenciano
		Antonio Oviedo García
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		José Ignacio Rodríguez González

b. The Executive Committee

Chair	Ángel Garrido García
Board Members	Consolación Pérez Esteban
	Miguel Ángel García Martín
	Francisco de Borja Carabante Muntada
	Engracia Hidalgo Tena
	Mariano Fuentes Sedano
Secretary	Pablo Bodega Herráez
Non-board member Managing Director	Luis Miguel Martínez Palencia

Tu sistema de transportes



c. The operational framework

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

Road passenger transport

Empresa Municipal de Transportes de Madrid (EMT)



A state-owned company of Madrid City Council providing urban transport services in the city of Madrid.

Urban transport in other municipalities



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

Suburban transport



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

Transport interchanges

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

Rail passenger transport



Metro de Madrid

A state-owned company of the Autonomous Region of Madrid, operating 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 for the extension of line 8 (Barajas - Airport T4) and line 9 (Puerta de Arganda - Arganda del Rey) operated by Metro Barajas S.C. and TFM, respectively.



Light rail concessions

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



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, and are funded by user contributions in purchasing the various ticket types and the public contributions from the different levels of government, constituting the so-called system pricing subsidy.

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

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

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

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

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

The CRTM has an agreement with Renfe Viajeros that regulates the use of Travel Passes and the payments arising therefrom.

All payments to the various transport operators are funded via user contributions, based on the revenue collected from the sale of different transport tickets and from the contributions of the different public authorities in the consortium.

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



** 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*

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

- ▶ 34% is used to cover the operating deficit of the EMT of Madrid.
- ▶ 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 operating expenses and commercial expenses of the CRTM.
- ▶ The Autonomous Region 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 Cards (zones E1 and E2) in accordance with the criteria established in the partnership agreement between the two authorities.

For the financial year 2020, we must make reference to the situation resulting from the COVID-19 health crisis.

The mobility restrictions imposed by the declaration of the State of Alarm and the health measures to combat the pandemic caused a drastic reduction in revenue from the sale of tickets, while we were required to maintain the service supply in order to comply with health measures and capacity restrictions. This situation resulted in a surplus deficit of 281,100,000 euros due to increased spending on fare subsidies and the various actions to guarantee the health and safety of all transport users and workers.

To finance this major expense and the cashflow tensions caused by the reduction in revenue from ticket sales, the Autonomous Region of Madrid increased its contribution to finance the fare subsidy by a total of 312,000,000 euros. This additional contribution was partly financed by the transfer of 267,200,000 euros from the State Administration to the Autonomous Region of Madrid, in application of Royal Decree-Law 22/2020 of 16 June, governing the creation of the COVID-19 fund.

2020 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 2020, the total amount of revenue settled from both budgets amounted to 2,241,800,000 euros and, in terms of expenses, the amount at 31 December represented a total of 2,226,700,000 euros. 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 586,300,000 euros in 2020. The difference between revenues – entitlements – and expenditure – obligations – places the budgetary result for the year at a surplus of 15,000,000 euros, according to the figures below.

CRTM BUDGET SETTLEMENT 2020
Limited and estimated budget/euros

REVENUE	Entitlements
Chapter 3.- Fees and other income	746,457
Chapter 4.- Current transfers	1,686,064,723
Chapter 5.- Equity income	0
Chapter 7.- Capital transfers	8,767,876
Chapter 8.- Financial assets	3,348
TOTAL LIMITED REVENUE	1,695,582,404
Collection revenue	546,204,684
TOTAL ESTIMATED REVENUE	546,204,684
TOTAL REVENUE	2,241,787,087
EXPENSES	Obligations
Chapter 1.- Personnel expenses	6,985,453
Chapter 2.- Running expenses	4,173,524
Chapter 3.- Financial expenses	5,526
Chapter 4.- Current transfers	1,646,329,085
Chapter 6.- Real estate investments	1,344,537
Chapter 7.- Capital transfers	0
Chapter 8.- Financial assets	9,000
TOTAL LIMITED EXPENSES	1,658,847,125
Raw materials in service operations	4,199,869
Other external work	22,396,956
Collection repayment	541,299,631
TOTAL ESTIMATED EXPENSES	567,896,455
TOTAL EXPENSES	2,226,743,580
D.REC-O.REC. 2020	
I.- LIMITED BUDGET OUTTURN	36,735,279
II.- ESTIMATED BUDGET OUTTURN	-21,691,771
FINANCIAL YEAR INCOME(LOSS) (I+II)	15,043,507

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 2020 is equal to the budgetary result.












ACTUAL FINANCIAL

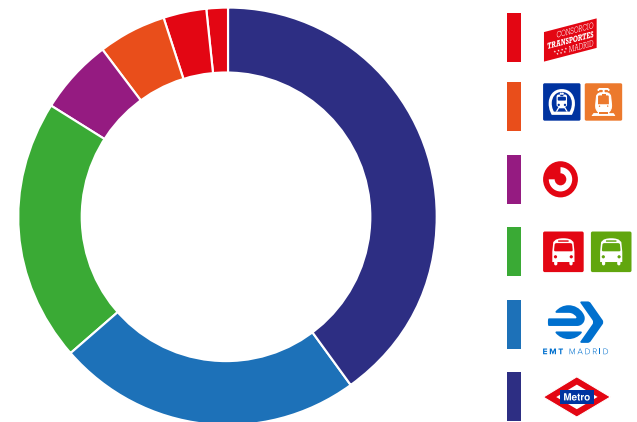
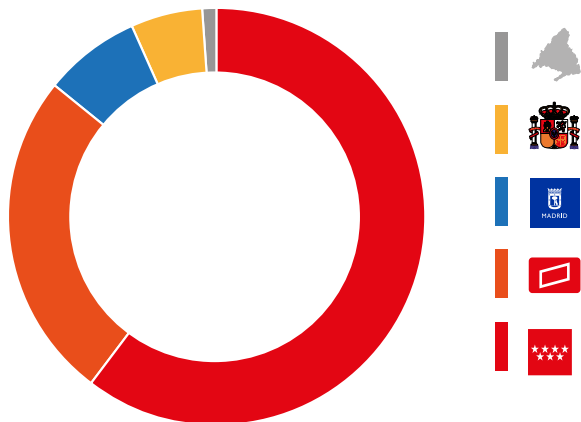
	RESULT 2020
I.- REVENUES	€2,286,751,178
Contributions to CRTM	€1,694,765,603
Fare revenue applied	€586,263,721
Own CRTM and commercial income	€5,721,854
II.-EXPENSES	€2,271,707,671
Internal CRTM and commercial operations	€39,114,865
Fare payment to transport operators	€2,158,366,768
Administrative concessions	€74,226,038
Other capital expenditure	€0
III.- DIFFERENCE (I-II)	€15,043,507

The financial flows of the source and application of funds for the financial year 2020 can be seen in the following scheme, which presents all revenue and expenses, and the economic results for 2020.

FUNDING SCHEME FOR CONTRIBUTIONS FROM THE CRTM TO THE REQUIREMENTS OF THE TRANSPORT SYSTEM. 2020

Financial result / euros

SOURCE OF FUNDS 2020			APPLICATION OF FUNDS / ACTUAL NEEDS 2020		
	AUTONOMOUS REGION OF MADRID	1,377,874,684		METRO DE MADRID, S.A.	908,366,647
	MADRID CITY COUNCIL	166,789,370		EMPRESA MUNICIPAL DE TRANSPORTES DE MADRID, S.A.	534,484,751
	STATE ADMINISTRATION	126,894,000		ROAD CONCESSIONS (CITY AND SUBURBAN BUSES)	464,341,289
	LOCAL CORPORATIONS AND AUTONOMOUS REGIONS	23,207,549		RENFE VIAJEROS	127,194,402
	FARE REVENUE APPLIED	586,263,721		RAILWAY CONCESSIONS	123,979,680
				OTHER NEEDS (ADMIN. CONCESSIONS, RUNNING/CAP EXPENSES, OPERATORS)	74,226,038
				CRTM OPERATING EXPENSES	33,393,011
TOTAL SOURCE OF FUNDS - 2,281,029,324			FINANCIAL RESULTS FOR FINANCIAL YEAR 2020 - 15,043,507		TOTAL APPLICATION OF FUNDS (NEEDS) - 2,265,985,817



PROFIT AND LOSS ACCOUNT FOR FINANCIAL YEAR 2020 (in euros)

LIMITED AND ESTIMATED BUDGET (€)	2020	2019		2020	2019
1. Tax revenues and social contributions	0.00	30.05	I Result (saving or dissaving) of ordinary management (A+B)	19,853,597.90	-84,346,830.56
b) Rates	0.00	30.05			
2. Transfers and subsidies received	1,687,697,140.63	1,377,608,162.41	II Result of non-financial operations (I +13+14)	19,853,597.90	-84,346,830.56
a) For the financial year	1,687,697,140.63	1,377,608,162.41			
a.1) Subsidies received to fund expenses for the financial year	66,995.46	114,811.88			
a.2) Transfers	1,687,630,145.17	1,377,493,350.53			
3. Net sales and provision of services	546,209,642.68	954,039,864.75	15. Financial revenue	189,845.76	2,158,946.10
a) Net sales	546,209,642.68	954,039,864.75	b) From other marketable securities and long-term loans	189,845.76	2,158,946.10
6. Other ordinary management revenue	556,611.30	1,624,680.86	b.2) Other	189,845.76	2,158,946.10
7. Excess provisions	5,927,951.33	0.00	16. Financial expenses	-5,526.46	-5,017,152.99
A) TOTAL ORDINARY MANAGEMENT EXPENSES (1+2+3+4+5+6+7)	2,240,391,345.94	2,333,272,738.07	b) Other	-5,526.46	-5,017,152.99
8. Personnel expenses	-6,985,452.87	-7,049,128.57	20. Value impairment, disposals and sales of financial assets and liabilities	-5,768,644.85	-88,974,749.85
a) Wages, salaries and similar	-5,344,847.12	-5,338,650.10	b) Other	-5,768,644.85	-88,974,749.85
b) Employee welfare expenses	-1,640,605.75	-1,710,478.47	III Result of financial operations (15+16+17+18+19+20+21)	-5,584,325.55	-91,832,956.74
9. Transfers and subsidies granted	-1,646,273,614.72	-1,409,581,284.37	IV Net results (saving or dissaving) for the financial year (II + III)	14,269,272.35	-176,179,787.30
10. Supplies	-552,990,462.54	-974,368,763.12			
a) Consumption of goods and other supplies	-552,990,462.54	-974,368,763.12			
11. Other ordinary management expenses	-10,806,329.10	-23,126,315.24			
a) External supplies and services	-10,720,466.88	-22,960,611.82			
b) Taxes	-85,862.22	-165,703.42			
12. Amortisation/Depreciation of fixed assets	-3,481,888.81	-3,494,077.33			
B) TOTAL ORDINARY MANAGEMENT EXPENSES (8+9+10+11+12)	-2,220,537,748.04	-2,417,619,568.63			

BALANCE SHEET 2020 (in euros)

ASSETS	2020	2019	NET WORTH AND LIABILITIES	2020	2019
	282,520,133.68	293,959,120.97		282,520,133.68	293,959,120.97
A) NON-CURRENT ASSETS	18,733,494.61	23,018,029.93	A) NET WORTH	172,394,919.09	158,150,605.89
I. Intangible fixed assets	10,936,118.95	13,166,810.72	II. Generated equity	172,394,919.09	158,150,605.89
2. Industrial and intellectual property	405.75	608.60	1. Income (losses) from prior years	158,125,646.74	334,330,393.19
3. Computer applications	1,595,782.10	840,127.64	2. Financial year income (loss)	14,269,272.35	-176,179,787.30
4. Investments in assets under lease	70,921.62	50,899.77			
5. Other intangible fixed assets	9,269,009.48	12,275,174.71	B) NON-CURRENT LIABILITIES	28,344,301.88	32,550,031.60
II. Tangible fixed assets	1,067,428.04	1,004,364.76	I. Long-term provisions	28,055,518.85	32,246,085.80
2. Structures	81,265.21	82,111.73	II. Long-term payables	288,783.03	303,945.80
5. Other tangible fixed assets	986,162.83	922,253.03	4. Other payables	288,783.03	303,945.80
V. Long-term financial investments	6,729,947.62	8,846,854.45			
2. Representative credits and securities	6,729,711.11	8,846,617.94	C) CURRENT LIABILITIES	81,780,912.71	103,258,483.48
4. Other financial investments	236.51	236.51	II. Short-term payables	2,937.50	2,937.50
			4. Other payables	2,937.50	2,937.50
B) CURRENT ASSETS	263,786,639.07	270,941,091.04	IV. Creditors and other payables	76,844,300.00	94,581,558.59
III. Debtors and other receivables	150,368,696.25	197,428,618.06	1. Creditors from current budgetary operations	241,419.30	1,467,492.85
1. Debtors through management operations	-327,947,052.22	-292,039,189.23	2. Other accounts payable	75,974,637.62	83,887,105.21
2. Other accounts receivable	4,333,551.40	13,181,935.79	3. Public authorities	628,243.08	9,226,960.53
3. Public authorities	473,982,197.07	476,285,871.50	V. Accrual adjustments	4,933,675.21	8,673,987.39
V. Short-term financial investments	11,360.00	5,707.98			
2. Representative credits and securities	11,360.00	5,707.98			
VI. Accrual adjustments	0.00	4,002,530.75			
VII. Cash and other cash equivalents	113,406,582.82	69,504,234.25			
2. Cash and banks	113,406,582.82	69,504,234.25			



2 The supply

The public transport system of the Autonomous Region 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.

The public transport supply in 2020 was marked by the extraordinary circumstances brought about by the COVID-19 pandemic health emergency, and by the effects of lockdown and the suspension of all non-essential activities derived from the declaration of the State of Alarm on 14 March, and the subsequent mobility-reduction measures adopted according to the evolution of the health situation.

Due to the fluctuations in demand and the measures adopted to stop the spread of the pandemic, the service supply of the different modes of transport was readjusted, always bearing in mind the measures decreed by the health authorities and the evolution of the pandemic.








The adaptations to supply promoted by the CRTM guaranteed the necessary mobility of workers, as well as the provision of an essential public service for the citizens of all municipalities of the Autonomous Region of Madrid, prioritising the lines serving health centres and medical staff shift changes.

In this context, in 2020, the production of services for the public transport system as a whole stood at 327,100,000 cars-km of rail, and 260,900,000 cars-km of road, on a network of almost 11,000 km serving all the municipalities in the region.

The following table summarises the main figures of the supply in 2020 by type of transport operator, in order to provide an analysis of the system as a whole.

2020 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+Branch	215	462	5	11**
Length- network (km)	269.5	1,602.9	8,616.0	54.8	361.4**
Length- lines (km)	269.5	3,900.0	21,425.0	54.8	714**
No. of stations/stops- network	237	4,743	8,474	62	95
No. of stations/stops- lines	287	11,214	22,179	63	203**
No. of vehicles (cars/buses)	2,320	2,066	2,063	241	1,056
Vehicle-km (millions)	164.8	87.7	173.2	15.7	146.2

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

** Accounting criteria have been modified



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.

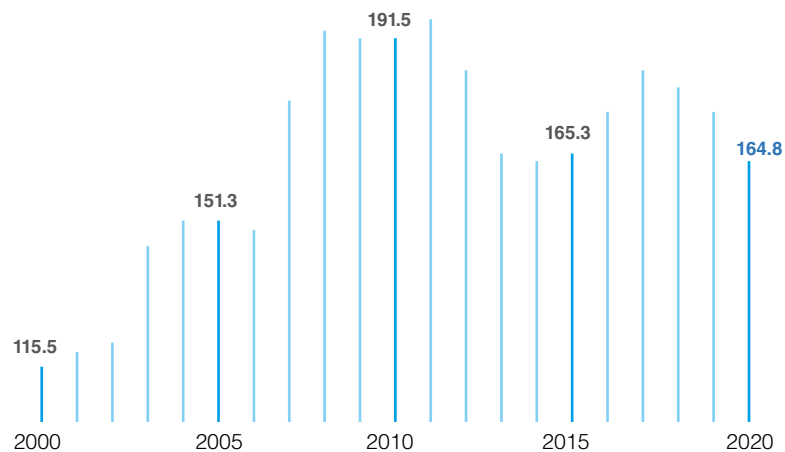
Output in 2020 amounted to 164,800,000 carriage-kilometres, down 6.5 from 2019, mainly as a result of the reduced service (both in number of trains and in timetables) during the days for which the State of Alarm was in place.

On a business day, the morning rush hour supply consists of 311 trains in service, with the average interval being 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 2020 is made up of 2,320 cars, and their average age is 20 years.



