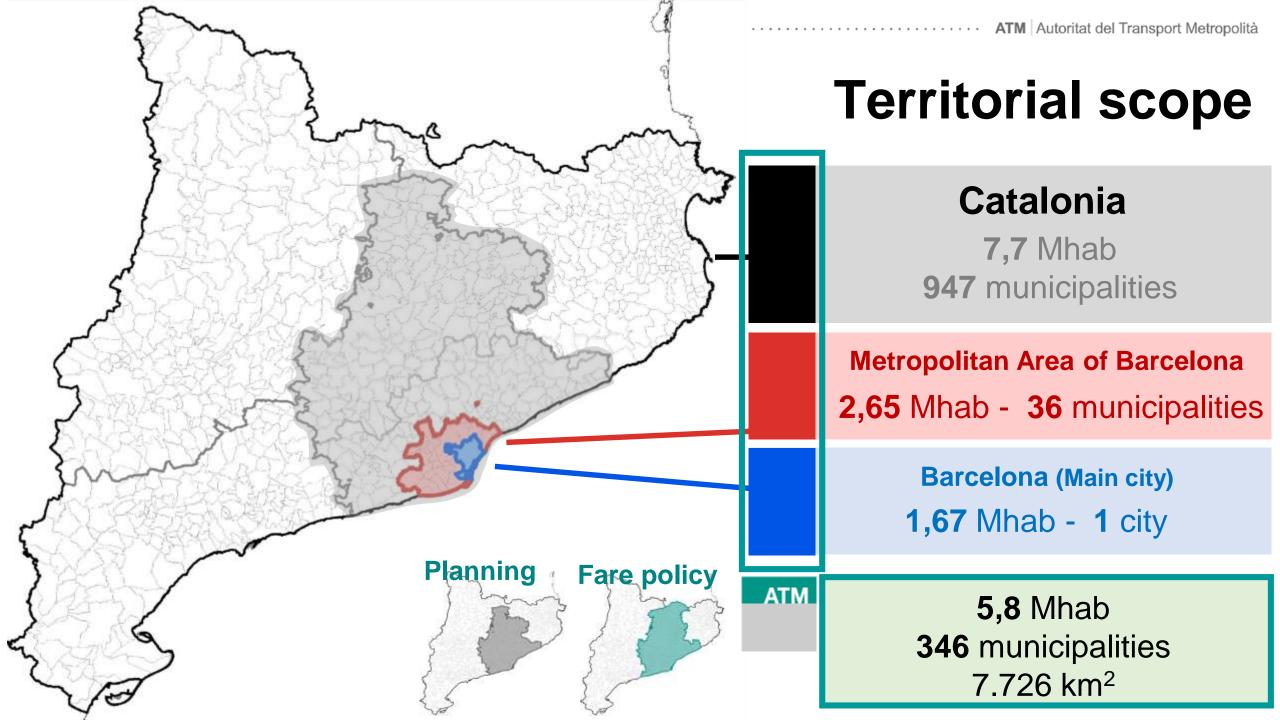
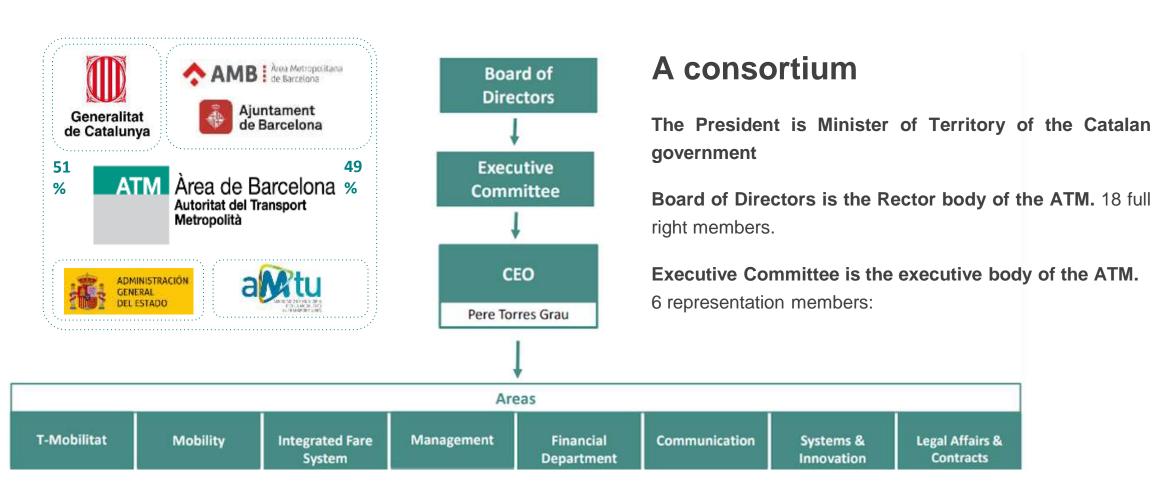




### **ATM Presentation**



# **ATM's Organisation**



Staff: 36 people Budget 2018: 1.433 M€

### **ATM's Main functions**

#### **Planning**

- Planning of infrastructures:
   Infrastructure Master Plan
- Planning and management of metropolitan mobility: Mobility Master Plan

#### **Management**

- Delegated management of the Metropolitan Tram network
- Government financing of the public transport system
- Program contracts with public transport operators

#### **Fare policy**

- Fare integration and subsequent fare policy
- Promotion of integrated communication of the fare System
- New fare digital platform: Tmobility



**BUS** 

# **Public transport system**

Metropolitan Transports of Barcelona (TMB, Public Operator): Urban bus of Barcelona. It is the 746 lines principal operator of the System. Administrated by the AMB.

15.805 km network

**Other transport operators** There are other 50 private operators (metropolitan, intercity or urban) that offer services in a concessional regime or other modalities, administrated by the Generalitat of Catalonia, the Metropolitan Area of Barcelona or the City Councils.

TIMB 26 VIRRELIAND TOTAL TOTAL





















# **Public transport system**

## RAILWAY OPERATORS



Metropolitan Railway of Barcelona (TMB, Public Operator): Metro of Barcelona. Administrated by the AMB.





Generalitat of Catalonia Railway (FGC, Public Operator): Metro and commuter trains. Public company owned by the Generalitat of Catalonia





Metropolitan Tram, (private operator, concessional system):
Administrated by ATM.

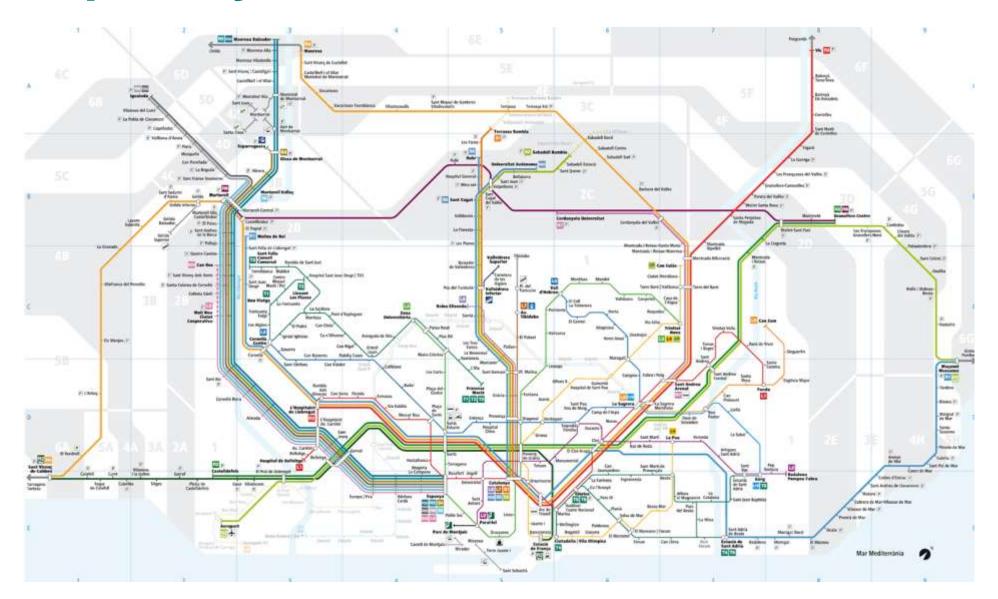




Rodalies of Catalonia (Renfe, Public Operator): Commuter train network. Public company of the General State Administration, the ownership of the service was passed to the Generalitat of Catalonia in 2010.