ANNUAL EVOLUTION OF PRODUCTION (millions of vehicles-km)



SUPPLY PER LINE AT MORNING RUSH HOUR ON A BUSINESS DAY

Line	1	2	3	4	5	6 ₁	6 ₂	7	7 _b	8	9	10	10 _b	11	12 ₁	12 ₂	R
Trains	36	19	27	26	32	20	14	20	6	12	23	34	14	5	11	10	2
Cars per train	6	4	6	4	6	6	6	6	3	4	6	6	3	4	3	3	4
Operating speed (km/h)	22.8	23.2	23.9	21.7	22.6	24.3	25.1	27.0	32.7	35.5	25.4	29.9	30.0	28.4	40.6	40.6	11.6
Travel time (min) (round trip)	115	69	68	79	119	58	56	85	32	53	97	94	61	29	60	60	10
Interval (min)	3.2	3.6	2.5	3.0	3.7	2.9	4.0	4.2	5.2	3.8	4.2	2.8	3.8	5.6	5.5	6.0	5.0



2.2 EMT



The Madrid urban bus network, operated by Empresa Municipal de Transportes de Madrid (EMT), is made up of a total of 215 lines, of which 187 are day lines and 27 are night lines, to which the 24-hour Airport Express line should be added.

During 2020, the following one-off projects were implemented across the EMT network:

- ▶ Creation of the Cero lines, aiming to implement measures to reduce the level of emissions from motorised vehicles in the Centro district, as provided in the Environmental Sustainability Strategy of Madrid City Council:
 - Line 001: Atocha Station – Moncloa.
 - Line 002: Puerta de Toledo – Argüelles (extension of the previous M2 line)
 - Line C03: Puerta de Toledo – Argüelles (peripheral line to the Centro district)

The first two are free for the user and all use electric buses.

- ▶ Creation of the 159 line to connect the new PAU El Cañaveral to the intermodal area of Alsacia (former Special Service).
- ▶ Creation of the Feria de Madrid – Hospital Isabel Zendal Special Service for the opening of the new emergency hospital located in the district of Valdebebas.
- ▶ Creation of the Puerta del Sol-Sevilla – Puerta de Toledo minibus Special Service to ensure access to urban facilities located in the Centro district after the permanent pedestrianisation of Puerta del Sol.
- ▶ Modification of the route of lines 3, 51, N16 and N26 due to the permanent pedestrianisation of Puerta del Sol, and of lines 59 and 83 to locate the terminus of the new line 001 in the stations of Atocha and Moncloa respectively.

The total number of kilometres covered in 2020 is 87,700,000, 5.7% under that of the previous year, due to the readjustment of service as a consequence of the reduction of mobility caused by the COVID-19 pandemic. In this regard, car-hours (6.84 million) and passengers (9.9 million) also experienced a similar relative drop.

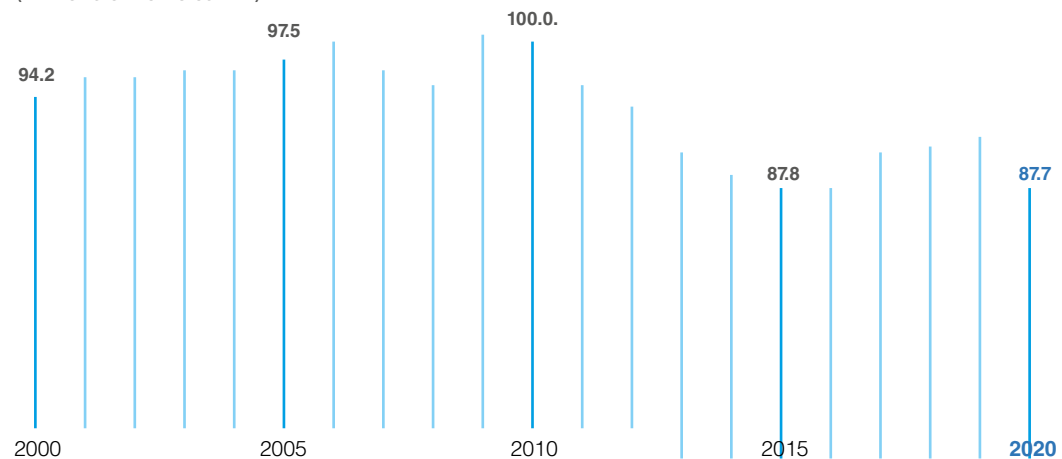
The characteristics of the scheduled supply vary due to the diversity of the lines making up the daytime network, although the main group consists of lines with an average daily frequency interval of between 8 and 12 minutes. At rush hour, 36% of bus routes run at a frequency of every 8 minutes or less.

The average operating speed in 2020 was 12.8 km/h, similar to that recorded in the previous year, due to the adaptation of service layouts.

In 2020, the EMT vehicle fleet consists of 2,066 active vehicles, with an average age of 5.8 years, of which 1,563 run on natural gas, 37 are hybrids, 81 are electric, and the remainder run on biodiesel. During the year, 265 new units (234 natural gas and 31 electric buses) were added to the fleet and 281 vehicles were written off. All buses have low floor and ramp for People with Reduced Mobility (PRM).



ANNUAL EVOLUTION OF PRODUCTION (millions of vehicles-km)



% LINES BY INTERVAL AT RUSH HOUR



2.3 Road transport concessions



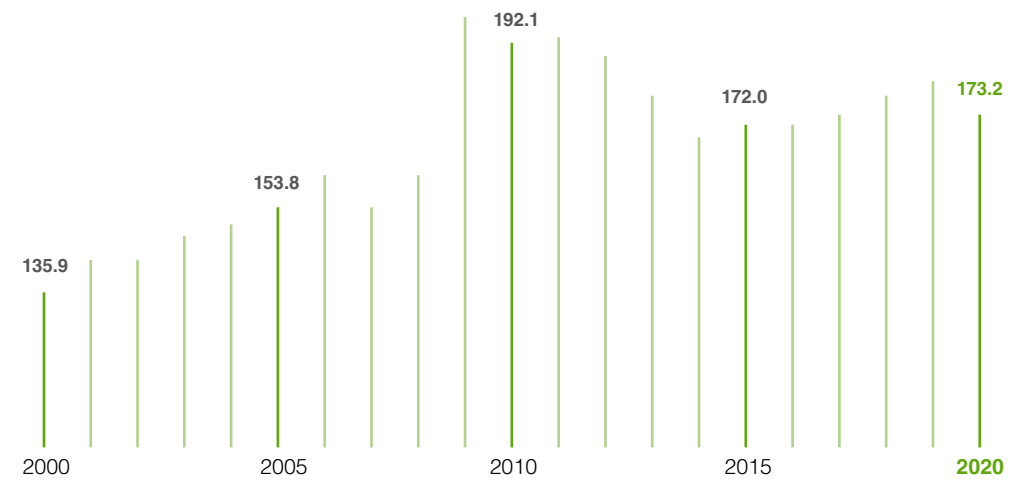
The bus network of the road transport concessions of the Autonomous Region of Madrid comprised 462 lines at 31 December 2020, with 305 day suburban lines, 117 urban lines and 40 night suburban lines. The following changes were made during 2020:

- 538** “Madrid (Príncipe Pío) – Navacarnero (La Dehesa)”
- 650A** “Circular Pozuelo – Majadahonda – Pozuelo”
- 650B** “Circular Pozuelo – Majadahonda – Pozuelo”
- SE720** “Estación de Colmenar – Soto del Real – Manzanares El Real”
- N200** “Alcalá de Henares – Villalbilla – Alcalá de Henares”
- N204** “Madrid (Canillejas) – Paracuellos - Daganzo”

The system of lines is operated by 31 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 28,152 departures 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.

The vehicle fleet of road transport concessions comprises 2,063 buses. 166 buses were renewed in 2020, with the average age standing at 4.8 years. As a result of this fleet renewal and improvement, 245 vehicles that work with compressed or liquid natural gas are available, with 341 hybrid vehicles and one electric. Likewise, 100% of the bus fleet is adapted for use by People with Reduced Mobility (PRM).

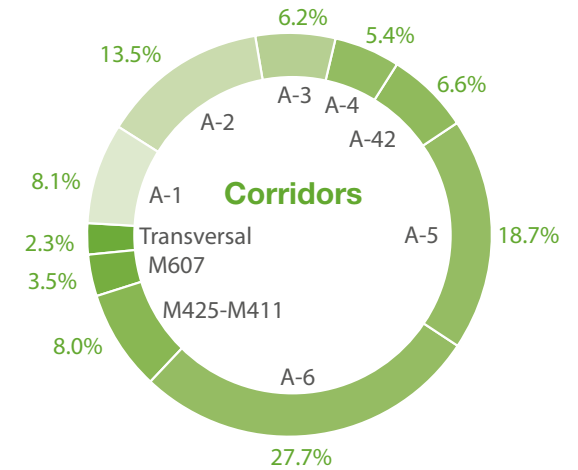
% LINES BY INTERVAL AT RUSH HOUR



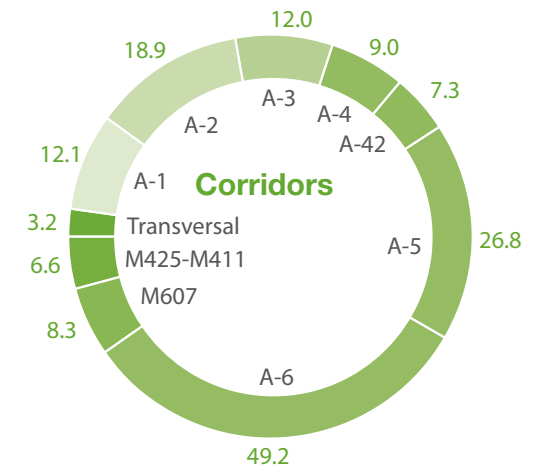
Distribution of supply by corridor

The supply generated during 2020 along the different corridors is shown below, these being broken down according to the motorways and main access roads to the capital. This also includes a group of transversal routes which cover connections between some of these main corridors.

Suburban concession departures by corridor (% of departures)



Suburban concession supply by corridor (millions of km)



2.4 Renfe-Cercanías (suburban railway)



Renfe-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 main population centres of the region, along with the city of Guadalajara.

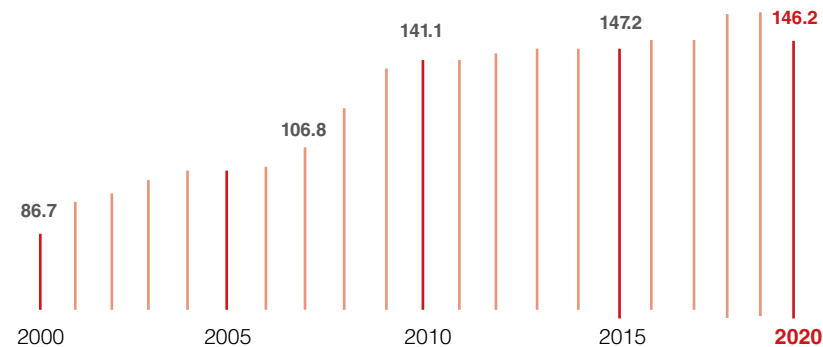
The Renfe-Cercanías network is formed of 9 lines, with 2 branches, and 95 network stations across 391 km, including the Azuqueca, Cotos and Guadalajara stations outside the regional scope of the Autonomous Region of Madrid, and the Zarzalejo, Robledo de Chavela and Santa María de la Alameda stations as an extension of the network from El Escorial.

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

The supply of scheduled transport for the Renfe-Cercanías services in 2020 stood at 1,171 journeys and more than 1.7 million passengers a day, resulting in a volume of 386,939 journeys over the year and an annual production of 146,600,000 vehicles-km.

The vehicle stock comprises 279 trains, with an average age of 26.8 years.

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	40	30	23	24	32	3	21	203
Number operations	75	211	160	264	262	80	42	-	77	1,171
Number operations in rush-hour periods**	28	94	74	113	126	37	18	-	34	524
Peak frequency (i/v)	30/30	7/8	18/13	6/5	5/5	13/26	16/18	-	18/30	14/17
Cars per train	6/10	6/10	10	10	6	6/10	6/10	-	10	-
Operating speed (km/h)	34.6	49.4	57.9	50.7	46.0	47.9	53.8	-	47.4	49.1

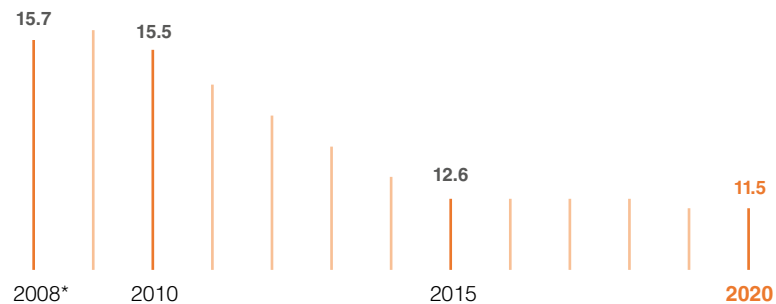
* Line C-9 remained closed since the declaration of the State of Alarm of 14 March 2020

**Rush-hour periods: 6:00-9:00/13:30-15:30/18:30-20:30



Overall, 2020 output was 11.5 million vehicles-kilometres.

ANNUAL EVOLUTION OF PRODUCTION (million vehicles-km)



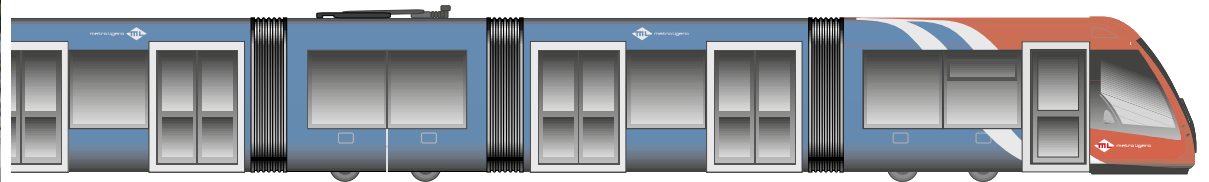
*The light rail network started operating in 2007.

2.5 Light rail



The light rail network consists of 4 lines, the names and concession companies for which are indicated below:

- 1** Pinar de Chamartín – Las Tablas | metros ligeros de madrid | Metros Ligeros de Madrid S.A.
- 2** Colonia Jardín – Estación de Aravaca | metroligero oeste | Metro Ligero Oeste S.A.
- 3** Colonia Jardín – Puerta de Boadilla | TRANVÍA parla | Tranvía de Parla S.A.
- 4** Tranvía de Parla (línea circular)



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

SUPPLY PER LINE AT MORNING RUSH HOUR ON A BUSINESS DAY

Line	Trains	Cars 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 ₁	3	5	20.1	24.8	10.0
direction 2 4 ₂	4	5	19.6	24.8	7.0



2.6 Other railway concessions



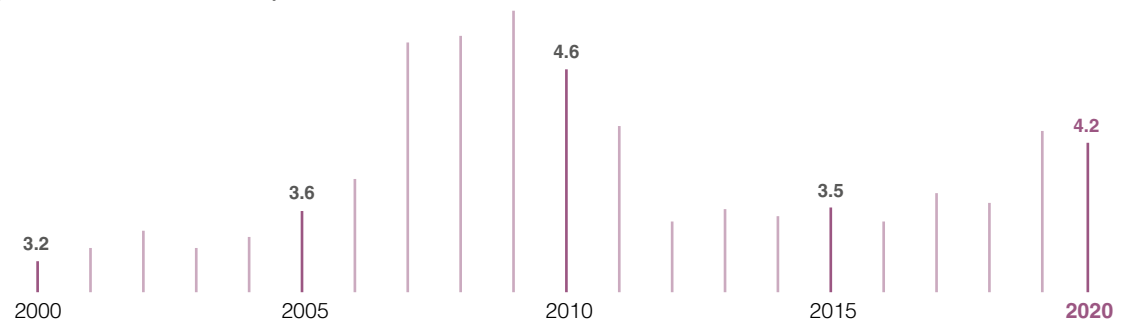
This is the section of line 9 between the Puerta de Arganda and Arganda del Rey stations. It covers a length of 19.0 km and 6 stations-line, the Puerta de Arganda station being the link with the rest of line 9.

The services are provided by the concession company Transport Ferroviarios de Madrid, S.A.

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.

2020 output amounts to 4.2 million vehicles-km.