# Public transport system

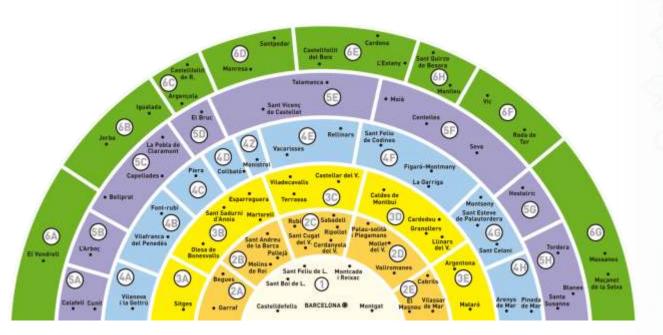
RAILWAY
NETWORK
23 railway lines
811 km

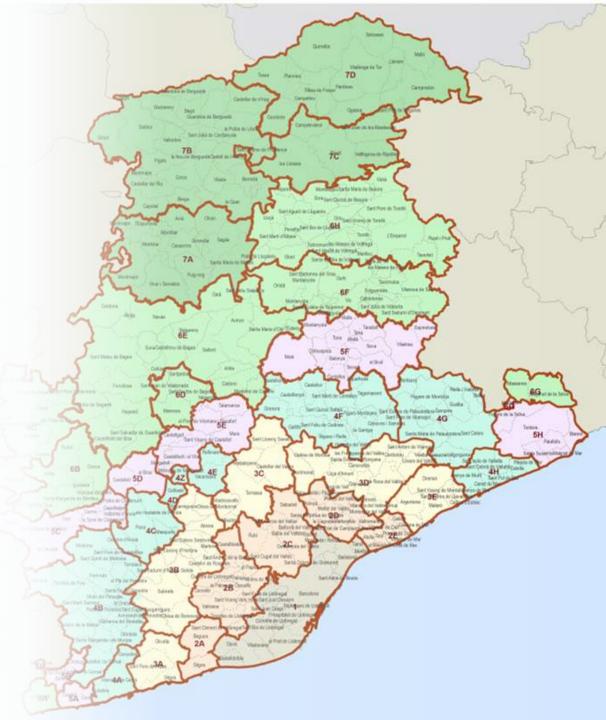


# **Integrated Fare System**

- **346** municipalities
- **5,7** M inhabitants

The **integrated fare** enables passengers to **pay for a single journey and make transfers on different means of transport.** This translates to considerable savings for all users.





# **Integrated Fare System**

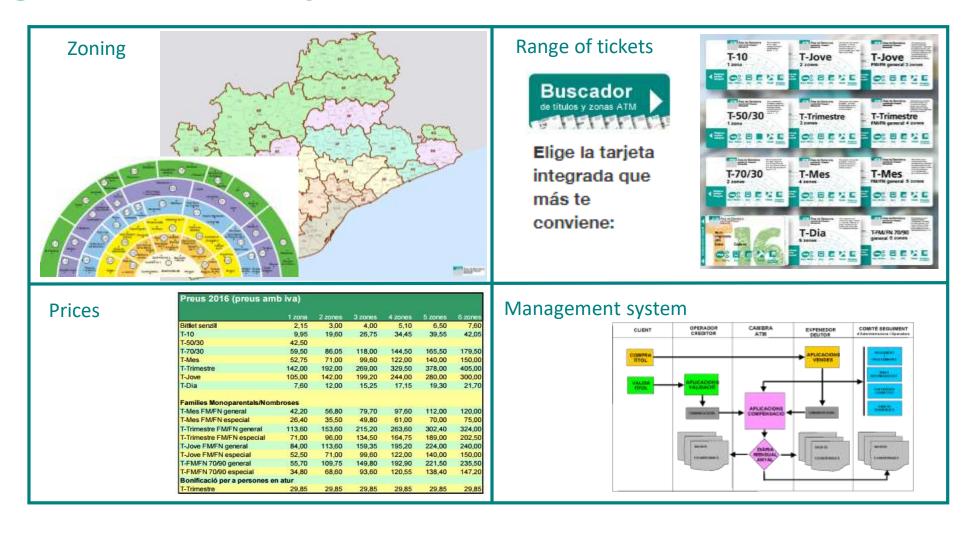
In order to establish an IFS two-level decisions need to be taken:

- 1. Transport **user** level:
  - ✓ Zoning of the territory.
  - ✓ Definition of the integrated tickets.
  - ✓ Establish the level of prices.
- **2. Transport system** level:
- ✓ Defining the management system.
- ✓ Coordination with the transport companies in order to accept the integrated tickets.

### **General System Principles**

- ✓ All transport tickets form part of the system, and the ATM is responsible for pricing
- ✓ Transport tickets valid for all modes and all operators
- ✓ The system needs to be easy to understand and accepted by the citizens.
- √ The range of integrated tickets is complete: multi-trip to trimestral pass
- ✓ **Social pricing** with integrated tickets for children, young people and families
- ✓ The tickets have to be **easy-to-buy**, wide commercialization network
- √ The user can change the transportation mode as many times as he needs during the trip, without any extra cost and for a period of time
- ✓ Appropriated level of financing coverage of the system

### **Integrated Fare System**



### **Zoning**

- √ Scope: 346 municipalities and 5,7 million of inhabitants.
- √ 7 sectorial areas divided depending on the distance and the interest poles (7th zone: partial integration).
- ✓ Area 1: it is composed of 18 municipalities, Barcelona and adjacent municipalities / 36 with flat rate
- ✓ The rest of the areas are concentric to the Area 1.
- ✓ Fare zone: defined by the intersection of the area and the sector.
- ✓ The regional capitals and the nearby municipalities belong to the same fare zone, respecting the attraction generated by the city.
- ✓ Every municipality belongs to a unique zone (except Sitges-Garraf and Les Botigues, adjacent to Castelldefels-).



# **Fare principles**

- ✓ The price is settled depending on the **number of zones** used.
- ✓ The maximum number of zones that can be charged in a trip is 6.
- ✓ Users loyalty: Reduction of the price when increasing the use of the system
- ✓ Validity of the tickets for a **period of time:** every ticket establish his own caducity



### **Fare principles**

- ✓ Transfer are not economically penalized. The user pays according to the zones, regardless of the modes of transport he uses.
- ✓ The maximum time allowed for transfers is 1h 15 min (between the first and the last validation) for 1 zone titles, and it increases 15 min for every extra zone.
- √ The fares are approved for the ATM Board of Directors.





### **Implementation**

In order to implement this project the following actions have been done:

- ✓ Negotiation and collaboration agreements with all the transport companies.
- ✓ Monitoring of the activity of the awarded companies in charge of the ATM tickets distribution.
- ✓ Monitoring and promotion of the compatible validation and selling systems in all the transport companies.
- ✓ Creation of the Chamber of income distribution. Definition and approval of the Chamber's regulation.
- ✓ Monthly liquidations for the tickets use among the integrated transport companies.
- ✓ Communication campaign in order to inform the citizens about the new integrated system use
- ✓ User service
- ✓ Definition and establishment of the integrated fare's management system.

# Integrated Fare's Management System (SGIT)

- √ The objective is to offer fare integration coverage in the following aspects:
  - Income distribution of the integrated tickets sales among the different transport operators.
  - Availability of statistics, useful for demand studies, calculation of fare increase and others.
  - Definition of new integrated tickets and fares.
  - Support to the ATM auditing functions.
- √The principal subsystems of the Integrated Fare's Management System (SGIT) are the following ones:
  - **✓** SGIT Communications
  - ✓ SGIT Converter
  - ✓ SGIT Distribution
  - ✓ SGIT Enquiries
  - ✓ SGIT Maintenance

### **Income Distribution**

- √ Creation of the Chamber of Compensation and income Distribution, in order to manage the information received from the Fare Integration management system, as well as to distribute the incomes.
- √The income distribution depends on the collected net fare and the modal chain of every trip, obtained from the intermodality index.
- √The follow-up bit has been implemented in order to obtain the transfer's information in every trip (intermodality index).

✓ Distribution rules examples:

Monomodal: R=T

Bimodal

Urban 1ª corona (Ru)+ Interurban (Ri): Ru= 50%TR

(or opposite direction) Ri= T-Ru

Trimodal

Interurban+ Interurban+ Urban 1ª corona:

(or opposite direction)

Ru= 48%TR

Ri1=(T-Ru)/2

Ri2=(T-Ru)/2

Where:

R= Collection for trip and passenger

Ru= Collection for an urban trip

Ri= Collection for an interurban trip

T= Net fare for trip

TR= Reference fare

# **Public transport supply**

	Routes	Network (km)	Trains km.10 <sup>6</sup>	Trains / HP
Urban (Metro TMB)	8	123	92,9	146
Suburban (FGC+Renfe)	23	666	123,1	85
Tramway	6	29	2,4	23
SUBTOTAL		740	_0400	054
	Routes	Network (km)	Buses on service	Age
Urban TMB	101	830	903	8,5
Suburban (Metropolitan buses)	115	1.452	652	9,2
Suburban (Other buses)	417	12.278	686	6,8
Other services	147	1.045	275	9,6



### **Demand**



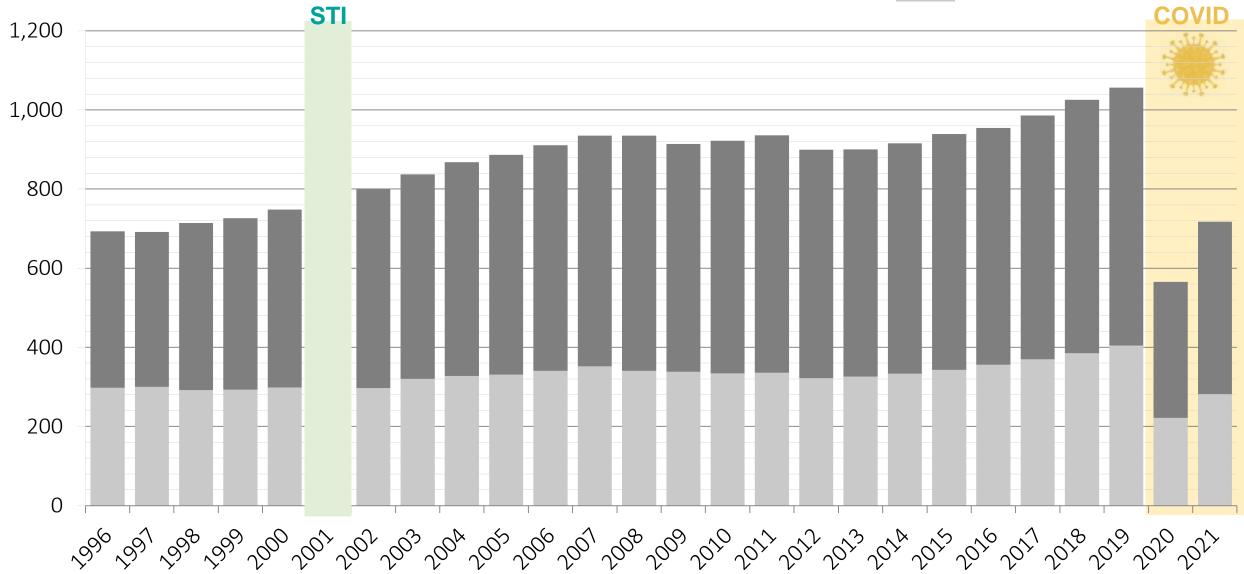
**TRAIN: URBAN & SUBURBAN** 

(Metro: 64% | TRAM: 4,5% | Suburban: 31,5%)



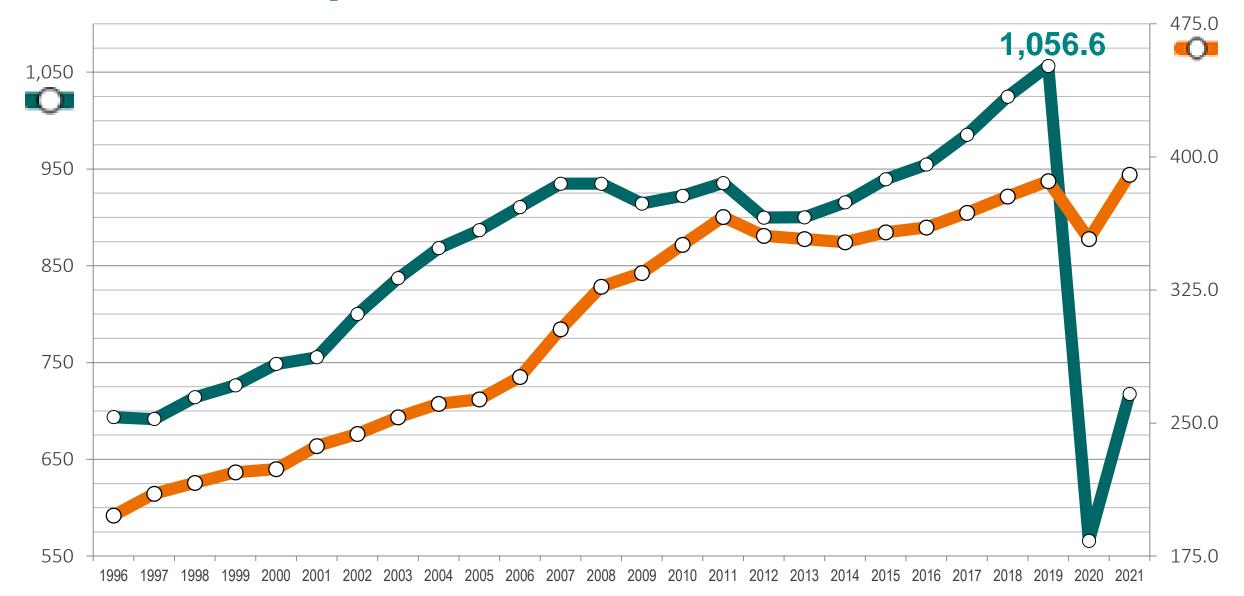
**BUS:** URBAN & SUBURBAN

(TMB: 52%)