ANNUAL EVOLUTION OF PRODUCTION (million vehicles-km)



*Operations on line 9 began in 1999

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)
9b	7	2/3	53.4	42.8	6.0



3 The fare system

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

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

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

3.1 Zoning

The Autonomous Region 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 Autonomous Region of Madrid, containing a population spread over the remaining 129 municipalities.
- ▶ In addition, two eternal 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 to it, there is a combined single ticket valid for all these services.
- ▶ A **ten-trip ticket**, aimed at repeat users who purchase it in advance. In zone A, there are two types of tickets of this kind: a multimodal ticket (Metrobús), valid for use whether on the underground, EMT or ML1, in addition to the concessions of the companies Prisei and Alacuber inside the municipal district of Madrid; and another, a ticket for ten trips with transfers, valid only on EMT and enabling passengers to change lines within one hour of the first validation. In zones B and C there is a ticket for ten trips 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 ten-trip ticket.
- ▶ The **Travel Pass**, a personal, multi-modal, unlimited-use ticket for regular users purchasing in advance. It remains valid for 30 days as of its first use; there is also an annual option. The passes are priced differently depending on the age of the user, with three categories: young

(up to 26), adult (between 26 and 64) and senior citizen (aged 65 and over).

Functional exceptions to this general pricing framework apply to the sections outside the underground network that, together with the Metro Liger 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 the floating population. 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 Autonomous Region 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.

Multimodal and multi-operator tickets, owned by the CRTM, are sold on the underground network (more than 1,200 automatic machines), at transport interchanges (10-trip tickets for suburban road operators), at Renfe-Cercanías (more than 500 automatic machines) and on two external networks: the network provided by Logista, basically made up of the tobacconists and other authorised establishments, which distribute all the tickets in a network of over 1,200 points of sale;

and the Bankia ATMs in the Autonomous Region of Madrid (with over 1,600 points available), which top up the 30-day passes and 10-trip tickets.

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.

The annual passes purchased by individuals or companies, for their staff, are managed through the CRTM itself.

3.5 The fares

The prices in force since 1 February 2013, when the last price review took place, were maintained in 2020, with the exception of the rate for Senior Citizen users which was reduced from €12.30 to €9.30 in the case of 30-day passes.

The Ministry of Infrastructure Development is responsible for approving the fares corresponding to tickets of Renfe-Cercanías.

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)	€9.30							
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

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.

SINGLE AND 10-TRIP UNDERGROUND AND LIGHT RAIL TICKET

Zone	Metro Zone A+ML1	Metro Norte	Metro Este	Metro Sur	TFM & MLO	Combined metro and light rail
Single	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-trip	€12.20	€11.20	€11.20	€11.20	€12.20	€18.30

Airport supplement €3.00

SINGLE AND 10-TRIP TICKETS ON URBAN AND SUBURBAN BUSES

	EMT	A	1 zone	2 zones	3 zones	4 zones	5 zones	6 zones
Single	€1.50	€1.50	€1.30	€2.00	€2.60	€3.60	€4.20	€5.10
10-trip	€12.20- €18.30	-	€8.50	€12.20	€16.10	€23.00	€29.70	€37.40

Airport express line €5.00

TOURIST TICKET

Zone	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

Tarjetas Transporte Público - Public Transport Cards

Tarifas - Fares

SENCILLO Y 10 VIAJES - SINGLE AND 10-TRIPS

ABONO TRANSPORTE - TRAVEL PASS

BILLETE TURÍSTICO - TOURIST TICKET

Información de Transporte Público
Llama o ven a Metro de Madrid al 900 444 404
www.metrod Madrid.es

3.6 The Technology

Contactless wallet technology is a strategic project for the integrated public transport system of the Autonomous Region 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')

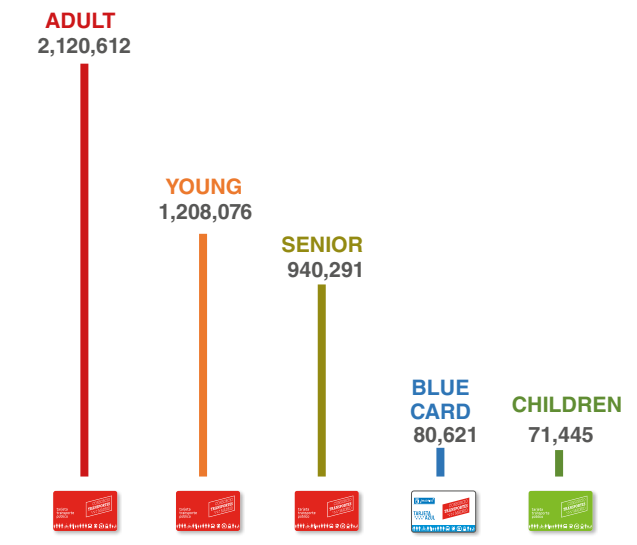
Different tickets can be contained in two types of public transport card: personal and non-personal. The former may contain a personal ticket and two additional non-personal tickets. Non-personal cards, sold under the 'Multi' name, only contain non-personal tickets.

During 2020, demand for cards was also considerably affected by mobility restrictions and as such the usual annual increases recorded in previous years did not take place. Though in the first two months an average of 100,000 users were incorporated into the system, from the month of March onwards there was a sharp decrease, never returning to the same figures as recorded at the beginning of the year.

The number of active personal cards on 31 December 2020 reached 4,421,045, 1.1% more than in 2019, with varying evolutions for the three profiles. The users of Senior cards increased 5.2% as a consequence of various effects: reduced fares and the population's natural ageing process. Users of the Young Pass, on the other hand, slightly reduced (-1.3%). The decrease in

users of children's cards was particularly striking, with 14.5% less than in 2019. Each year, there is a balanced flow between expiring cards and new registrations. However, given the exceptional nature of the year 2020, there was no adjusted balance between new requests and users ceasing to hold this card, as is normally seen in previous years. Furthermore, Blue Cards reduced 8.2% in 2020, for the fundamental reason that no new registrations were made. The reduction in Senior fares may result in users transferring from the Blue Card to this ticket. However, no significant reduction in the overall volume of users was observed, although there was a small decrease in Blue Card users aged 65 and over.

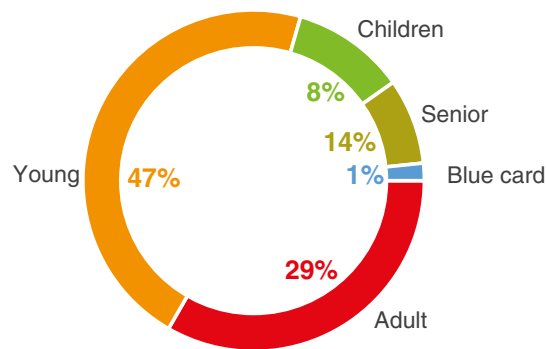
ACTIVE PERSONAL CARDS BY PROFILE as at 31 December 2020



The number of personal cards active amounted to 245,333, half of those incorporated into the system in 2019. 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 67.4% of cards.

PERSONAL CARDS ISSUED BY PROFILE/CHANNEL

	Management Offices	Internet	Total
Young	76,006	40,087	116,093
Adult	52,570	18,105	70,675
Senior	24,686	10,331	35,017
Children	12,003	8,247	20,250
Total	165,265	76,770	242,035



Children's cards (40.7%) and Young cards (34.5%) were the most requested by remote means and, as has occurred in previous years, the users of adult cards were those most likely to use in-person management services to obtain their cards. The monthly average for cards requested was 20,444 – approximately half of that in 2019. In April, no more than 1,000 new cards were issued and in September, as is usual, the number of requests increased substantially (41,353) in comparison to the evolution recorded from the start of the pandemic. However, the greatest number of new cards made in 2020 came in January, also influenced by the increase in card requests for Senior users as a result of the significant reduction in ticket prices.

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.

The following table summarises the Multi Cards distributed up to 31 December 2020, differentiating

between those provided during their promotion and those sold through the two existing sales channels. Throughout the first three years since its implementation, more than 12 million cards have been sold, while sales fell considerably in the last year – with only 1.1 million sold – resulting in the total number of cards in circulation reaching 13.4 million at the end of 2020. The large fall in visitors to Madrid, as well as the general mobility restrictions, significantly halted the growth of Multi cards recorded in previous years.

MULTI CARDS IN CIRCULATION at 31 December 2020

Free of charge	1,231,425
Social services	38,000
Provided during promotion	1,193,425
Sales	12,190,203
Logista	680,533
Metro	11,509,670
TOTAL	13,421,628

Throughout 2020, 23.5 million tickets were topped-up onto Multi cards, a little more than half of which were single Metro de Madrid tickets (54%). The decrease in tickets topped-up is consistent with the reduction in mobility – 42.8% less than in 2019. The distribution of tickets loaded by operators indicates a slight decrease in the share represented by the Metro, in line with the trend for users to prefer buses over this network observed over the year. However, these are small differences.

The Development and Compliance Centre (DCC)

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

During 2020, the adapted functionality for the application of fare reductions for Senior passes was tested, both in ticket-sales machines and in validation scanners. Likewise, the top-up application was modified to issue both tickets with the CRTM's tax identification, as well as Metro de Madrid, in order to invoice the single tickets belonging to this operator. Similarly, we have continued working in the field of contactless-card emulation (Host Card Emulation) on mobile phones, employing the NFC communication protocol, to provide passengers with an alternative means of topping up their travel tickets.





4 The passengers

859.6
million
passengers
in 2020

The consequences of the pandemic on trips made within the Public Transport System of the Autonomous Region of Madrid have been reflected in a notable decrease in demand, with 859,600,000 passengers in 2020, which represents a fall of 46.3% in comparison to the previous year – 741,000,000 in absolute terms.

This figure implies an average of 126.8 trips per inhabitant per year, 37.9% less than in the previous year: the lowest value recorded since the creation of the Regional Transport Consortium. The pandemic affected the population's mobility in all aspects, particularly with regard to public transport, reducing travel as much as possible – particularly that not considered essential. The highly significant reduction in in-person activities, both in workplaces and in teaching, together with the reduction in tourist activity, explain the drastic decrease in this ratio.

In the first two months of 2020, demand increased 3.3%, in line with the year-on-year evolution recorded in the previous year. However, as a consequence of mobility restrictions derived from the measures adopted to slow the spread of the pandemic, the number of trips made on public transport suffered an unprecedented reduction throughout the year, resulting in an overall figure of 859,600,000 at the end of the year. From the second half of March onwards, mobility drastically reduced as a result of the application of Royal Decree 463/2020 of 14 March, declaring the State of Alarm to manage the health crisis caused by COVID-19. This exceptional measure resulted in business day passenger figures of 400,000 users during the period of maximum restriction, representing a decrease of more than 90% in the month of April. After this key moment representing the maximum reduction in demand, figures slowly recovered, though, even at the end of the year, 40.6% fewer passengers were recorded in the system.

4.1 Evolution of passenger demand by operator

In the first two months, the majority of operators saw demand grow in the same volume as in previous months. However, as a consequence of the mobility restrictions derived from the measures adopted to slow the spread of the pandemic, the number of passengers on public transport suffered a generalised reduction in all forms of transport throughout the year, with the greatest drop being recorded in light rail (-49.5%), followed by Metro de Madrid (-48.4%).

Within a context of general decrease, the lowest reductions were noted in the road transport modes, urban and suburban buses within the region: EMT (-45.1%) and suburban operators (-43.0%). This was reflected in a slight increase, 1.6%, in the weight of the number of bus passengers within the distribution of trips made on rail and road modes of transport.

EVOLUTION OF PASSENGER DEMAND BY OPERATOR (millions)

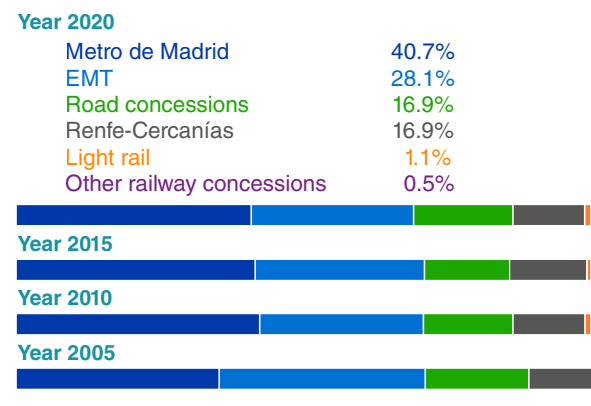
YEAR	Metro de Madrid	EMT	Road concessions	Renfe-Cercanías	Light rail ⁽¹⁾	Other railway concessions ⁽²⁾	TOTAL
1990	416.3	433.3	154.1	96.3	-	-	1,100.0
% VAR 90/89	5.5%	-4.7%	10.5%		-	-	2.8%
1995	397.2	521.5	191.6	126	-	-	1,236.2
% VAR 95/90	-4.6%	20.3%	24.4%	30.8%	-	-	12.4%
2000	518.9	531.2	270.1	161.2	-	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	-	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	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%

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

In 2019, the second highest passenger demand was recorded since the body's creation, making the decline experienced in 2020 even sharper. The crisis of the years 2008-2014 did not cause a reduction in demand of the scale recorded in the last year.

The pandemic abruptly cut short the trend of recovery experienced in the demand for public transport since the 2008 crisis, which reached the historic maximum of 2007 (1,630,500,000) in 2019, giving rise to a historic minimum of 859,600,000 passengers.

EVOLUTION OF TOTAL DEMAND BY OPERATORS



4.2 Evolution of demand by transport ticket

The distribution of demand by ticket maintained the same proportions as in 2019, as the fall affected all user profiles equally. However, it was noted that there was a smaller reduction in passengers with the Children's Card (-42%) than multi-trip tickets (Travel Pass and 10-trip) and single tickets. Passengers labelled as "others" also experienced a smaller decrease, as this grouping mainly includes special services implemented due to service cuts and, this year, passengers on road concessions without an identified ticket. However, this reflects the service operators' circumstances rather than user preferences.

Though in aggregate terms there are no great differences by ticket type, the monthly analysis reveals the behaviour of users faced with the uncertainty generated by the pandemic. During the lockdown period, from the second half of March to the end of June, there was a greater decrease in passengers using the Travel Pass than those using ten-trip tickets or single tickets. The user, faced with the unpredictability of the situation, opted to use tickets with more flexible validity than the pass, and the 10-trip ticket in particular. In the last six months, differences had already narrowed, with more homogenous decreases across all types of tickets. However, in terms of overall demand, the distribution by tickets remained practically invariable with regard to that of 2019. Furthermore, it must be

ANNUAL DISTRIBUTION OF PASSENGERS BY TICKET TYPE 2020

		Metro de Madrid	EMT	Road concessions	Renfe-Cercanías	Light rail ⁽¹⁾	Other railway concessions	TOTAL
Single	Passengers	13,901,615	12,360,729	13,918,039	10,764,286	454,133	321,333	51,720,135
	% Total	26.9%	23.9%	26.9%	20.8%	0.9%	0.6%	100.0%
10-trip	Passengers	66,280,630	28,795,656	13,360,140	7,298,940	1,107,159	562,405	117,404,930
	% Total	56.5%	24.5%	11.4%	6.2%	0.9%	0.5%	100.0%
Travel Pass	Passengers	266,612,152	193,344,781	115,628,003	81,751,259	7,702,910	3,112,828	668,151,933
	% Total	39.9%	28.9%	17.3%	12.2%	1.2%	0.5%	100.0%
Children's TTP	Passengers	3,039,971	1,869,306	670,162	979,613	102,209	35,964	6,697,225
	% Total	45.4%	27.9%	10.0%	14.6%	1.5%	0.5%	100.0%
Other	Passengers	11,279	5,190,330	1,751,683	8,560,291	124,414	0	15,637,997
	% Total	0.1%	33.2%	11.2%	54.7%	0.8%	0.0%	100.0%
TOTAL	Passengers	349,845,647	241,560,802	145,328,027	109,354,389	9,490,825	4,032,530	859,612,220
	% Total	40.7%	28.1%	16.9%	12.7%	1.1%	0.5%	100.0%

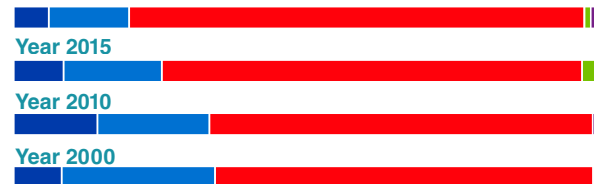
(1) Includes the MLM, MLO and Tranvía de Parla operators.

recalled that, from the second half of March to the end of June, buses allowed entry via the rear door, which prevented the correct registration of all tickets used for onboard access.

EVOLUTION OF THE DISTRIBUTION OF DEMAND BY TICKET TYPE

Year 2020

Single	6.0%
10-trip	13.7%
Travel Pass	77.7%
Children's card	0.8%
Other	1.8%



The Travel Pass is the most widely-used ticket on all operators (77.7%), and although its weight among bus passengers is usually higher than in other modes, road transport was surpassed by light rail in this unusual year. Both in EMT and road concessions, the Travel Pass lost two percentage points in the distribution by tickets and, in exchange, the amount of passengers with 10-trip tickets increased. In EMT, the use of single tickets did not decrease, as users had the option to pay via card and, in fact, their use increased considerably during the pandemic. However, users of road concessions did not have this option, which thereby reduced their annual weighting in the distribution.