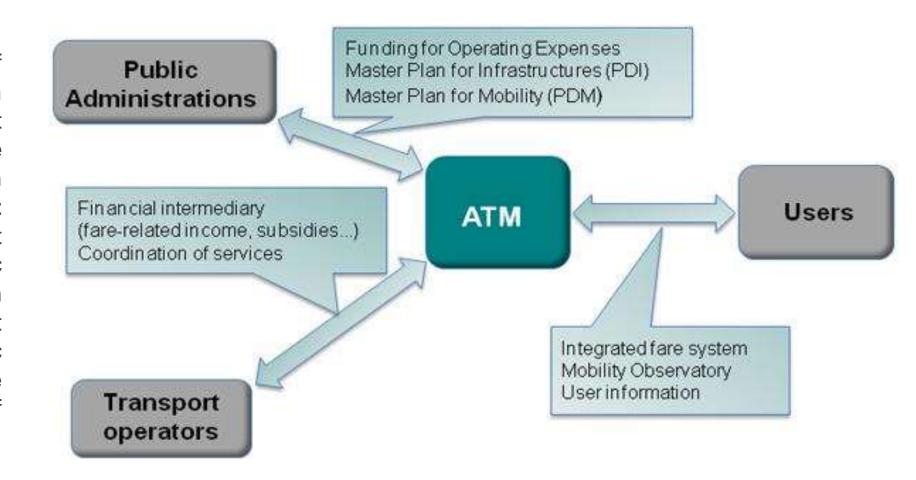
# **Public transport**





# Financing the transport system

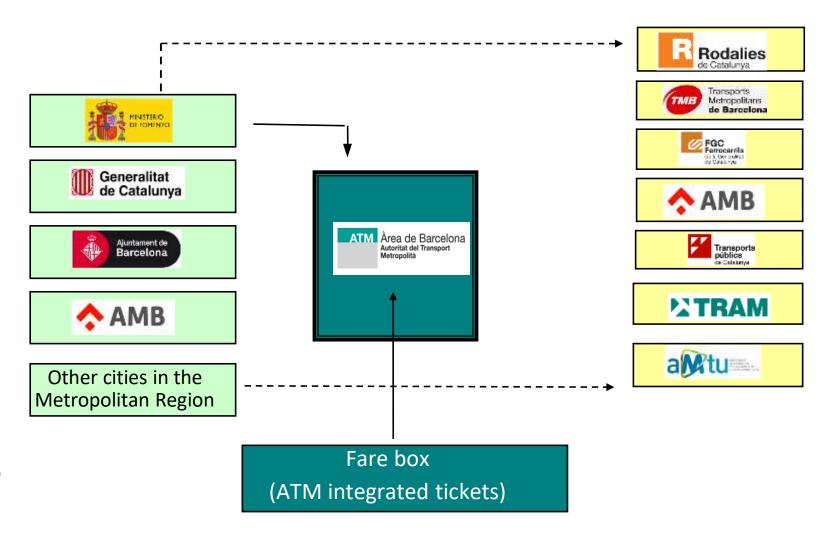
One of the primary duties of ATM (Metropolitan the Transport Authority) is to act as a financial hub for the entire metropolitan collective public transport **system**. This guarantees that there are sufficient economic resources to carry out an ongoing improvement in the public programme within transport the Metropolitan of Region Barcelona.