DISTRIBUTION OF PASSENGERS BY TICKET AND OPERATOR

	Metro de Madrid	EMT	Road concessions	Renfe-Cercanías	Light rail (1)	Other railway concessions	TOTAL
Single	4.0%	5.1%	9.6%	9.8%	4.8%	8.0%	6.0%
10-trip	18.9%	11.9%	9.2%	6.7%	11.7%	13.9%	13.7%
Travel Pass	76.2%	80.0%	79.6%	74.8%	81.2%	77.2%	77.7%
Children	0.9%	0.8%	0.5%	0.9%	1.1%	0.9%	0.8%
Other	0.0%	2.1%	1.2%	7.8%	1.3%	0.0%	1.8%



4.3 Sales of tickets

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 ten-trip tickets for the underground and light rail network and ten-trip 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 82.1% of Metrobús, the ten-trip ticket for zone A. The Logista point of sale network then plays a very important role as an external support for the transport network, with 31.2% of Pass sales, 17.2% of Metrobús and a majority 97.2% of suburban service bus passes. The Bankia ATM network plays a minor role (1.2%) in the sale of tickets, and is therefore included in the “Other” category. The CRTM is assigned a separate subsection, although its main role is the distribution of yearly cards, through the sale of cards for conferences and the sale of tourist tickets to end users via its Management Offices, in particular those providing the airport service.

DISTRIBUTION OF THE SALE OF TICKETS BY DISTRIBUTOR

	Metro	Logista	Renfe-Cercanías	CRTM	Other
Travel Pass	55.6%	31.2%	11.0%	0.2%	2.0%
Tourist ticket	69.7%	0.6%	4.6%	25.0%	0.1%
Metrobús (zone A 10 trips)	82.1%	17.2%	0.0%	0.2%	0.5%
Suburban bus pass	0.0%	97.2%	0.0%	0.3%	2.5%

A total of 13,366,285 passes were sold in 2020 across all user zones and profiles. This figure, representing a 37.2% decrease on the previous year, includes 30-day ticket top-ups on contactless cards and annual passes distributed in monthly instalments. It does not include tourist tickets, which are analysed separately.

As we can see, the reduction in the number of units sold is less than the impact suffered in terms of the number of trips made. During 2020, it was noted that, as a consequence of the exceptional circumstances surrounding the pandemic, mobility patterns were modified, with the reduction of unnecessary trips being one of these changes, an indicator that reflects a direct relationship with the number of trips per pass.

SALES OF THE TRAVEL PASS BY USER PROFILE

	Adult	Young	Senior	Blue Card	EAP	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
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
% VAR. 20/19	-37.2%	-36.8%	-38.4%	-31.8%	-93.0%	-37.2%

The three main pass profiles recorded an approximately similar decrease, with the most affected being the Senior pass, while the Young pass saw the smallest decrease. The users of the Blue Card, although not as numerous as the rest of the profiles, present a difference of just over 5 points compared to the average. The decrease in EAP (pass for beneficiaries of the employment-activation programme) comes as a consequence of the disappearance of said programme.

The homogenous decrease of sales per profile meant that the overall distribution for 2020 is similar to that of 2019. 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. 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.

The fact that 58.2% of tickets are sold on a flat-rate basis makes it 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. In the last year, sales of zone C and all interzonal tickets fell below the average, although in absolute numbers their significance is much lower than other zones.

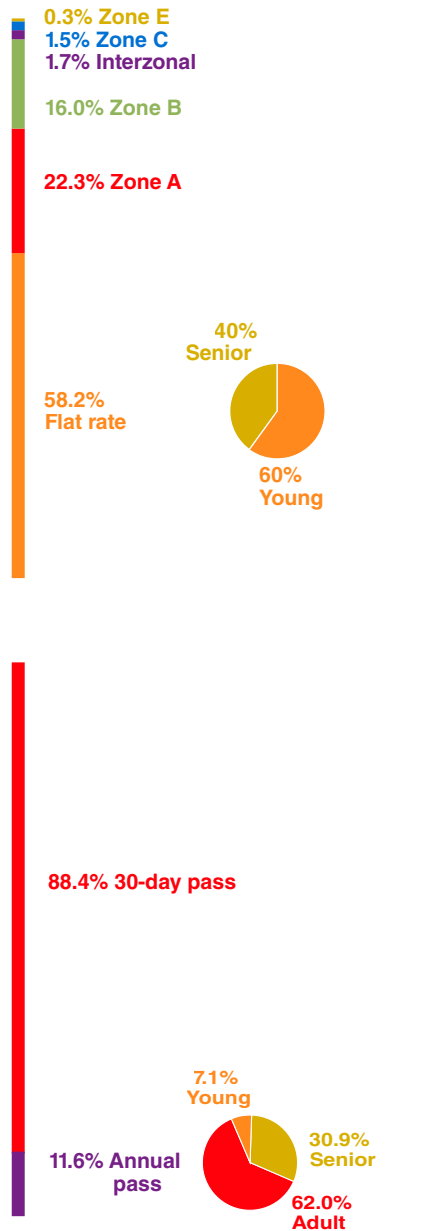
EVOLUTION OF THE SALE OF THE TRAVEL PASS BY ZONE

	Zone A ⁽¹⁾	Zone B	Zone C	Inter-zonal ⁽²⁾	Zone E ⁽³⁾	Senior	Young	EAP ⁽⁴⁾	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
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	231,150	46,601	3,106,657	4,666,184	3	13,366,285
% VAR 20/19	-38.1%	-36.4%	-31.9%	-24.6%	-37.1%	-38.4%	-36.8%	-93.1%	-37.2%

(1) Including the Blue Card from 2007 onwards (2) Passes B1-B2, B2-B3, B3-C1 and C1-C2 (3) Area outside the Autonomous Region of Madrid, encompassing part of Castile-La Mancha (4) The EAP programme ended in 2018, but in 2020 there were still residual top-ups by pass holders who had the option of purchasing this fare for a few additional months



SALES OF THE TRAVEL PASS BY PROFILE AND ZONE



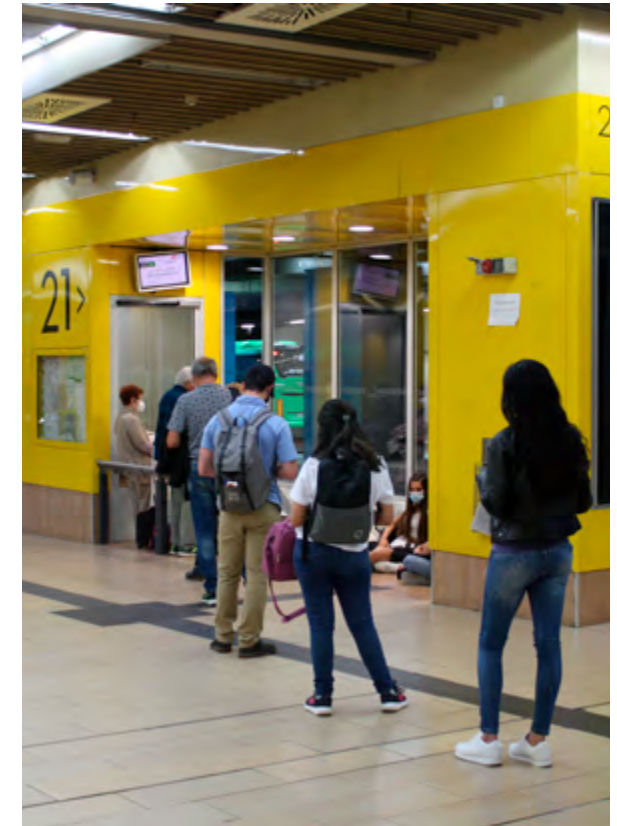
88.4% of the passes sold were 30-day tickets, five points below the figure for the previous year. Annual passes are normally purchased at the beginning of the year, and as such the sales figures were not affected by the pandemic, though 30-day tickets were.

Among annual passes, although the largest group was the middle-aged user, largely as a result of the significant number of tickets sold to staff of public and private entities, Senior users are gradually increasing their weight within the distribution. In the last year, this group grew by almost 4% in comparison to the year before, due to the decrease in fares, as well as the natural evolution of the senior population.

The average number of pass holders using the 30-day ticket each month was 1 million, with a month of maximum sales which reached 1,875,948 units in January and just 175,662 units sold in April, during the strictest mobility restrictions.

The ratio between sales in the peak months and the total population of the Autonomous Region of Madrid aged between 7 and 84 indicates a penetration of 22.4%, including use of both the yearly and 30-day passes. Throughout the year, 25.4% of all residents in the region used the Travel Pass at least once. In previous years, this figure was almost 20 percentage points higher. The clear conclusion of this fact is that there has not been such sporadic use of the pass as in previous years. In fact, the monthly reduction in this ticket in the summer months was less than that in the months of winter and spring.

During 2020, users of the Young Pass made 47 trips per ticket, while Seniors made 26 and Adults 68. Across the three profiles, there was a significant decrease in the number of trips per 30-day ticket, more pronounced in the case of Seniors (-25%) and less so among Adult Pass users (-8%).



In terms of social tickets, a total of 1,327,455 passes from the different categories were sold in 2020, 36.2% less than the previous year. The sale of tickets to people with disabilities saw the greatest decrease (42.6%), while holders of the Blue Card continued using this pass in the greatest numbers, although also with a lesser volume of sales than in 2019.

The sale of the different tourist tickets (Adult, Children's and Conference) suffered a drastic decrease – 83.9% less than the year 2019, when there had been a 30.6% increase on the previous year. The scarce reception of visitors throughout the year had a determining effect on sales. The fact that no sales were made to conference attendees throughout the year was also significant, while in 2019 more than 105,000 of such tickets were sold.

Zone A accounts for most of the sale of tourist tickets, 97.6% of the total, as in previous years. The best-selling tickets are the day tickets (44.4%), followed by the three-day tickets (17.9%). In previous years, the use of five-day tickets was much higher, largely because of conference attendance.

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%
% 20/19	-37.8%		-42.6%		-31.8%		-36.2%	

SALES OF TOURIST TICKETS BY PROFILE AND ZONES

	Adult	Children	Conferences	Total
1 day, zone A	48,200	3,557	0	51,757
2 days, zone A	15,701	383	0	16,084
3 days, zone A	20,219	635	0	20,854
4 days, zone A	14,026	354	0	14,380
5 days, zone A	8,227	260	0	8,487
7 days, zone A	4,895	133	0	5,028
Total zone A	111,268	5,322	0	116,590
1 day, zone T	1,283	21	0	1,304
2 days, zone T	353	11	0	364
3 days, zone T	494	11	0	505
4 days, zone T	321	6	0	327
5 days, zone T	242	5	0	247
7 days, zone T	123	3	0	126
Total zone T	2,816	57	0	2,873
Total 2020	114,084	5,379	0	119,463
Total 2019	613,819	21,948	105,389	741,156
% 20/19	-81.4%	-75.5%	-100.0%	-83.9%





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. During 2020, the sudden emergence of COVID-19 posed the first major challenge of maintaining the supply, as well as high service levels, despite huge fluctuations in demand, driven by the severe restrictions that affected the population's general mobility. While the urgent protocols and measures required by the health emergency were implemented, we continued developing the lines of work initiated in previous years. 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

a. Interchanges

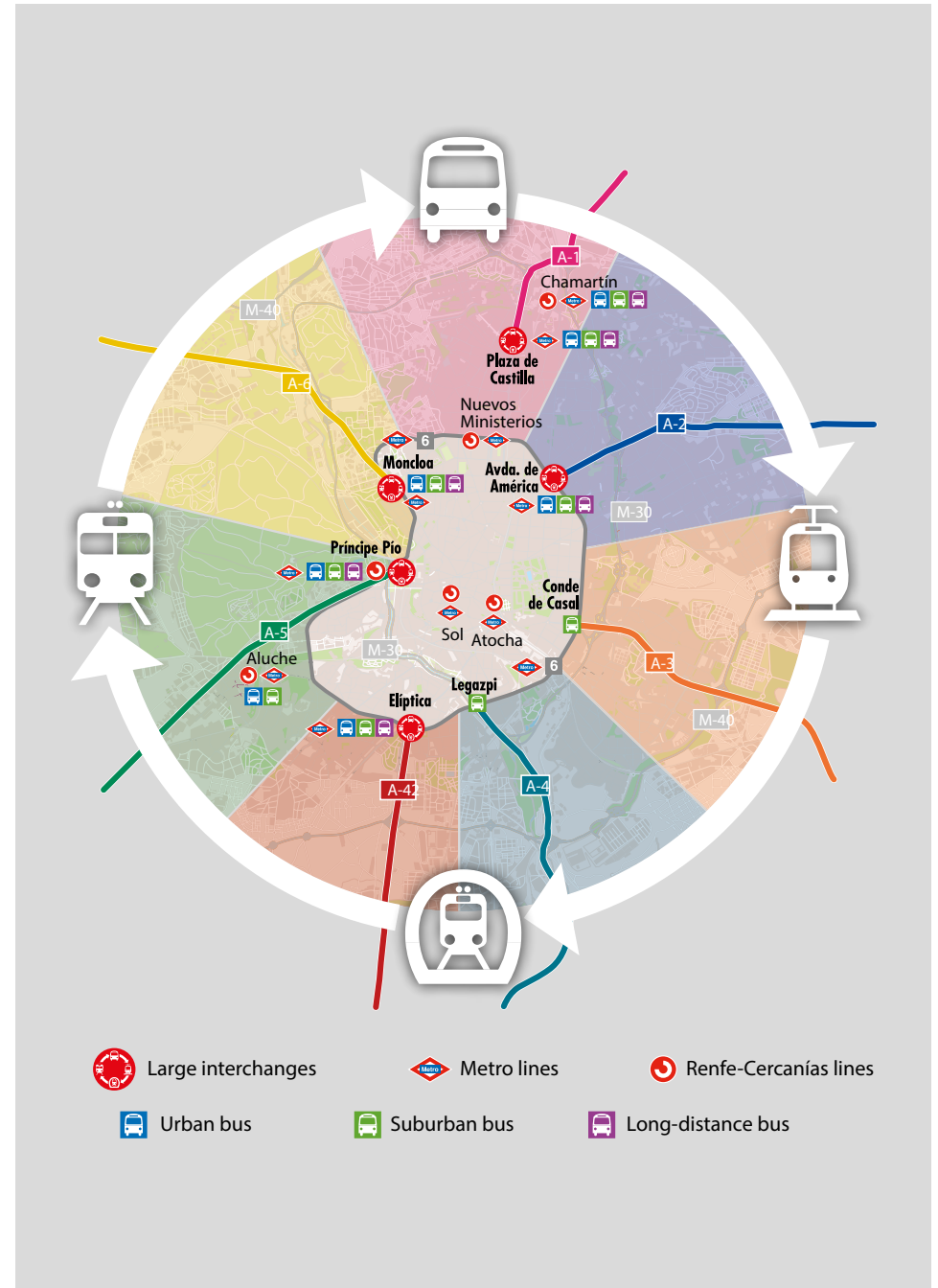
The interconnection of the different modes present in the public transport system is evident in the infrastructures used for modal integration. These facilities allow for the different transport networks to be structured, facilitating intermodal mobility and connections with high-capacity modes, whether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

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 travel operations and more than 17,000 urban operations 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. In 2020, despite the consequences of the COVID-19 pandemic, over 1 million passengers used these per day.

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

In recent years, the use of bicycles in everyday mobility has undergone a qualitative leap in the Autonomous Region of Madrid. For several years now, the CRTM has maintained several operational approaches to promote this vehicle as an additional mode to the region's transport system. During 2020, as indicated in the recent study "Analysis of the integration of the bike within the public transport of Madrid" carried out by the CRTM, and associated with the exceptional situation caused by the COVID-19 pandemic, a general increase in the use of bicycles was detected for all types of mobility in the main metropolitan regions of the country. This current 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 2020 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 Autonomous Region of Madrid, using compatible, contactless technology. This service is available in the Getafe G-Bici bicycle system and in the electric bicycle system of Madrid City Council, BiciMad.

At the start of 2020, the trend of increased BiciMad users increased. However, the emergence of COVID-19 resulted in the closure of this service from 16 March to 22 April. After the reopening of the service on 22 April, during lockdown, its



use rapidly recovered, with increased demand varying from 7 to 13% in comparison with the previous year. A high 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)

During 2020, 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. The REB point is equipped with a U-shaped anchor support and an information panel containing user regulations and practical tips. After the end of lockdown and alongside the increased use of bicycles in everyday mobility, a significant increase was also recorded in bicycles parked in the REBs, particularly in the second half of 2020.

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. During 2020 the feasibility of new cycling routes was examined, along with the respective connections to modal interchange stations, some of which had been initiated in 2019. During 2020, work started on the pedestrian-cyclist crossing over the Poveda bridge between Rivas Vaciamadrid and Arganda del Rey.



5.2 The CITRAM

In 2020, 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.

The health crisis caused by COVID-19 and its effects on mobility also marked the year in the Centre. The follow-up of the various measures adopted in the public transport system of the Autonomous Region of Madrid, the provision of information to operators or users and the management of related incidents became priority points in CITRAM's operation during 2020.

Within the context of the pandemic and as a decision-making aid, demand and occupancy studies were carried out according to the measures in place at each moment, support was provided to the suburban transport department for the analysis of kilometres travelled by all in-service vehicles and the extraordinary measures for Christmas arrangements were monitored.

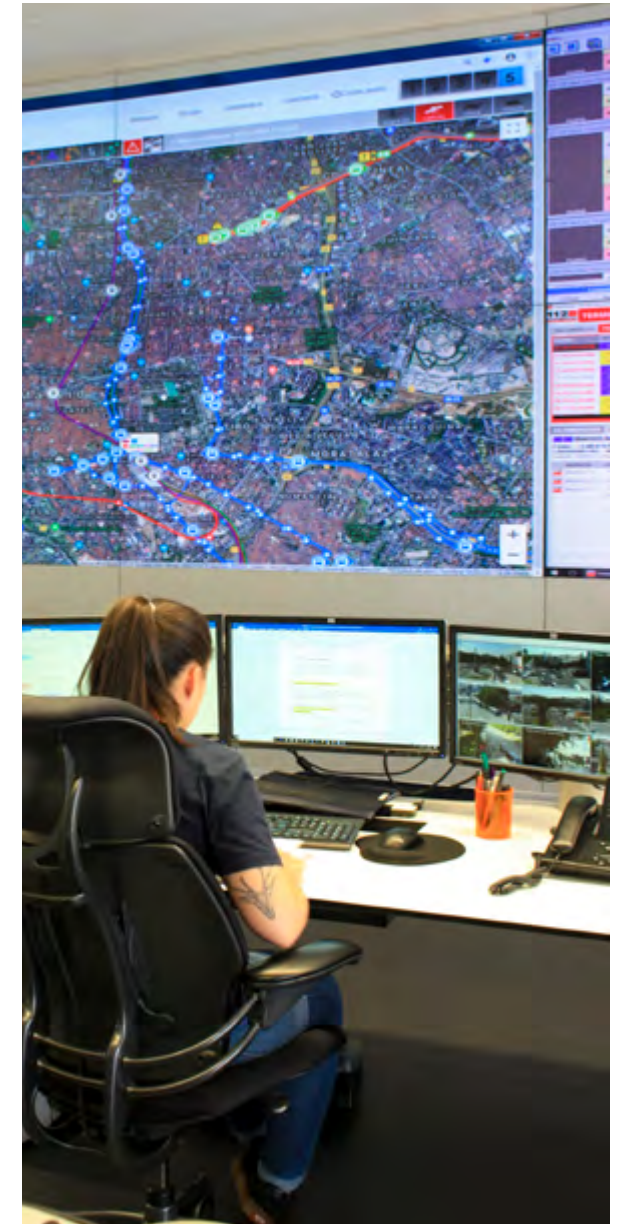
Furthermore, bearing in mind the request from the health authorities to work remotely whenever possible, CITRAM established measures making this form of work possible. For this, a system for remote connection to the Centre and its tools was configured, while staff were trained in its proper

use and operating procedures for the proper development of working activities were generated.

Other special operations carried out included the service cut in Metro line 4 for improvement works in the first quarter of the year, the monitoring of the university admission tests that took place between 6 and 10 July and 8 and 11 September, and the final stage of the Vuelta cycle tour held on 8 November.

Also during 2020, and as part of the contract for the operation, maintenance and development of existing systems, CITRAM continued implementing technological developments placing these at the cutting edge of multimodal transport management. These included:

- ▶ Improvements to the automation of information updates for top-up points and Public Transport Card Management Offices. This information is available for consultation on the CRTM website.
- ▶ Implementation of the Backup Centre. Installation, commissioning and maintenance of installations and equipment to be used in the event of a serious event at the centre's current premises, in order to allow operations to continue in the same way as at the main site, ensuring effective real-time administration of the Autonomous Region of Madrid's public transport system.



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 and universal accessibility. In 2020, the CRTM signed new partnership protocols with companies and organisations. As of 31 December of this year, 30 protocols had been signed since the Centre's creation. These partnerships include in particular 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, which was the first such public transport service in Spain, managed by the CRTM. This line was put into service at the start of 2020, integrated in the corresponding concession that operates

the suburban bus lines serving the Cantoblanco campus. The aim of this collaboration is to analyse and promote the development and adoption of new vehicles and clean technologies in the fleets intended for public transport, as well as investigating the potential and impact of autonomous and connected vehicles in the public transport system, or implementing efficient-driving technologies (such as efficient driving dashboards).

Other projects developed from the innovation centre during 2020 have included:

- ▶ The installation of e-ink solar PMVs at multi-operator stops to show information about the different modes of transport.
- ▶ The launch of a challenge-reward app entitled “deja tu huella” to incentivise the use of public transport, focused on the Moncloa interchange.
- ▶ The optimisation of universal accessibility and flows in interchanges via microsimulation techniques.
- ▶ The launch of new means of ticketing via the use of QR codes for access and validation in suburban bus lines.
- ▶ The “BUS-LAB”, a laboratory bus that brings together all the innovation within the public transport system in one bus, with improved features, services and comfort for users, while managing to increase customer satisfaction in their experience of mobility.

- ▶ The installation of a multimodal real-time public-transport information system in the Parquesur de Leganés shopping centre.

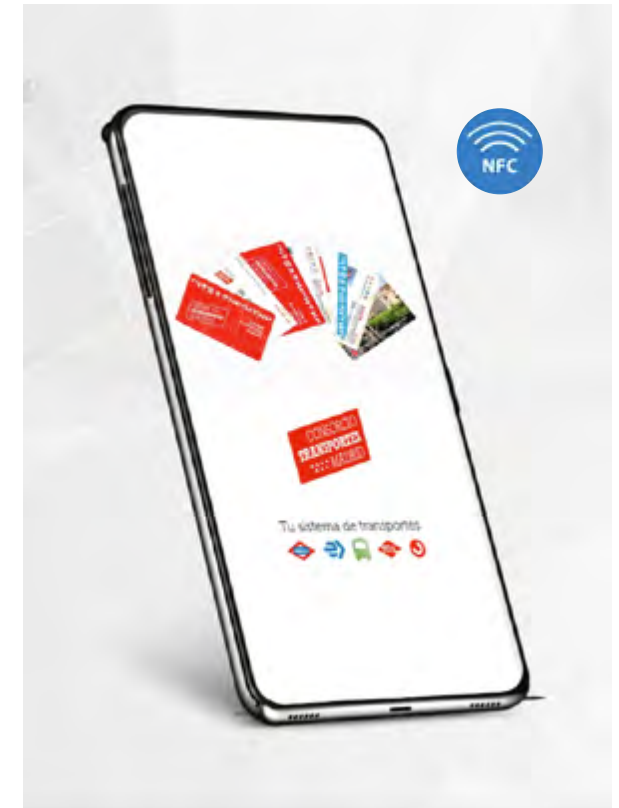
In terms of training, during 2020, various courses related to the sector's activity were promoted, offered both in-person and remotely, though mainly through the latter modality due to the circumstances imposed by the COVID-19 pandemic.



5.4 New technologies

The Regional Transport Consortium continues to undertake projects focused on implementing new transport technologies, prioritising the following lines of action in 2020:

1. **Compensation App:** this app was implemented in the month of August, aiming to offer compensation to those users that could not use their transport tickets as a result of the mandatory lockdown resulting from the State of Alarm declared due to COVID-19. This app allows users to top-up their card with a new ticket, equivalent to that not used, free of charge.
2. **NFC top-up app:** during 2020, the development and culmination of the phases of the second pilot project for the top-up of tickets via mobile phone continued:
 - a. **Fourth phase:** test participation was extended from 500 to 5,000 users (first quarter of 2020).
 - b. **Fifth phase:** in October 2020, this was extended again, reaching approximately 20,000 users in December.



5.5 Relevant activities

a. The operation of the public transport network and COVID-19

The spread of coronavirus and the associated illness (COVID-19), leading to the declaration of the State of Alarm on 14 March 2020, resulted in a radical change to the lives of citizens. The Spanish Government employed this instrument in order to guarantee the protection of citizens' health, the containment of the virus and the reinforcement of the public-health system. During this period, which was initially declared for 15 days, the public's circulation was limited, only permitted to travel for basic necessities, which had a devastating effect on general mobility and the use of public transport.

As we know, the State of Alarm was extended for several months and, throughout this time, the implementation of various protection and management measures in transport networks was continual, with many of these extended beyond 2020.

The transport network of the Autonomous Community of Madrid at the beginning of the pandemic

In the case of the Madrid region, it was difficult to maintain an adequate transport supply to cover the basic needs of essential workers, as well as guaranteeing connections to hospital and care centres and ensuring social distancing in vehicles,

while the fall in demand exceeded 50%, reaching levels of less than 10% of normal demand during the hardest moments of the pandemic.

As such, the drastic fall in general mobility led to an adjustment in the supply of all modes of transport to 60%-80% in peak times, and to 50% in off-peak hours, continuously and progressively adapting service programmes according to demand and changes detected in mobility patterns, bearing in mind the health measures decreed by the authorities.

Another important question posed at that time was the lack of knowledge and uncertainty as to the duration of the State of Alarm and, in general, regarding the efficacy of the implementation of prophylaxis measures in everyday life and, above all, in the transport network. Over the months, studies would be carried out in countries like France or the UK, demonstrating that the likelihood of contagion in public transport was very low, with rates never exceeding 1%. The measures subsequently found to be the most effective in reducing the risk of contagion were the mandatory use of masks, intensive cleaning and disinfection, as well as ventilation systems in vehicles. The responsible behaviour of users was also signalled as a factor in reducing the risk, as interaction between passengers is less than in other areas such as the workplace, restaurants or family gatherings.

In this sense, and as a first step, passenger transport vehicles followed a strict daily cleaning routine based on the recommendations of the Ministry of Health, supported by existing control protocols.



Initial anti-COVID-19 measures adopted in the transport network

In the first weeks of the pandemic and with regard to the metro network, the availability of those trains with stations near hospitals were prioritised. In terms of facilities, the control and monitoring of their operation was reinforced, prioritising escalators, lifts and moving walkways, paying attention to the opening of sliding doors or the automatic operation of train doors to avoid the use of hands. Furthermore, every ten minutes, the metro loudspeaker issued a message requesting that users distribute themselves along the platform, as well as inside trains during their trip. These measures, or similar, were also applied in the Renfe-Cercanías network and on the light rail.

The EMT de Madrid also had to adapt its offer to the drastic fall in demand. As such, services like BiciMad and the Teleférico were suspended. The capacity limit in EMT buses was set at a certain number of passengers according to the model's capacity, with this number of seats specified at the entrance to the vehicle. Only buses with screens remained in operation, payment in cash was not permitted, an onboard system for the purchase of single tickets via contactless card payment was implemented and the daily and full disinfection of each bus was reinforced.

In the case of urban and suburban buses in the CRTM network, passengers were not permitted to occupy the rows behind the driver's seat in all vehicles without a screen. Furthermore, the use of Public Transport Cards was recommend, limiting the use of cash as much as possible,



and ultimately banning this payment method. The bus shelters of the suburban network were also disinfected by members of the Emergency Military Unit (UME).

Both suburban buses and those of the EMT de Madrid were made available to the authorities to guarantee the transport of medical staff or even patients to health centres. These vehicles were driven by UME staff, as well as by volunteers from the EMT and suburban operators. Several “shuttle” lines were put in service under this formula, like that which connected Atocha station to the IFEMA field hospital, and volunteer-driven lines from health centres to medicalised hotels or those commissioned as a resting place for medical staff.

Long-term measures and the development of new anti-COVID-19 initiatives

Throughout 2020, and due to the various stages of the evolution of the pandemic, various health measures were implemented, such as the maintenance of social distancing, the use of masks indoors and capacity limitations.

In this regard, information campaigns were reinforced by loudspeaker, as well as through various communication channels. These messages were issued on the screens of transport interchanges, on CanalBus, on Canal Metro, in the digital spaces of the CRTM, on the social media pages of Metro, in Consortium bus shelters and on the trains of the Metro network.

From May, and with the arrival of the so-called “de-escalation”, new measures and informative

5 • Strategic lines

campaigns were launched, with the installation of new signage in the transport network, both in trains and stations and in the fleet of buses, indicating aspects to bear in mind such as social distancing between users and the occupancy of seats, among other aspects.

Metro de Madrid installed new signs, added to the vinyl stickers installed on the floor of the platforms, to establish social distancing between passengers. On the other hand, the official Metro de Madrid app was optimised so that users could find out exactly when each train would arrive and where their closest station was. As such, passengers could better plan their trips and reduce the amount of time spent within the underground facilities.

Another addition was automatic capacity control, a device designed to control and limit access to the network when the established capacity was exceeded. This recorded numbers via the validations of entry turnstiles. When the maximum capacity permitted was exceeded in each station, the system briefly prevented passengers from accessing the inside of stations.

Anti-COVID-19 certifications

During summer 2020, anti-COVID 19 protocol certifications by AENOR (the Spanish Standardisation and Certification Agency) were launched. The protocol against COVID-19 guarantees good health-hygiene practices to reduce and avoid the spread of coronavirus. For this, AENOR studies 11 fields, including compliance

by the company with all prevention and cleaning practices required and recommended by health authorities. Several operator companies, as well as Metro de Madrid, obtained said certification.

On the other hand, in transport interchanges, the CRTM and the concessionary companies thereof relied on daily information regarding the number of passengers using each of these centres. Furthermore, the interchanges' vigilance and control teams ensured compliance with the safety measures promoted by the Spanish Government, paying particular attention to those relating to social distancing. Interchanges also established strict specific cleaning and disinfection protocols and implemented extraordinary disinfections.



Safe return to everyday life

Aiming to ensure a safe return to activity, the Autonomous Region of Madrid implemented the #PorUnaVueltaSegura mobility plan for the start of the academic year and return to working activity at the end of summer. The supply was increased on all networks to 100%, as well as cleaning and vigilance measures, even though demand at that time was still 40% less than usual. In the first half of September, the increase in supply fluctuated between 14% and 35% of a normal business day for the Metro, EMT de Madrid buses and the suburban buses of the Consortium network.

In December 2020, the first year of the pandemic came to an end and, far from improving the situation, a certain “chronification” developed, with the famous “waves” of increasing and decreasing infection becoming a daily occurrence. Though the transport network did not recover the levels of use recorded prior to March 2020, it was noted that the strict adaptation to health protocols and the adoption of anti-COVID-19 measures were very well-received by users who slowly regained confidence in the use of public transport.





b. aParca+T Park-and-Ride Plan

The Strategic modal Interchange Parking Strategy of the Autonomous Region of Madrid, drawn up in 2018, known as “aParca+T”, is an ambitious long-term plan (lasting 12 years), which aims to promote the use of park-and-ride facilities in the region, bringing together their management from the Regional Transport Consortium, and giving the existing network a unified image and usage conditions, extending this network with new parking spaces and facilities, ultimately amounting to over 90 car parks which will add up to offer a comprehensive offer, with an investment in excess of 200 million euros.

In 2019, the Colmenar Viejo car park went into operation as a pilot test for the implementation of the technological platform which will serve as the basis of the future “aParca+T” network. Throughout 2020, this pilot was monitored with analysis of the platform’s operation and tracking of demand. The results were strongly influenced by the effect on general mobility generated by the COVID-19 pandemic throughout the year. Given the relevance of this test for the plan’s design, and with the aim of suitably establishing the definitive characteristics and conditions that the future parking management platform will need to have, it was decided to extend the duration of this pilot project in order to obtain parameters closer to a more balanced demand context.

The next phase involves the entry into operation of other car parks in pilot mode across Madrid (Ciudad Universitaria, Wanda Metropolitano, Nuestra Señora del Recuerdo and Avenida de Portugal), Valdemoro, Fuenlabrada and Getafe. The latter will be located in the El Casar station, linked to the project for the extension of metro line 3.



c. The A-2 Bus-HOV lane

In 2020, the “Improvement of the accessibility of public passenger transport to Madrid, A-2 Bus-HOV lane, inbound and outbound project” progressed, with the drafting of the Addendum to the Convention signed for the execution thereof in October 2019 by all parties: the Ministry of Transport, Mobility and Urban Agenda (MITMA), the Directorate-General for Traffic, Madrid City Council and the CRTM.