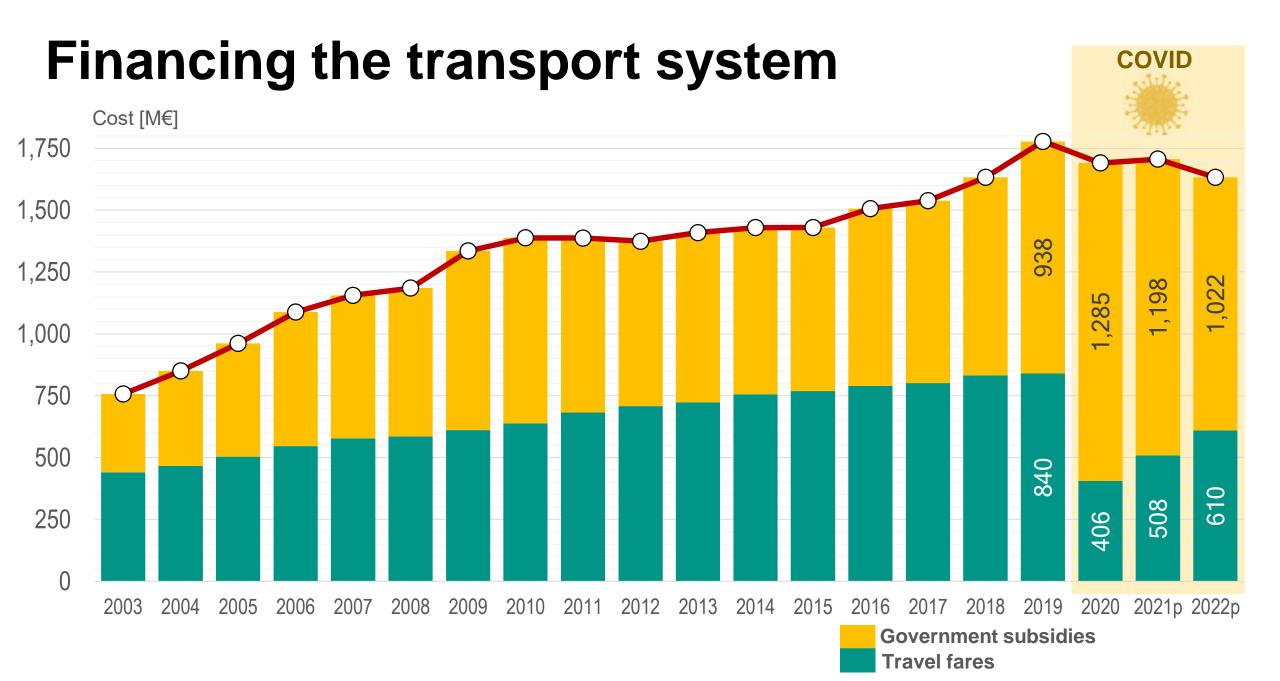
# **Public Transport financing**

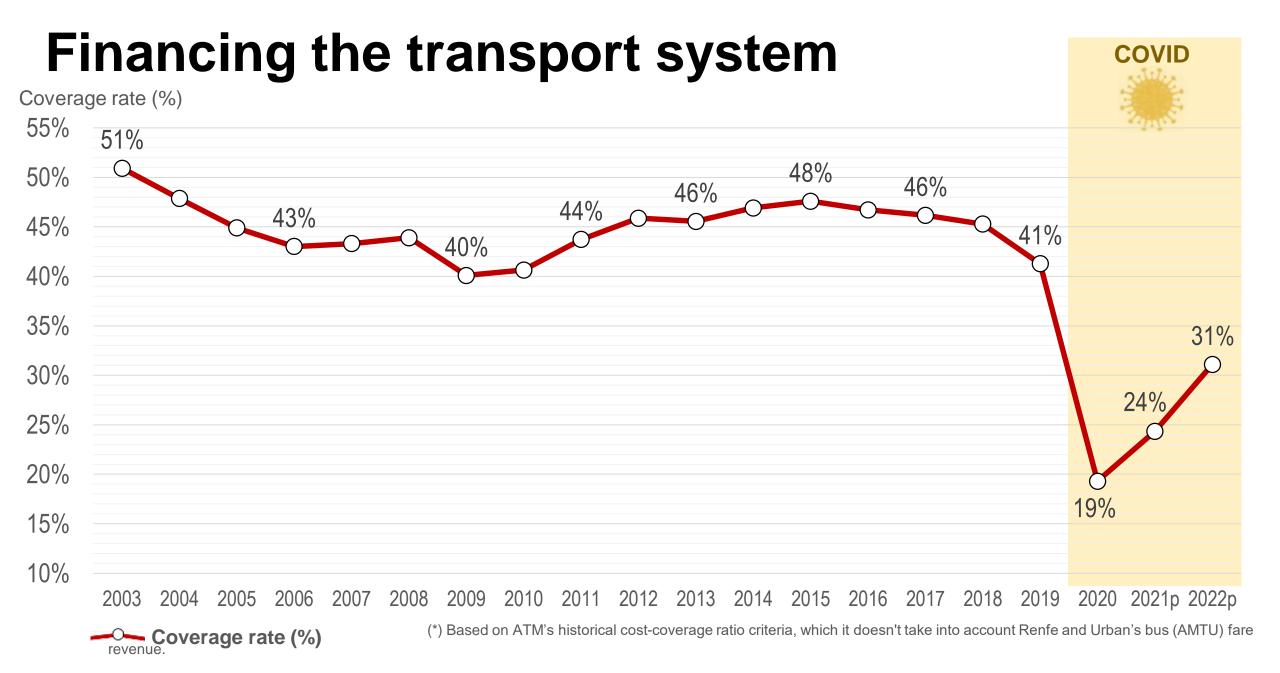
The Transport System is financed by the tickets sale and the contributions from the Administrations.

The ATM manage the contributions and distribute them between the operators, it works as a financing hub.

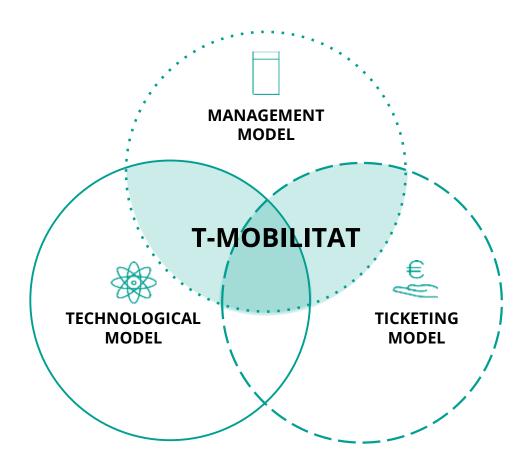


The ATM consortium works as a financial hub





### T-mobilitat key aspects



#### **Management model**

- Operational and role management based on ISO 24.014
- Mobility management and transport planning
- Citizen service (CAI)
- Mobility information (CGIT)
- Technology maintenance and operation (CGT)

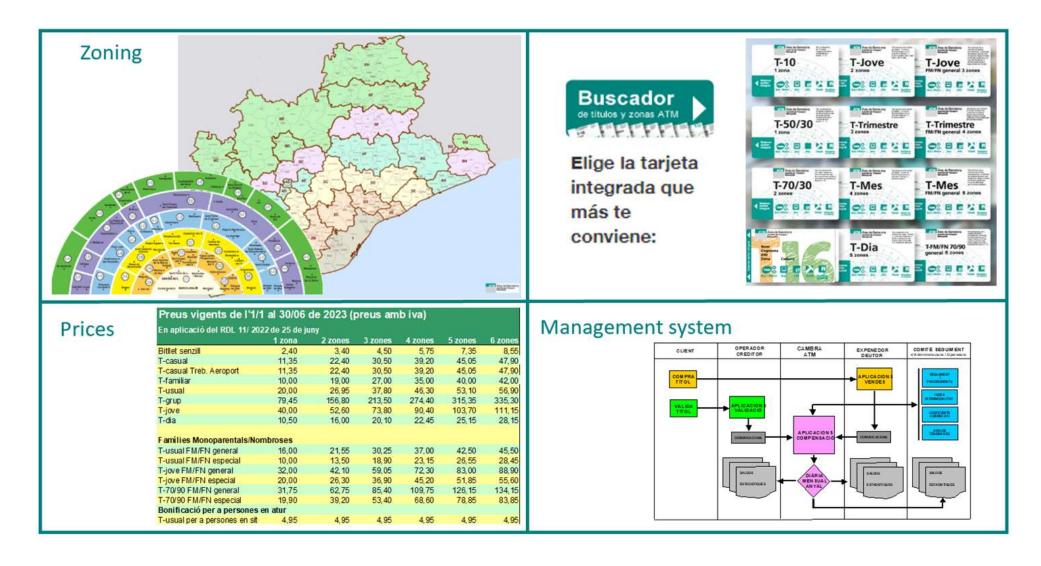
#### **Technological model**

- End-to-end security system
- High performance chip
- Scalable, interoperable and multi-operator solution
- Bank card simple ticket
- Mobile as a check terminal and NFC validator

#### **Ticketing model**

- Multi-operator-multi-user and multi-territory tariff system
- Mid-term mileage pricing
- Validation at departure (Check in Check out)
- Identification of users entitled to bonus (profiles)

### **Integrated Fare System**



Ticketing	Ticket*	
T-10	T-10/casual	unipersonal, timed ticket for 10 integrated journeys on all modes of transport, depending on the zones passed through (maximum charge 6 zones). Not valid at the Airport T1 and Airport T2 metro stations on line L9 Sud.
T-familiar 1 sort	T-familiar	Multi-person, timed ticket for 8 integrated journeys on all modes of transport, depending on the zones passed through (maximum charge 6 zones). Not valid at the Airport T1 and Airport T2 metro stations on line L9 Sud. Is for 30 consecutive days
T-grup	T- 70/30/grup (30 consecutive days)	Multi-person, timed ticket for 70 integrated journeys 30 consecutive days from the first time the ticket is stamped, on all modes of transport, depending on the zones passed through (maximum charge 6 zones).
T-usual	T-Mes/usual (30 consecutive days)	Personal, non-transferable ticket for an unlimited number of integrated journeys in the zones limited by the zone where the ticket is first stamped, on all modes of transport, depending on
The latest states		the zones passed through (maximum charge 6 zones). The ticket must be accompanied by an identity card, residence card or passport.
T-Dia	T-Dia	Unipersonal transport card with unlimited number of trips in the area delimited by the first validation for 24 hours after the first use. It allows, at most, a round trip and a return with origin or destination Metro stations T1 and T2 Airport of the South L9 Metro line.

<sup>\*</sup>With integrated tickets you can make up to **three transfers during the same journey**. You must stamp the ticket each time you transfer. The maximum time allowed to make a journey is 1 hours and 15 minutes for tickets covering 1 zone. This increases by 15 minutes for each additional zone.

# Mean characteristics

- aracteristics
- Limited journeys / unlimited
- Temporary
- Payment / free / Reduced/bonus
- Multimodal / monomodal
- Unipersonal/multipersonal
- Personal/anonymous
- Profile
- territory
- Ownership administration
- ...

# Range of tickets

#### **Discounted integrated transport tickets**











Name	N. trips	Validity	Who
T-16	Unlimited	Between ages 4 and 16, which expires on 31 December of the same year that they turn 16 years of age	A child from 4-16 (identified with an supporting document)
T-Jove	Unlimited	90 consecutive days from the fist time it was stamped	Young people aged under 25 (identified with an supporting document)
Large families	Range of tickets for la	arge families with discounts up to 20% in a go special category	eneral category and 50% in a
T- usual (Unemployed people)	T-usual at a T-10 (1 z	one) price. This ticket can be used by people benefit lower than the SMI.	receiving an unemployment

## Range of tickets

#### **Other integrated transport tickets**





T-verda



T-aire



T-10 Treb. Aeroport

Packs especiales para El Berguedà y El Ripollès

T-esdeveniment

Major improvements have been introduced in the discounted ticket system in recent years, the most significant of which are the following:



- The T-16 is a personalised travel card for children from 4 to 16 years of age (since 31 December of 16<sup>th</sup> birthday).
- It allows them free travel for an unlimited number of journeys on the public transport network that forms part of the integrated fare system, within the fare zone in which the user lives.
- Card issuing and management costs are paid by the user when the card is first issued.

 The T-jove travel card is a quarterly season ticket for young people up to 25 years old (now up to 30 and flat fare for all the territory).





- There is a new range of tickets for large families, with discounts on the price of personalised travel cards of 20% for general category and 50% for special category large families.
- These cards can only be obtained from the customer service centres of public transport operators.

### **Integrated Fare System**

A last year study (before the discounts of prices of September of 6 regions comparative (Barcelona i Amsterdam, Berlin, London, Madrid and Paris) i 7 another European areas with lesser extension (Girona, Lleida, Tarragona and Edinburg, Newcastle, Orleans i Vilnius).

In general Catalonian regions are among the cheapest. The difference in price with the rest of the de regions (weighted by cost of living) are of the order of 3 to 5 times higher.

Catalonian regions have the greatest variety of social fares: Catalonian regions Catalans and Paris are the only ones that offer discounts for all social categories.

El percentage of use of social and reduced fares in public transport varies between 8%, in case of Madrid or Lleida, since 40% in Paris. Barcelona ranks as the 3rd city with 30%. (attached graphics)

Barcelona and Paris are the only cities that offer transport tickets to fight against environmental pollution

**Barcelona es ranked in first position with two tickets**: the firts one allows three years of free travel in exchange for removing a polluting car. The second one allows especial round-trip prices in a pollution day.

All transport tickets are subsidized and the price coverage is of the order of 27%

Figura 4-11 Preu minim per viatge utilitzant el millor bitflet disponible en funció del nombre de viatges mensuals realitzats per l'usuari. Font: Institut Cerdà (2022) a partir de dades de les respectives autoritats del transport.

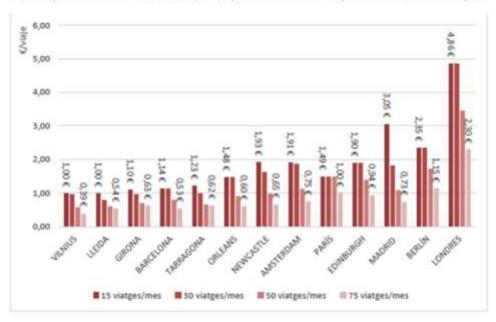
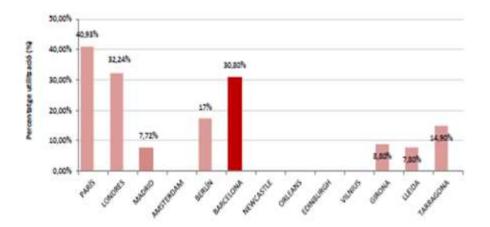


Figura 5-1 Percentatge d'utilització de títols socials sobre el total de validacions del sistema. Font Institut Cerdà (2022) a partir de dades de les autoritats del transport.



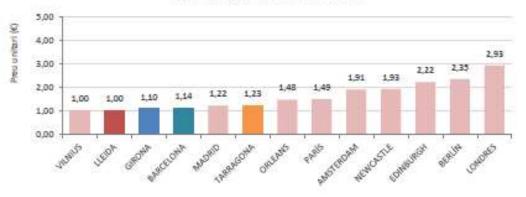
### 1. T-casual / T-10

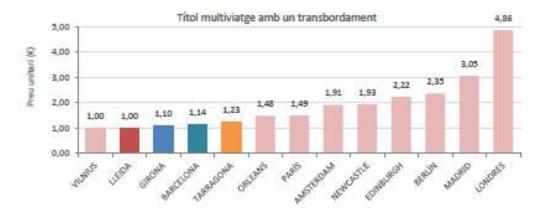
- unipersonal, timed ticket for 10 integrated journeys on all modes of transport, depending on the zones passed through (maximum charge 6 zones). Not valid at the Airport T1 and Airport T2 metro stations on line L9 Sud.
- Prices: with a cost for travel for the client of 1,00€ in Lleida, 1,10€ in Girona, 1,14€ in Barcelona and 1,23€ in Tarragona, it places to Catalonian Regions in the first places with a cheap ticket of multiples trips.

Catalan regions lead the classification as the cheapest regions compare to others in terms of cost of living.

Is also the main and cheapest alternative for young people with less than 35 trips/month and is cheaper than reduced fares for young people compare to other regions such as London or Amsterdam

#### Titol multiviatge sense transbordament





#### Observacions:

- A Amsterdam, preu calculat amb la tarifa balance, utilitzant com a hipòtesi un trajecte de 5km.
- A Vilnius no existeix títol multiviatge; s'ha utilitzat el bitllet senzill per realitzar la comparativa de preus.

### 2. T-usual-abonament mensual

Abonaments mensuals (monthly ticket)

Personal, non-transferable ticket for an unlimited number of integrated journeys in the zones limited by the zone where the ticket is first stamped, on all modes of transport, depending on the zones passed through (maximum charge 6 zones). The ticket must be accompanied by an identity card, residence card or passport.

Before the 50% discounts, Barcelona had reduced the prices in 25% of T-usual and T-jove.

This fact make Barcelona the cheapest of the Catalonian regions.

At €40, Barcelona is the second region with the cheapest monthly ticket after Vilnius (This region does not have a monthly pass and we compare different types of trips in a month)

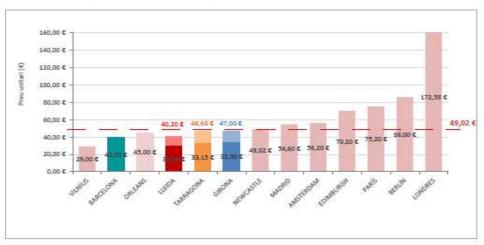
On the other hand, Lleida, Tarragona and Girona are in the 4th, 5th and 6th regions, respectively, with more monthly financial benefits. However, for users of the T-50/30 (€30.50, €33.15 and €35, respectively), the Catalan regions occupy the 2nd, 3rd and 4th cheapest prices in Monthly Validity Tickets ( rest of Vilnius per day, for the stated conditions) and Barcelona remaining in 5th position.

Girona, Lleida and Tarragona had a very competitive single ticket compared to the rest of the regions only after Vilnius.

The Catalan regions of Lleida and Barcelona in first place, and Girona i Tarragona in second, are the cheapest regions in terms of cost of living.

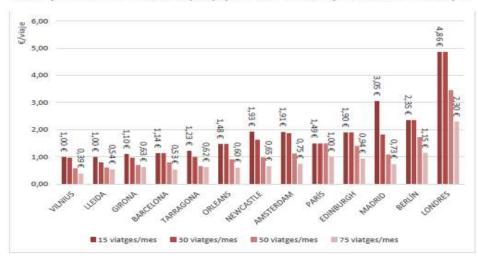
• If we compare with the price of **T-50/30 of Girona, Lleida i Tarragona**, this situation in price is still better

Figura 4 Preu d'un abonament mensual a les regions considerades a l'estudi. Font: Institut Cerdà (2022) a partir de dades de les respectives autoritats del transport.