Likewise, during 2020, the CRTM coordinated with said Administrations for the unification of the three aforementioned phases into a single constructive project to be tendered by the MITMA Directorate-General of Construction of the Directorate-General of Roads.

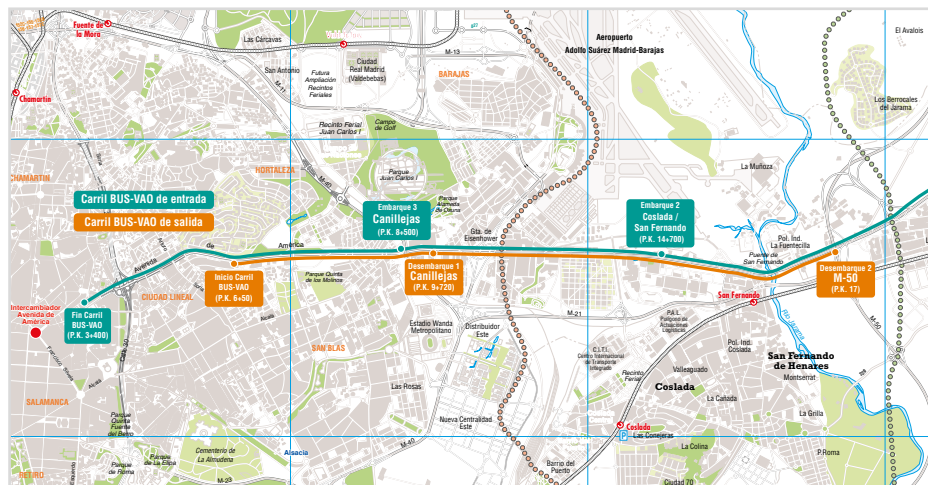
The proposed solution consists in reserving the left-hand lane of the highway entering and leaving Madrid for buses, motorbikes and vehicles with

two or more occupants (HOV) during rush hour. The inbound lane will have a reduced number of embarkation points and users will need to remain in the lane until its end in Madrid (Avenida de América). Several embarkation and disembarkation 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 reserved platforms, and with the additional 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 11,200,000 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 euros), 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.



13 M€
de inversión

15.000 viajeros
beneficiados al día

15 minutos ahorro
de tiempo de viaje al día

500.000 horas
de ahorro al año

900 toneladas CO₂
evitadas a la atmósfera



d. Improvement work on the underground network

At the start of 2020, the Autonomous Region of Madrid began works for the **full renovation of metro line 4**, which affected the 23 stations on the line as well as its 16 kilometres of railway track.

The works, which had a budget of 47 million euros, consisted in the modernisation of rail signalling systems and the electrification of the overhead line, installing a complete rigid catenary system.

The new signalling offers the line greater safety and availability, as well as improving transport capacity, as it allows a greater number of trains to provide service at the same time. Meanwhile, the rigid catenary system will make it possible to reduce incidents in the network and cut maintenance expenses.

At the same time, and although these were independent works, the service's suspension was approved in order to modernise four stations on the line: Esperanza, Prosperidad, Arturo Soria and Alfonso XIII.


The works lasted two months, suspending the service from 13 January to 9 March 2020, both inclusive, and with partial opening of the central section between Argüelles and Avenida de América on 6 March.

During the works, the Regional Transport Consortium established an initiative to facilitate user mobility, which included a special bus service at no additional cost for Metro passengers, as well as reinforcements on 4 Metro lines and 7 EMT lines.

The special bus service, provided by EMT, served the section between Avenida de América and Pinar de Chamartín, with 35 buses and a frequency between three and five minutes. Throughout its period of operation, it transported a total of nearly 2.9 million passengers, with an average volume of 48,000 passengers per day – and almost 65,000 passengers on certain days – with the Av. de América - Prosperidad connection being the most popular.

Likewise, **line 7b** (Hospital del Henares – Henares) remained closed from 5 February to 25 June to carry out actions aimed at solving the problem caused by the presence of water around the station and its effects thereon, as well as the necessary repairs to architectural elements.

Furthermore, **line 9b** (La Poveda – Arganda del Rey) was closed from 31 March to 28 April to undertake various repairs to several structures, as well as the **Gran Vía station** throughout the year, as connection works with the Renfe-Cercanías Sol station continued, in addition to accessibility improvements.



Trabajamos 24x7 para ti
We are working 24/7 for you

4

Renovación y mejora de las instalaciones Del 13 de enero hasta mediados de marzo
Renovation and improvement of the installations From 13 January to mid-March

Alternativas de transporte público · Public transport alternatives

SERVICIO ESPECIAL DE EMT
Special bus service

⇒ **SE Avenida de América - Pinar de Chamartín** cada 3 - 5 min 06:00 - 01:30 h

LÍNEAS RECOMENDADAS DE EMT
Recommended urban bus lines


⇒ **9 Sevilla - Hortaleza** ⇒ **21 Pintor Rosales - El Salvador**
⇒ **29 Felipe II - Manoteras** ⇒ **70 Plaza Castilla - Atocha**

ALTERNATIVAS DE TRANSPORTE PÚBLICO
Public transport alternatives
(ARGÜELLES - AVENIDA DE AMÉRICA)

	Argüelles	San Bernardo	Bilbao	Alonso Martínez	Colón	Serrano	Velázquez	Goya/Liata	Diego de León/América	Arganda del Rey
Argüelles	4	4	4	4	4	4	4	4	4	4
San Bernardo	4	4	4	4	4	4	4	4	4	4
Bilbao	4	4	4	4	4	4	4	4	4	4
Alonso Martínez	4	4	4	4	4	4	4	4	4	4
Colón	4	4	4	4	4	4	4	4	4	4
Serrano	4	4	4	4	4	4	4	4	4	4
Velázquez	4	4	4	4	4	4	4	4	4	4
Goya/Liata	4	4	4	4	4	4	4	4	4	4
Diego de León/América	4	4	4	4	4	4	4	4	4	4
Avenida de América	4	4	4	4	4	4	4	4	4	4

■ Línea de Metro de Madrid / Underground lines ■ Línea de EMT / Urban bus lines

PLANO DE LA RED · NETWORK MAP



www.crtm.es app Mi Transporte

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

In 2019, the Governing Council of the Autonomous Region 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 2020, €99,219.62 of the grant was executed, finalising nine projects in the municipalities of Ambite, El Berrueco, Cenicientos, Estremera, El Molar, Piñuecar-Gandullas, Quijorna, Redueña and Serranillos del Valle, with improvements at 17 bus stops, 16 pavements works, one on paving and seven to move street fixtures.



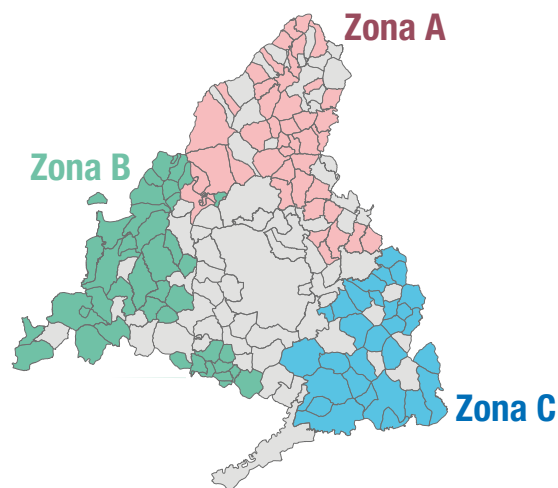
110 municipalities

€3.14 M invested

435 paving works

330 pavement advances

51 new bus shelters



f. Stop on demand on suburban night-time lines

On 30 October 2020, the stop on demand service began 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, as long as it was within 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.

5.6 Universal accessibility

During 2020, 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.

This year, special effort was made due to the impact of COVID-19, which forced a rethinking and adaptation of initially scheduled measures. As well as the various training activities and actions, thanks to remote connections, the CRTM continued to actively participate in the Council for the Promotion of Accessibility and Elimination of Barriers (hereinafter CASB) of the Autonomous Region of Madrid's technical committees and working group. Within the CASB, the body has worked on various actions, including the following two:

- ▶ The finalisation and approval by the Council Plenary of the proposal to modify Decree 13/2007, Technical Development Regulation regarding the Promotion of Accessibility and Elimination of Architectural Barriers of the Autonomous Region of Madrid, regarding the so-called "Stop Environment".
- ▶ The creation of a regulatory proposal for the drafting of the new Accessibility Law of the Autonomous Region of Madrid (on articles relating to transport).

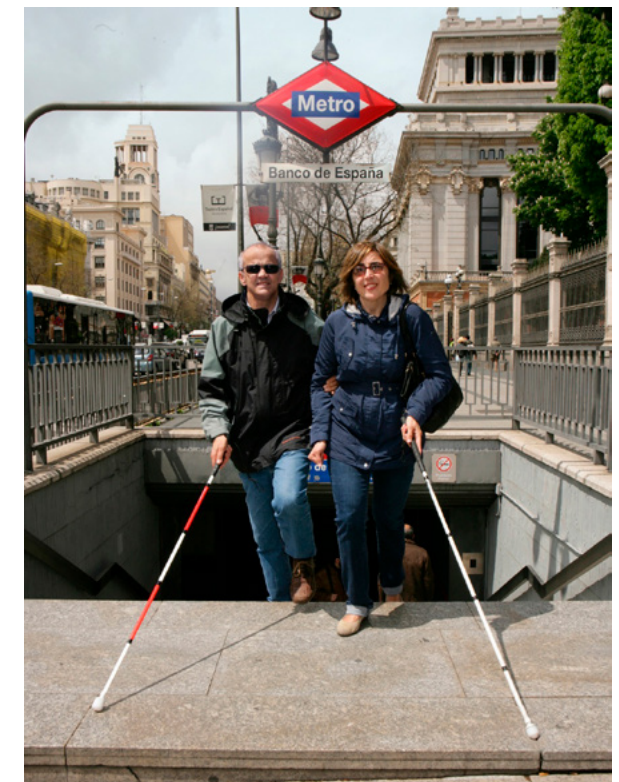
The continuity of other actions, such as the collaboration with the State Reference Centre for Personal Autonomy and Technical Aids (CEAPAT), were more greatly affected as they required field work which was necessarily slowed due to the effects of the pandemic.

Furthermore, various projects already underway continued, such the refurbishment of bus stops on the metropolitan bus network, the online video-interpretation service in sign language for the hard of hearing, inspection works regarding universal accessibility, and the creation and compiling of accessibility protocols for the public transport system (installations, moving equipment, interchanges, etc.).

Metro de Madrid is continuing in the development of the 2016-2020 Accessibility and inclusion Plan, with a budget of more than 145 million euros for the installation of 101 lifts in 36 stations on the Madrid suburban network, as well as the implementation of other elements such as tactile flooring, double handrails, signage in braille and other complementary accessibility measures.

ACCESSIBILITY OF PUBLIC TRANSPORT MODES (31 December 2020)

 	Accessible Metro de Madrid stations	66%
 	Accessible light rail and other railway concession stations	100%
 	Number of Metro de Madrid lifts	551
  	Accessible urban 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 Autonomous Region of Madrid 2013 – 2020. Plan Azul +”, highlighting its work as a member of the Air Quality Section of the Environment Council of the Autonomous Region 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 Autonomous Region 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 2020 was 181.

With the renewal complete, more than 71% of the fleet providing regular public transport services for suburban passengers in the Autonomous Region 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 265 vehicles. As such, in 2020, 84% of the fleet of buses could be considered “green”, including natural-gas, hybrid, electric and diesel vehicles (Euro V and VEM). The number of “zero emissions” electric vehicles increased to 81, representing 4% of the total. On the other hand, the average age of the fleet was reduced to 5.8 years.



CHARACTERISATION OF TRANSPORT FLEETS

By emissions regulation (EU Directives)

	Euro VI	Euro V/EEV	Euro IV	Euro III	0 emissions	TOTAL
Urban buses of Madrid (EMT)	1,134	525	326	0	81	2,066
CRTM Road concessions	1,468	593	0	1	1	2,063

By type of fuel

	Diesel	Natural gas	Natural gas/diesel	Hybrid	Electric	TOTAL
Urban buses of Madrid (EMT)	385	1,562	1	37	81	2,066
CRTM Road concessions	1,476	242	4	337	1	2,063

5.8 Service quality

The CRTM understands that service quality should focus on users. Quality and Customer Service therefore share an increasingly interwoven space. 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.

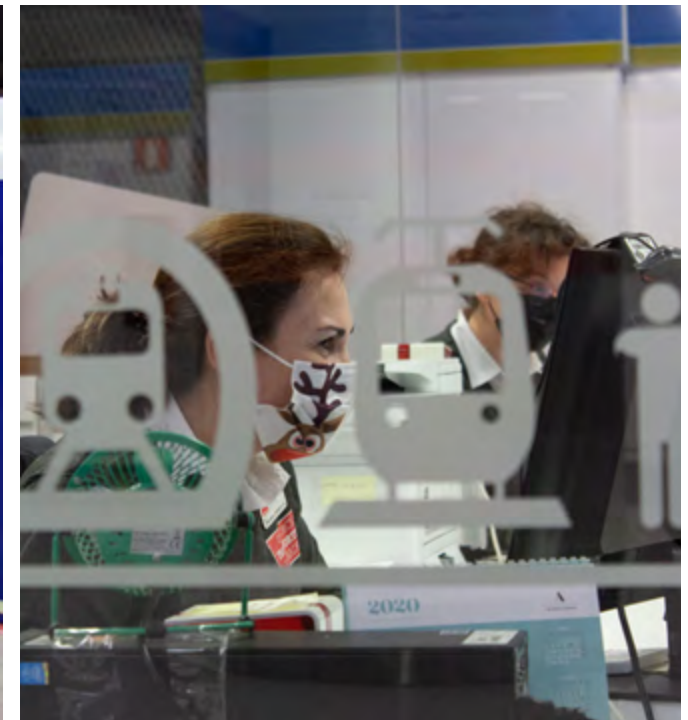
The service is monitored and controlled using in-house resources, through the body's inspection team, as well as by contracting technical support implementing specific measurements and studies. The work performed directly by inspection staff exceeded 6,600 hours of effective inspection work in 2020. 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. These are used to provide an overview of customer expectations and their level of satisfaction. 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. During 2020, despite COVID-19, nearly 773,000 people were dealt with in person, and a little over 440,000 by telephone or digitally.



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) Preliminary viability study on the implementation of a reserved-platform collective transport system connecting the district of Valdebebas with the Metro de Madrid network

The study aimed to explore various alternatives to connect the district of Valdebebas with the Metro de Madrid network via a reserved-platform collective transport infrastructure (BRT). The system was designed as a service of high-quality electric buses. Various route alternatives were studied, with all of these passing through the interchange with the Renfe-Cercanías network in the current Valdebebas station.

Three phases were considered in the study:

- ▶ An initial phase included the connection of the district of Valdebebas with the Cercanías station.
- ▶ A second phase would supplement the district connection with the metro network, including, as a result of proximity criteria, two possible alternatives: the stations of Mar de Cristal and Feria de Madrid.

- ▶ A third phase would extend the BRT infrastructure to the intermodal area of Canillejas and from its northern end to connect with Terminal 4 of Madrid Barajas - Adolfo Suárez Airport.

b) Analysis of the adaptation of infrastructure on the railway transport line between Pinto and San Martín de la Vega to the operation of a reserved-platform public transport system

The aim of this study was to analyse the situation of the infrastructure on the railway transport line between Pinto and San Martín de la Vega and its possible use for development in the various alternatives of reserved-platform public transport systems.

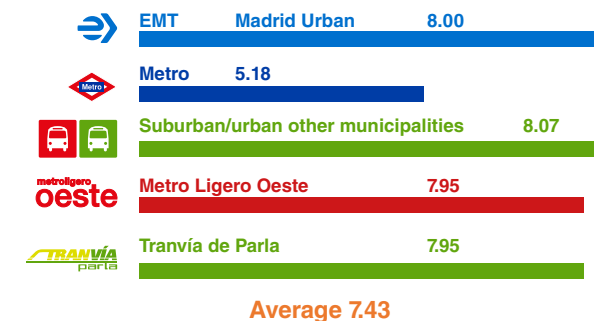
Four alternatives were proposed to adapt the existing infrastructure for BRT or light rail systems. The analysis was based on a social, economic and environmental evaluation of each option, their required investment in facilities and moving equipment, their construction and operation costs, the estimated demand, and other benefits such as time savings and possible environmental impacts.

c) Studies assessing the quality of transport services

In 2020, the CRTM conducted more than 16,400 surveys on users of the public transport system of the Autonomous Region of Madrid in order to determine their satisfaction with the service.

The various studies conducted across the respective modes of transport reveal an overall average rating of 7.43/10 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.

DEGREE OF SATISFACTION (out of 10)



d) Verification studies of the established indicators in the suburban transport Quality Plan

Monitoring and oversight of the Autonomous Region of Madrid Suburban Road Transport Quality Plan draws on a range of different sources of information. This involves using systematic records of service operations, inspections of the organisation and oversight based on specifically contracted studies.

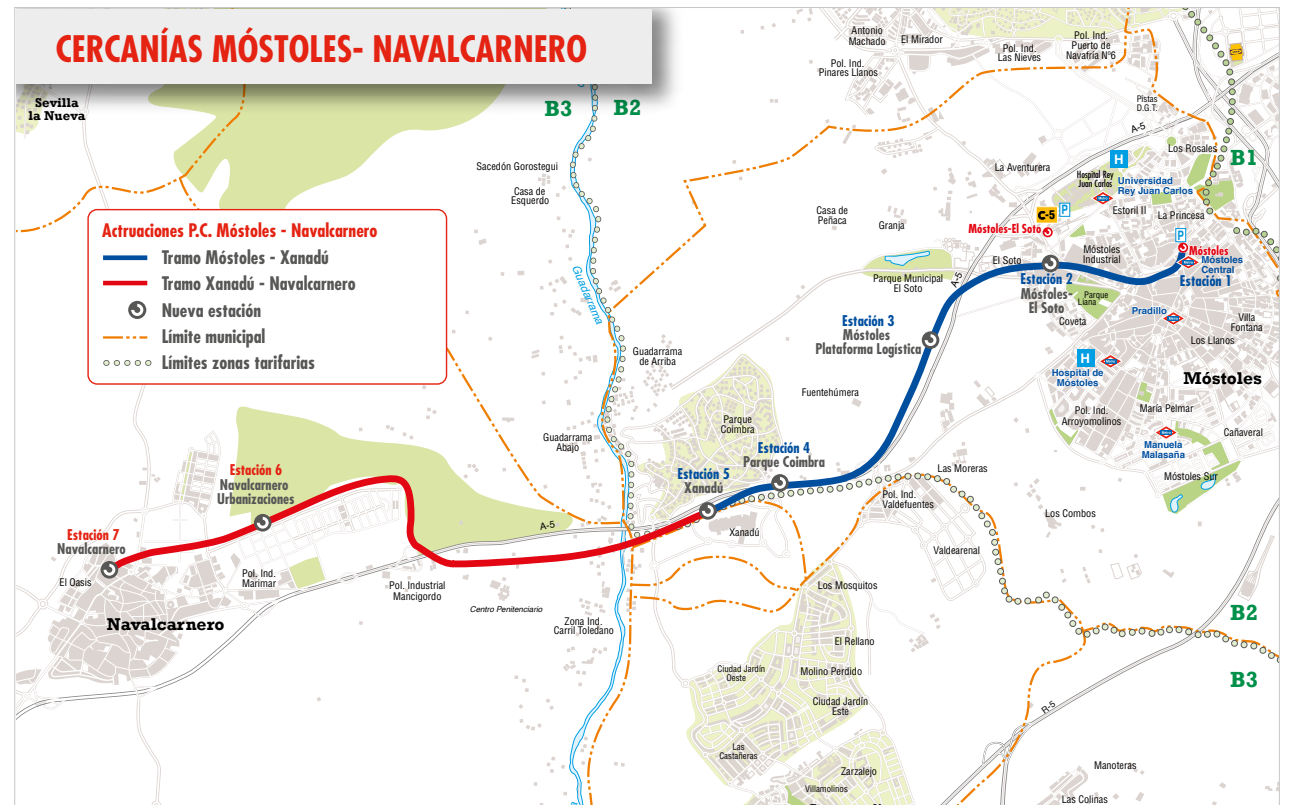
In 2020, various works were undertaken with external support to examine the telephone support and online information services provided by transport operators, the functioning of dynamic passenger information points and various aspects regarding the cleanliness and upkeep of vehicles.



e) Analysis of the adaptation of infrastructure on the railway transport line between Móstoles Central y Navalcarnero to the operation of a reserved-platform public transport system

This study consisted in a preliminary analysis of the infrastructure implemented for the railway transport line between Móstoles-Central and Navalcarnero, with construction halted from January 2010, with the aim of assessing its adaption for possible use of a reserved-platform public transport system.

Nine alternatives with varying degrees of use of the already completed works were analysed. The alternatives analysed included proposals of various natures, from extensions of the current Cercanías line C-5, light rail metro lines, BRT or Bus-HOV lanes for use by the suburban bus lines that currently operate along the corridor.



f) Integration of the bicycle within the public transport of Madrid

This study analysed bicycle mobility and its interaction with the public transport network, as well as its potential within the intermodal chain of everyday journeys. Part of the analysis focused on the impact of the pandemic and the general increase in bicycle use within the post-covid context. Another aspect that should be highlighted is the study of preferences for the location of bicycle racks, based on the results of a specific online survey, and on the regulatory framework for the transport of bicycles on board public transport. The study also touched on a review of the actions of other administrations regarding cycling mobility.



g) Analysis of mobility in the Autonomous Region of Madrid during the State of Alarm due to the COVID-19 health crisis

The aim of the study focused on daily monitoring of mobility in the Autonomous Region of Madrid after the application of Royal Decree 463/2020 of 14 March. The effects of the health measures adopted, with a drastic reduction in travel and a context of heightened uncertainty with regard to the evolution of mobility flows and patterns, required the establishment of precise monitoring of these variables in order to adapt the service programmes of the various modes of public transport to new needs.

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

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



5.10 European projects

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

In 2020, the CIVITAS ECCENTRIC project was concluded, which began in 2016 with the aim of demonstrating and proving the potential, viability and replicability of integrated and inclusive urban planning measures, innovative policies and emerging technologies, to improve sustainable mobility in the periphery of cities, and to foster clean, silent and CO₂ free urban goods logistics, thereby improving quality of life for the general public.

According to the final report on the project carried out by the European Commission, “[...] the project has proven that any change to mobility culture must be focused on people. As well as technological and organisational innovation, we must stimulate a change in behaviour. The project has made use of the participation and pilot projects in various environments and different target groups in order to obtain good results, seeking in particular to increase awareness and satisfaction with new mobility solutions. Although at times it has been difficult to guarantee the necessary political support, the evaluation has demonstrated an initial impact on behaviour. In the five Living-Labs, the impact in the formulation of local policies is clear to see and will be a good prerequisite for further extension of the demonstrations.”

More information at www.civitas.eu/eccentric





6 Citizen relations

Customer Information and Service during the pandemic

Throughout 2020, the CRTM was a fundamental coordinator of user information, from the establishment of the State of Alarm to the recommendations for the use of public transport upon de-escalation and as we returned to our day-to-day lives.

Our Customer Service hardly ceased in Management Offices, and sought to convey safety and trust in the system, in order to maintain mobility and accessibility for essential services and promote the return to normality and the region's economic recovery.

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

6.1 User information

a. The www.crtm.es website

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 13.7 million in 2020, as well as the more than 6 million visits to the public transport card administration module (<https://tarjetatransportepublico.crtm.es/>).

This year, the ‘Measures against Coronavirus’ page was created to offer information regarding all actions and recommendations for public transport related to the pandemic. A specific page was also created with all the information regarding the compensation of the Travel Pass as a result of the State of Alarm due to COVID-19, indicating the procedure to obtain a refund for passes not used during lockdown.

A section was also created within ‘Apps’ for the “Pass Compensation” app, to top-up cards with transport tickets not used during lockdown.

In addition, great efforts were made to provide information on the institution's most notable actions and news for the media. To this end, during 2020, the institutional website published 144 press releases (107 in the ‘Press Room’ and 37 in ‘News’) with their respective photographic support.

In this regard, it is worth highlighting all the information generated with regard to the recommendations against coronavirus, pass compensation and the extension of stop on demand to all suburban night-time services (information and banners, among others).

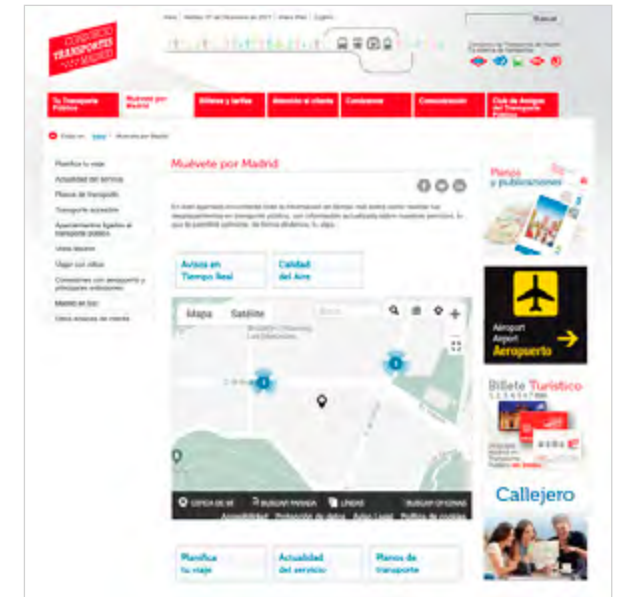
b. The “Mi transporte” app

“Mi Transporte” is the official CRTM mobile app that provides real-time information on the entire public transport system of the Autonomous Region of Madrid. The app lets you know which stop or station is nearest to the user's positions, and when the next service will arrive, among other utilities. During 2020, there were more than 72,000 downloads and over 1,600,000 visits.

The creation of the app involves the integration of data from the 40 operators offering public transport services in the region, totalling over 700 lines and 15,000 stops. This app provides real-time knowledge of all underground, urban and suburban bus, Renfe-Cercanías trains and light rail timetables. In addition to information on public transport, “Mi Transporte” includes another type of useful information for users: the location of the public bicycle system bases in Madrid (BiciMad), top-up points for the Public Transport Card, park-and-ride at public transport stations, green cycle routes, tourist information and more.

c. “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 2020, this app, in operation for controlled user testing, received 3,700 visits and almost 3,400 downloads.



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Tu sistema de transportes

Comunidad de Madrid

d. The “Tarjeta Transporte” pilot app

The app to download transport tickets via mobile phone, initially tested in 2019 with a pilot for 500 users, extended over the course of 2020 to more than 50,000, substituting the app launched by CRTM in 2014, the “Tarjeta Transport Público” [Public Transport Card] smartphone app which allowed users to check the balance on their TTP. 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.

Both the balance enquiry app and this new pilot are very handy for users, as demonstrated by the nearly 100,000 people who installed them in 2020.

e. The COVID-19 pass compensation app

At its meeting on 17 June 2020, the Regional Transport Consortium Board of Directors approved an extraordinary partial compensation procedure for users of the Travel Pass affected by the State of Alarm decreed as a result of the COVID-19 health crisis.

As established, users with personal Public Transport Cards topped-up with a 30-day or annual Travel Pass, acquired before 30 March, whose use had been affected by the mobility limitations applied to combat the health crisis as of the entry into force of the State of Alarm were eligible to apply.

An extensive application period was allowed for access to this compensation, from 6 July to 20 October 2020, through the means established by the Regional Transport Consortium for this purpose.

Users of the 30-day pass who requested compensation could obtain this until 20 November 2020, via the channels established for this purpose (compensation app, tobacconists and other authorised establishments).

In the case of individual users of the annual pass, once their request had been confirmed, an extension was automatically made, allowing them to extend its use until 31/3/2021.

For this, the CRTM implemented the option to submit the request remotely via its website, receiving an approximate volume of 144,000 visits and developing the app for obtaining total or partial compensation for unused travel passes during the lockdown period, a measure which benefitted over 250,000 users.

f. The Open Data portal

With the aim of spreading information about the Autonomous Region 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 Autonomous Region 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, 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.

This data generated by the CRTM is being used as a raw material, providing value-added services and innovative products to citizens. During 2020, the contents of the portal received more than 8.6 million requests.

g. "Pide Tu Bus"

"Pide Tu Bus" is the first "Stop on Demand" bus smartphone service in the Autonomous Region of Madrid. Installed at a bus stop in the municipality of Valdemorilla, "Pide Tu Bus" users inform buses that they are waiting at the stop so that they can pick them up. To do so, they can scan a QR code or send an SMS, which will alert vehicle drivers

of the need to stop at that point, while the system informs users of the waiting time for the service to arrive.

As a result, the 24 daytime services for line 641 (Valdemorillo - Moncloa) using this stop and the further 29 operations of line 642 (Colmenar de Arroyo - Madrid) significantly increased the supply of transport for users in this area.

During 2020, its sixth year in operation, it received over 3,000 service requests, 60% arriving via SMS, and 40% by scanning a QR code at the bus stop.



h. Passenger Information Points (PIV)

Real-time information panels are another of the CRTM's major technological initiatives. The so-called Passenger Information Points (PIV) are panels placed at bus stops that provide real-time information on the arrival of the next bus at the stop, as well as any incidents or other information of interest to passengers.

Within the network of suburban and urban buses of the Autonomous Region of Madrid, a total of 478 panels have been installed, distributed across 461 bus shelters, 9 more than the previous year, plus another 17 devices distributed in hospitals, bus stations and control centres. In the case of the EMT network, the number of panels available is 723 devices, 53 more than the previous year, of which 220 have operational WiFi.

i. Transport maps

The CRTM develops the Transport Information Publication Programme (PPIT) in compliance with one of its basic functions, “user information” (Art. 2.2.j of the CRTM Creation Act). In 2020, in line with this programme, the following transport information publications were published:

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

In April 2020, the map of Series 1a was updated for publication on the website.

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

In April 2020, 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 during 2020, with a total of two updates. This publication covers the entire EMT, underground and Renfe-Cercanías network in the city of Madrid.

Series 4. Transport map for the Autonomous Region of Madrid

During 2020, 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.

Series 5. Transport maps for districts of Madrid

The collection of district transport maps was conceptually redesigned during 2018, with this initiative culminating in 2019 and 2020 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. Three updates were made to this map in 2020, in the months of February, April and September.

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

Work continued during 2020 with updates to the maps in series 6, a total of 55 municipalities being updated for inclusion on the CRTM website as PDF files – including the first edition of the map of the municipality of Los Molinos. This update of maps responds to changes and improvements established by the CRTM and also responds to changes and improvements in municipal transport networks. Once the maps have been updated, they are made available at bus stops 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 2020, this relevant project was supplemented with the publication of 66 new zonal maps and the updating of another seven.



Series 7 maps. Night-time lines

The maps of night-time lines were updated and uploaded to the website in September, both for Madrid (EMT) and the suburban lines within the Autonomous Region.

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

These are brochures in various formats, both paper and web, published to support different events in which the CRTM collaborates or to provide information on the latest significant developments in the transport network. During 2020, many of the information actions carried out have been related to the implementation of anti-COVID-19 measures. In this regard, the opening of the Isabel Zenda Hospital involved the implementation of routes and timetables of various EMT Special Services, as well as an update to the zonal map of the Valdebebas Renfe-Cercanías station.

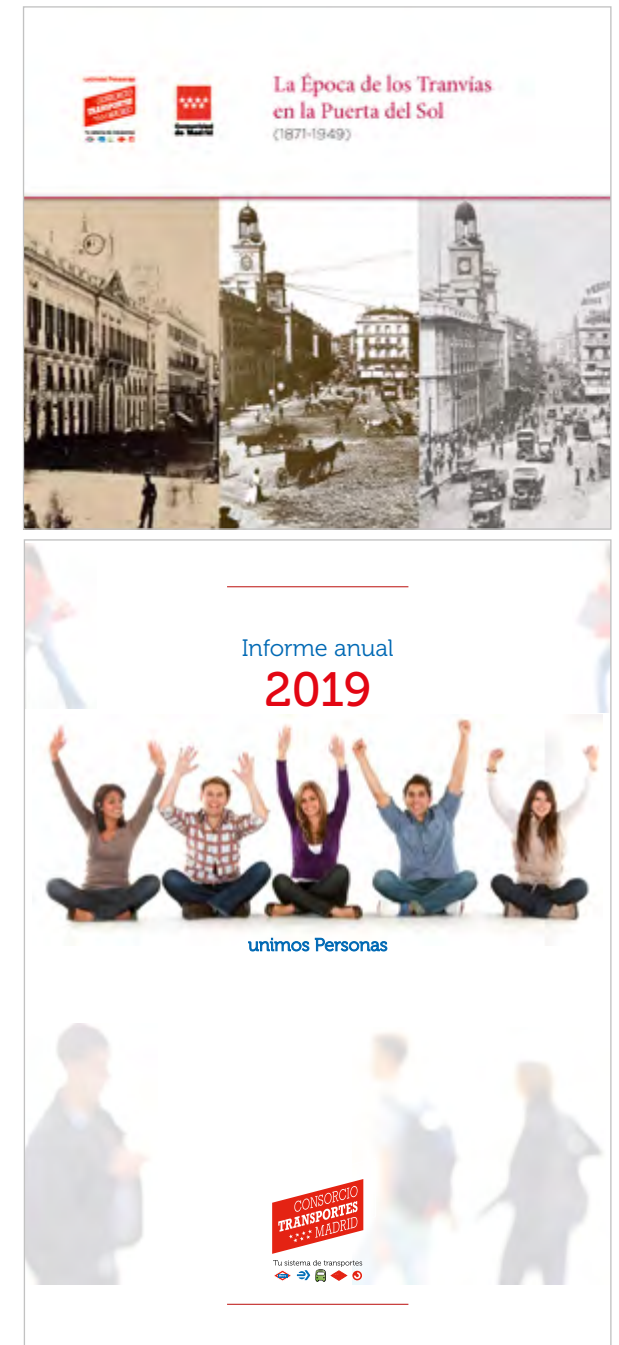
Another series of information actions concerned the pedestrianisation of Puerta del Sol carried out in August, which required the modification of routes and termini of various EMT lines. In total, more than 20 maps have been made for the website as a result of modifications to EMT lines, including the so-called “Cero lines”.