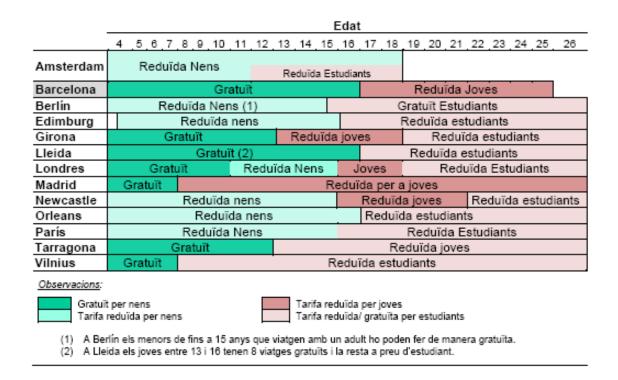
Observacions: Girona, Lleida i Tarragona tenen una doble columna ja que es visualitzen els títols T-50/30 (més econòmics i amb viatges limitats a 50) i el títol T-Mes. També Es visualitza la mitjana (excloent els dos valors extrems) que és igual a 49,02€.

Figura 4-11 Preu mínim per viatge utilitzant el millor bitllet disponible en funció del nombre de viatges mensuals realitzats per l'usuari. Font: Institut Cerdà (2022) a partir de dades de les respectives autoritats del transport.



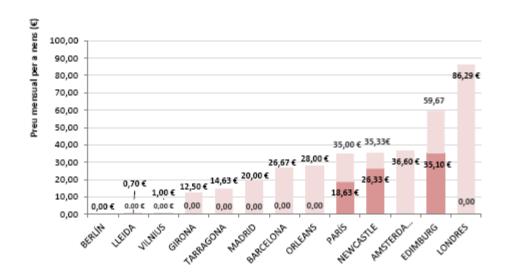
# 3. Fares for young people (1/2)

Children under the age of 4 travel free of charge in all the analyzed regions; but Barcelona, Girona, Lleida, Tarragona, London, Madrid and Vilnius are the only regions of the 13 studies that allow children over 4 years to travel for free. Of these 7, Barcelona and Lleida are the ones that offer free transport for children up to a more advanced age (ends December 31 of the year in which child turns 16 years), Girona and Tarragona (12 years), London (10 years) and Madrid and Vilnius (7 years)



Thanks to free transport for children, Barcelona, Girona, Lleida, Tarragona, London, Berlin, Madrid and Vilnius lead the ranking of the cheapest cities. In order of magnitude, the regions with the highest public transport prices relative to the cost of living are Edinburgh, Amsterdam, Newcastle, Orleans and Paris.

Figura 5-2 Comparativa del preu equivalent a un abonament mensual amb tarifa reduïda per a nens. Es mostra també el valor de la tarifa aplicada un cop superat el llindar d'edat per a nens fixat a cada regió. Font: Institut Cerdà (2022) a partir de dades de les respectives autoritats del transport.



#### Observacions:

- Mens
- Tarifa aplicable a partir de l'edat límit per nens.
- \* A Berlin els menors de 15 anys si van acompanyats d'un adult poden viajar gratuïtament.

# 4. T-jove. Fares for young people (1/2)

Intermediate position in transport fares for young people, with a price below the average and reaching up to 25 years (now is up to 30 and flat fare)

Practically all regions analyzed offer a discount for young people. Berlin stands out with a free student-only pass.

Lleida ranks 2nd, Girona 4th, Tarragona 5th and Barcelona 7th, with cheaper prices than Orleans, Paris, Newcastle, Amsterdam, Edinburgh and London (16-18 years) but more limited by age or access requirements of the students Four of the regions analyzed, Barcelona, Lleida, Tarragona and Madrid, apply discounts exclusively by age, without discriminating by occupation of the young person and, therefore, covering a larger population area.

Barcelona, Lleida and Tarragona are the regions that offer the bonus until the age of majority: under 25 without discrimination by occupation.

Five regions offer student-only discounts: in Berlin, it's free for students. In Orleans, discounts apply to students over the age of 16. In Edinburgh the reduced rate applies to students and in Vilnius the discount only applies to primary school pupils.

Figura 6 Comparativa del preu equivalent a un abonament mensual amb tarifa reduïda per a joves i/o estudiants. Font: Institut Cerdà (2022) a partir de dades de les respectives autoritats del transport.

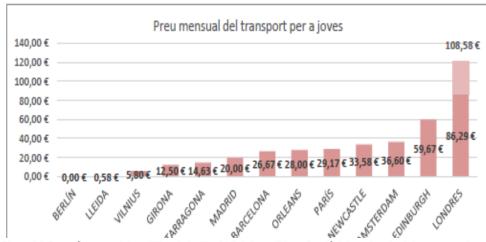
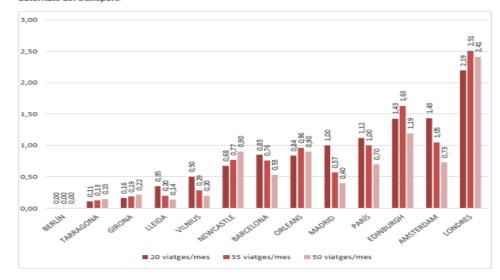


Figura 5-9 Preu mínim per viatge utilitzant el millor bitllet disponible en funció del nombre de viatges mensuals realitzats per un usuari jove i/o estudiant. Font: Institut Cerdà (2022) a partir de dades de les respective autoritàts del transport



# 5. Títols Família Nombrosa – Monoparental (large families and single parent)

- Good situation in relation to the offer of transport tickets for large families (also in Catalonian Regions for single parents)
- It is only offered in 6 of the 13 regions studied.
- Two possibilities are offered: a monthly tickets (T-usual) but also a quarterly tickets (T-70/90) and T-jove.
- Comparing the prices of the annual prices, Barcelona is in first place, ahead of Lleida, Tarragona, Girona and Madrid.
- If we compare with Paris, the values are equal to around 44 monthly trips, therefore, Barcelona offers a better position considering that the standard user normally makes two trips a day, on working days. Madrid with its annual pass is offering a lower position in large families, equaling Paris with around 60 monthly trips.
- Barcelona offers a monthly pass, a quarterly pass with limited (T-70/90) or unlimited trips, and also discounts for the T-Jove and T-usual pass with prices of 20% / 50% off.

### 6. Reduced rates for the elderly and unemployed

All analyzed regions offer reduced prices for seniors (in some cases, only under certain income conditions).

The discounts offered range from 20%, in the case of Berlin, to free in the case of Paris, Barcelona, Brussels and London.

London is the only region to offer free to all users, regardless of income level.

Barcelona and London are the regions with the widest age range (from 60 and with the best conditions (free).

Barcelona is the only region that offers a multi-trip ticket.

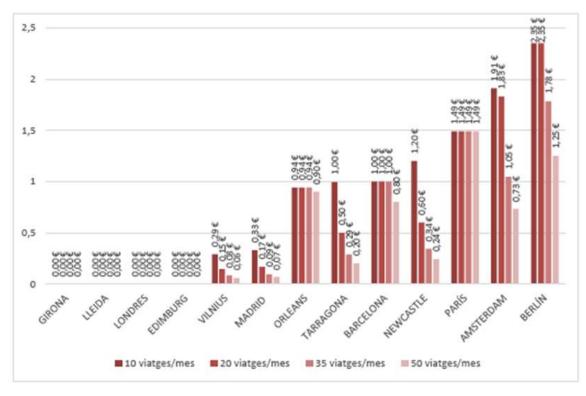
In Barcelona, this title makes it possible to better adapt transport expenditure to the mobility needs of the elderly, according to surveys that indicate less than 4 weekly journeys by public transport for over 65s.

According to this mobility guideline, Girona, Lleida are at the top of the classification with a free pass, and Tarragona, in 5th position with a very cheap annual pass.

Barcelona, on the other hand, occupies the 8th position with a 60% discount.

Weighted by certain indicators of the cost of living, Barcelona is in the 5th most expensive position. Tarragona remains in 6th position, behind Berlin, Amsterdam, Paris and Orleans. Lleida, Girona, together with London and Edinburgh are the best positioned as they offer free transport..

Figura 5-15 Preu mínim per viatge utilitzant el millor bitllet disponible en funció del nombre de viatges mensuals realitzats per un usuari de la tercera edat. Font: Institut Cerdà (2022) a partir de dades de les respectives autoritats del transport.



Barcelona, Girona, Lleida and Tarragona offer special fares for the unemployed with a low level of income (a segment also considered in Berlin, Orleans, Paris and London)

### 7. Tarifes ambientals

#### **Environmental tariffs**

In order to pursue reducing the negative effects of urban transport on public health and the environment.

Paris and Barcelona are the only two cities, of those studied in this report, that offer some special transport title in order to combat pollution and climate change through public transport.

Paris has an anti-pollution transport ticket for episodes of high pollution with a daily ticket like that of Barcelona with the T-aire

On the other hand, there is the T-verda a card which becomes a free public transport ticket for the whole integrated area (6 tariff crowns). It is a personalized integrated card issued annually for 3 years in exchange for deregistering a polluting vehicle

### annex. Other aspects

Barcelona is committed to an accessible, sustainable and safe mobility system.

**Currently, in Barcelona:** 

100% of the FGC network is accessible,

92.72% of the subway,

All TMB buses and 100% of the AMB network too.

On the other hand, since 2012 Barcelona's buses have been at the forefront of Europe for low emissions of harmful gases and particles.

TMB's commitment to reducing emissions and decarbonisation will mean that by 2030 more than half of the buses will be electric

The commitment is that in the next four years, 100% of the additions to the fleet (410 units) will be clean vehicles and 62% zero emissions.

This percentage goes beyond the European guidelines, which establish quotas of 45% and 22.5%, respectively.

ATM of Barcelona (2020) new pdM 2020-2025, relevance and emphasis on a series of transversal aspects that affect future mobility planning, such as: people's health, the gender perspective in mobility, the social sphere and accessibility aspect of mobility, and digitization and mobility 4.0.

The rest of the Catalan regions are also betting on an accessible, sustainable and safe mobility system. Some examples are:In September 2022, Territori put into circulation the first Km 0 biogas bus, on the express.cat line e3 and on the regular line L1011, which connect Montsià and Baix Ebre.

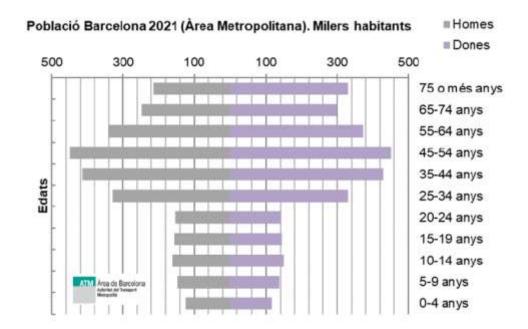
The on-demand public transport service called Clic.cat, this service was launched in the province of Girona in a pioneering way in October 2019.

In May 2022, the Municipal Transport Company (EMT) of Tarragona took a fundamental step by incorporating ten buses with hybrid technology.

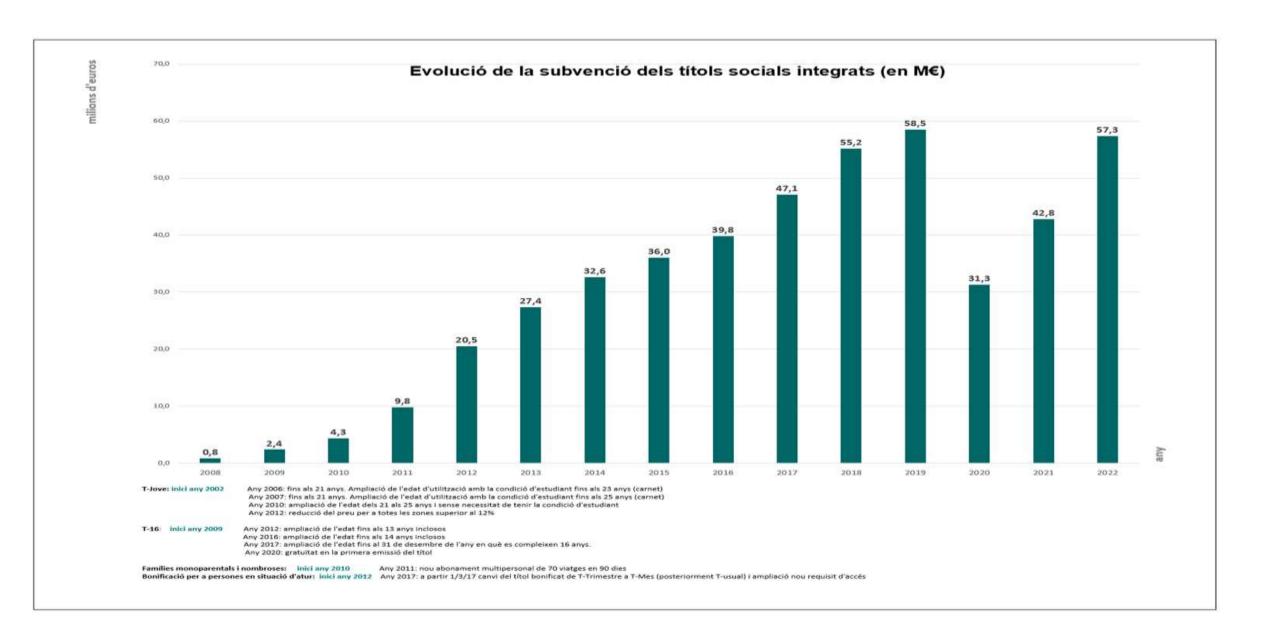
n this context, these aspects and attributes will increase the value of the service behind the fares of the public transport system in Catalonia.

### annex. Població i ús

Sexe	Edat	Mobilitat activa	Transport públic	Vehicle privat	Total
	16 a 29 anys	48,7%	18,7%	32,5%	100%
Harris	30 a 64 anys	45,5%	6,7%	47,7%	100%
Homes	65 anys i més	67,3%	5,8%	26,9%	100%
	Total	50,1%	8,4%	41,5%	100%
	16 a 29 anys	48,0%	28,2%	23,7%	100%
D	30 a 64 anys	54,2%	13,0%	32,8%	100%
Dones	65 anys i més	72,9%	8,7%	18,4%	100%
	Total	55,2%	11,5%	33,3%	100%



### Annex. Cost títols socials integrats ATM Barcelona







#### **ATM Presentation**

Don't hesitate!

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