In terms of suburban buses, various information actions have been carried out during 2020 to improve the conditions of passenger travel and waiting in interchanges in the face of COVID-19. Another important information development relates to the modification of night-time lines within the Autonomous Community of Madrid, including the stop on demand map implemented in the last quarter of the year. In summary, more than 10 maps have been created for the website as a result of modifications to various suburban 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 4 and 7B.

Other information publications

The CRTM Annual Report for 2019 was published in 2020. The historic publication “The Age of Trams in Puerta del Sol (1871-1949)” was published on the website, commemorating the closure to road traffic of Puerta del Sol carried out in August 2020.



6.2 Customer service

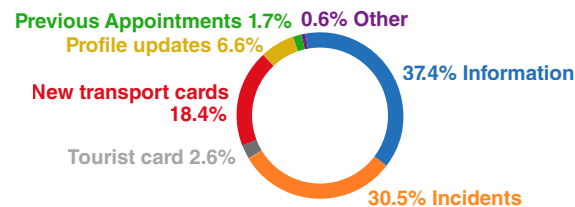
a. The Public Transport Card Management Offices

The face-to-face service channel comprises a network of 25 Management Offices strategically located in the Autonomous Region of Madrid. In 2020, these offices received a total of 772,249 visits from users, providing assistance in various services, 40% less than that received in 2019.

2020 presented a huge challenge for in-person customer service due to COVID-19. During the months of lockdown (March-May), a large proportion of offices were closed, with a reduced number remaining on duty. From June, the offices and means of providing service were transformed in order to make them compatible with safety measures. As such, chairs were removed, an appointment system was established for all administrative processes except for incidents and information, screens were installed at all workstations, antibacterial-gel dispensers were installed and the workforce was reinforced, including agents outside of the office allowing users to obtain information without entering the building, thereby streamlining service and avoiding the formation of queues. Likewise, cleaning and disinfection tasks were intensified in all offices. During this year, remodelling works began on the offices located at airport terminals 2 and 4.

Of all the operations performed at the Management Offices, 21% corresponded to the incorporation into the system of new users (new TTPs and tourist cards), and 79% to information and the management of after-sales services.

TYPE OF OPERATIONS PERFORMED IN MANAGEMENT OFFICES



The Management Offices serving the most users during 2020 were: Sol with 98,383 users, Moncloa with 83,471, Príncipe Pío with 66,396, Airport T4 with 65,815 and Atocha with 65,483 users.

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

309,190 users were assisted via the website, of which 52% requested a prior appointment, 29% requested a new or replacement TTP using this channel and 16% requested information via the email address tarjetatransportepublico@madrid.org. The remaining 3% correspond to requests for expense invoices and the processing of complaints.

c. The telephone customer service

Over 2020, a total of 131,177 calls related to the public transport system of the Autonomous Region 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 Autonomous Region of Madrid.

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

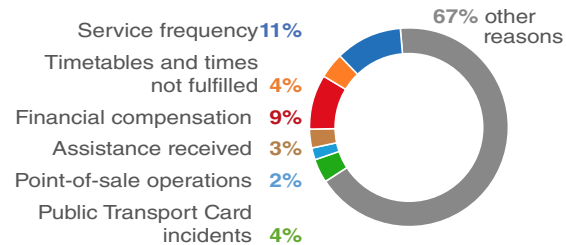


6.3 Complaints

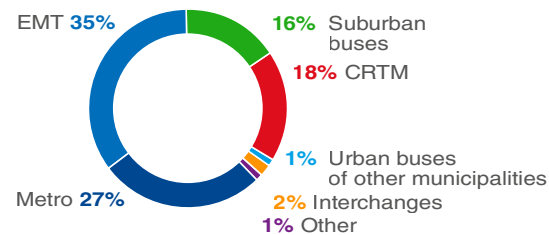
In 2020, the Autonomous Region of Madrid transport system registered 37,625 complaints, a decrease of 46% in comparison to the previous year (around 70,000). The ratio of complaints per million passengers stood at 43.8. These figures include the complaints received through the different channels available 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 Autonomous Region of Madrid (SUQUE) and other bodies through their respective registers.

Only six reasons exceeded an incidence rate of 2% and account for approximately 32% of the total complaints received, while the rest (68% of complaints) are distributed across an extensive list of 68 reasons.

REASONS FOR COMPLAINTS



DISTRIBUTION BY MODE



6.4 The Friends Club

In 2020, the Friends Club was affected by COVID-19 as a result of the suspension of all promotions that could put users at a risk of contagion. Even so, it maintained its numerous activities, adapting them to social needs at any given time with a clear goal: to maintain quality content.

During global lockdown, content was adapted to a digital solution with online participation, aligning itself with the needs of users and the new, more digital model of consumption. Highlights include the various Cirque de Soleil shows (Luzia, Corteo, Tótem and Amaluna), the Escape Rooms (Los Cohes and El Ladrón de Cuadros), the Virtual Tour of the Thyssen-Bornemisza Museum and the live FSO and Live From Home LiveNation concerts.

Also worth noting is the creation of the new Friends Club logo, which is more modern and dynamic, as well as the creation of the new website with a new, more functional visual style with new content adapted to new digital trends, including new indexes aimed at the participation of a younger audience (for example, PlayClub, aimed at gamers).

During this year, the Friends Club adapted to the various safety measures made necessary as a result of COVID-19 at all times, participating in those events, competitions, exclusives and



experiences that clearly complied with the requirements of user safety and collaborating in the “Safe Culture, Safe Theatres” campaign.

Despite this, the Public Transport Friends Club continued in its activities, making several competitions available to users, as well as events of various natures: cultural, musical, sporting and leisure. These include:

- ▶ SOM Produce, La función que sale Mal
- ▶ Film Symphony Orchestra: 2020 Tour Concerts
- ▶ Parques Reunidos (Atlantis, Parque Warner, Faunia, ZOO, Parque de Atracciones) with discounts for users of the Public Transport Card and prize draws for tickets in various waves throughout the season
- ▶ Broadcasting, prize draws and collaboration with DeAPlaneta: Top Gamers and Pucca
- ▶ Diamond Films and their films: Below Zero, Once Upon a Time, The War with Grandpa, Rifkin’s Festival
- ▶ Hiking experience in San Lorenzo del Escorial and rural experience with accommodation in Sierra de Guadarrama
- ▶ Leisure and sport: Xanadú Snow Zone

Communication of all activities has always been conducted via the clubdeamigos.crtm.es website, which received over 68,000 visits in 2020, and provided a channel for participation by 2,116 users in the 29 promotions offering prize draws and benefits.

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CONSORCIO TRANSPORTES DE MADRID

UITP

6.5 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 2020, communication efforts were focussed on informing and “training” all customers in the new pandemic context. In four successive waves and via all transport system communication media, various campaigns were carried out with safety recommendations against COVID-19, using the #siempreconmascarillas hashtag promoting the use of face masks.

Furthermore, other specific campaigns carried out to communicate new services and fares should also be noted:

- ▶ Campaign to publicise the new senior pass fare which entered into force on 1 January 2020
- ▶ Communication regarding the compensation of the travel pass as a result of COVID-19
- ▶ Implementation of the “Let’s move better, our future is in your hands” campaign, promoted by the International Public Transport Union (UITP)
- ▶ Collaboration in publicising European Mobility Week
- ▶ Campaign to inform users of stop on demand on night-time services – “Next stop your house”
- ▶ Sharing of the Autonomous Region of Madrid’s “Me mueve estar seguro” campaign for safety in public transport

6.6 Corporate Social Responsibility

It is important to note the social nature of the Madrid transport system during the pandemic, considered an essential activity for user mobility and collaborating in the cohesion and maintenance of the economic activity of the Autonomous Region of Madrid.

In this context of global lockdown and with this responsibility, immediate measures were taken: capacity limitations, mandatory use of masks and signposting of mobility circuits to avoid contagion, among other recommendations.

The Transport Consortium, as the institutional authority for the transport system of the Autonomous Region of Madrid, in addition to its commitment to achieving the goals of the 2030 Agenda, has contributed to the implementation of sharing of all COVID-19 safety measures on all forms of transport.

The “COVID-19 Travel Pass compensation” initiative, the recognition of the five interchanges of the Autonomous Region of Madrid at the cutting-edge of energy efficiency, and the development of the aParca+T plan should also be highlighted.

In terms of relationships with various interest groups, the CRTM has been linked with concrete

initiatives encouraging the achievement of the Sustainable Development Goals (SDGs), including:

- ▶ Collaboration in European Mobility Week 2020
- ▶ Sharing of the International Environment Day in collaboration with the UN, a programme for the environment
- ▶ CERMI “Safe use of public transport for people with disabilities” campaign

The relationship with the values of sustainability, accessibility and social commitment make the CRTM a strategic ally for NGOs, foundations and private companies, collaborating in social actions such as the Virtual Women’s Race 2020, Dyslexia Foundation, the race for “La igualdad es la meta” [Equality is the goal], the Books on the Street initiative or the Spanish Heart Foundation, with the “Pon corazón a tu corazón” campaign.

Within this context, values such as social commitment, knowledge, innovation, transparency, trust and safety are values that the Consortium aims to convey to society, aligned with the values that are best perceived by people, placing users at the heart of its operations: “We Bring People Together”.



7 Institutional relations

Videoconferencing provided a way to network

The experience of the CRTM and the integrated model of the transport system of the Autonomous Region of Madrid have traditionally formed the subject of international visits. During this year, in which travel and in-person meetings were halted, videoconferencing became the new way of networking between institutions.

The most prominent associations in the sector (UITP, EMTA, the Metropolitan Mobility Observatory) served as the forum for an exchange of experiences in the management of transport systems in the face of the COVID-19 crisis.

7.1 International presence

The CRTM is present in the most prominent industry associations:



ADVANCING
PUBLIC
TRANSPORT

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.



During the year, the CRTM participated in a multitude of forums, webinars and meetings, in which it shared its experience managing the crisis caused by COVID-19.

Furthermore, as part of Innovation and Training Centre, the CRTM organised an in-person training course in February entitled “Basics of public transport” (in Spanish), with the attendance of 25 people from Brazil, Colombia, Mexico and Spain. Given the mobility restrictions imposed from March onwards, the online format allowed the Centre’s training initiatives to continue, which were intense, participating in the organisation of courses on “Basics of public transport” in May, “Electric buses” in July and “Marketing and Communication” in November.

Webinar, 16 de diciembre de 2020 · 4h - 6h pm

Presentación de la “Guía UITP sobre procesos de licitación de autobuses en ciudades”

Las redes de autobuses representan el modo de transporte público mayoritario en todo el mundo. La eficiencia en la gestión de las mismas es, sin duda, un factor fundamental en la calidad de vida urbana. La clave del éxito se basa en contar con una planificación integrada de la movilidad y los usos del suelo, un marco institucional y regulatorio adecuados y una financiación estable.

En este contexto, el Comité de Autobuses de la UITP ha desarrollado la Guía sobre procesos de licitación de autobuses en ciudades. Se trata de una hoja de ruta, no una recomendación exhaustiva de contenidos, basada en la larga experiencia y buenas prácticas empresariales de los socios de la UITP.

Durante este webinar, los ponentes ilustrarán, mediante la presentación casos de estudio en todo el mundo, los distintos aspectos que contiene esta Guía, en relación con la definición de especificaciones funcionales y técnicas, normativa, condiciones financieras y contractuales, etc., con especial atención al despliegue de autobuses eléctricos.

Agenda:

- 4:00pm Apertura**
Alocución GARCÍA PASTOR, Vicepresidente del Comité de Autobuses, UITP
Representante de la Unión de Ciudades Capitales Bercenarrucanas, UCCI
Representante de España ICEX Exportación e Inversiones
- 4:10pm Panel técnico 1:**
El papel clave del autobús en los sistemas integrados de movilidad
Representante de Área Metropolitana de Barcelona
Representante de Consorcio Regional de Transportes de Madrid
Representante de Banco Mundial
Representante del Ministerio de Transportes y Telecomunicaciones, Chile
Moderador: Eleonora PAZOS, UITP
- 5:00pm Panel técnico 2:**
Aspectos clave a considerar en el despliegue de autobuses eléctricos
Sr. D. Mario CANET, Transportes Metropolitanos de Barcelona
Representante de EAT de Madrid
Sr. D. Juan ABELARRIAS, Mobility ADO
Representante de Barcelona
Moderador: Gibet CAMOS, Banco Interamericano de Desarrollo
- 5:50 pm:** Conclusiones y clausura
- 6:00 pm:** Fin

Colaboran:



EMTA (European Metropolitan Transport Authorities)

The CRTM is the Treasurer of EMTA, and since its creation in 1998 it has actively participated in the meetings, forums and working groups promoted by the association, as well as being the member responsible for the preparation of the Public Transport Barometer of the European Metropolitan Areas, which includes data on the public transport systems of the 31 partners that made up the association at the end of 2020.

In 2020, only one of the two usual annual meetings of the General Assembly were held – in this case, online and in November. Webinars and conferences were held alongside this, in which European transport authorities debated the measures implemented to face the COVID-19 crisis, and what challenges would be encountered in the future. Further info www.emta.com

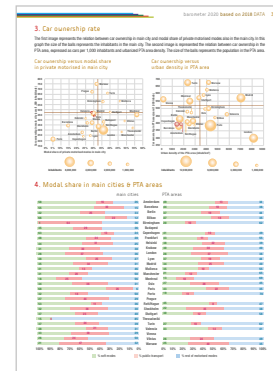
EMTA
European Metropolitan Transport Authorities

barómetro 2020 based on 2020 data

14th edition

Foreword by Rueda van der Pluijm EMTA Secretary general

These are unprecedented times for Europe as well for the rest of the world. The COVID-19 pandemic has brought about a crisis in the public transport sector. The impact of the crisis is not only on the number of passengers but also on the financial situation of the operators. The barometer provides a snapshot of the current situation in the public transport sector across Europe. It is a key tool for the industry to monitor the impact of the crisis and to identify the challenges that lie ahead.



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 2020, the CRTM participated in the 17th MMO Technical Seminar, entitled “A new reality and new challenges for our mobility services”, held on 23 October. Exceptionally, and due to the context of the COVID-19 pandemic, this edition was held entirely online. The central topic of the seminar was the presentation of strategies adopted to face

the pandemic by the various national transport authorities. The CRTM presented the main measures adopted in the Autonomous Region of Madrid.

International visits and advice



The experience of the CRTM and the integrated public transport management system of the Autonomous Region 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. In 2020, due to the COVID-19 crisis, visits have been substituted by videoconferencing, participating in a multitude of webinars and conferences and sharing the CRTM's experience in these times of crisis.

7.2 Acknowledgements of the Consorcio Regional de Transportes de Madrid

The Regional Transport Consortium was awarded in the “Mobility and Sensorisation Devices” category of the @asLAN Awards in March 2020 for the application allowing the topping-up of transport tickets via mobile phone. These awards were created to recognise digital-transformation projects in public authorities and bodies.

The project for the implementation of the Regional Transport Consortium top-up app for public transport cards was awarded above the other finalists – the open health services in mobility platform for citizens, of the Andalusian Health Service, and ADIF’s “SENTINEL Inventory of Railway Infrastructure Elements” project.

This project was also celebrated during the 20th Spanish Intelligence Transport Systems Conference in July 2020. This recognition awarded to the CRTM, within the ‘Projects’ category, forms part of the awards granted by the ITS Spain Association each year to people, entities or projects leading the way in terms of transport and technology.

The project that earned these accolades will allow users to add tickets to their Public Transport Card and pay for them by bank card via mobile phone. At the moment, almost 5,000 people are already using this app, currently still in its testing phase. The app is intended to be launched to all users during 2021.



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