INDIRECT MANAGEMENT OF BUS TRANSPORT SERVICES IN THE METROPOLITAN AREA OF BARCELONA
TERRITORY

CATALONIA

7.5 million people
32,108 km²
236 Inhabitants per km²

METROPOLITAN AREA OF BARCELONA

3.2 (42.7%) million people
636 (1.9%) km²
5,093 Inhabitants per km²
Local public administration

Established through the Law 31/2010 of the Catalan Parliament

Governed by a Metropolitan Council with representation of 36 municipalities
COMPETENCIES

- Underground public transport
- Collective urban public transport on surface
- Regulation of the taxi service
- Traffic management in the basic metropolitan road network
- Promotion of sustainable mobility
- Planning and management of the culture and tourism transportation
- Approval of the Metropolitan Urban Mobility Plan
PROVISION MODELS

**Collective urban public transport on surface**

**Direct Management**
- Public company
- No tendering process
- Public company
- AMB owns 100% of shares
- High degree of autonomy

**Indirect Management**
- Private companies
- Awarded through a tendering process
- Publicity and competition principles
- Private companies
- AMB carries out the whole process of planning, contracting and supervising the service
## Data

<table>
<thead>
<tr>
<th>Bus Network</th>
<th>TXM</th>
<th>AMB</th>
<th>AMB</th>
<th>AMB</th>
<th>AMB</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of lines</td>
<td>101</td>
<td>91</td>
<td>20</td>
<td>2</td>
<td>2</td>
<td>216</td>
</tr>
<tr>
<td>Network length (km)</td>
<td>1,659</td>
<td>1,985</td>
<td>807</td>
<td>65</td>
<td>49</td>
<td>4,564</td>
</tr>
<tr>
<td>Trail length (M km Useful year)</td>
<td>39.6</td>
<td>28.9</td>
<td>5.8</td>
<td>4.3</td>
<td>1.1</td>
<td>79.7</td>
</tr>
<tr>
<td>Buses fleet</td>
<td>1,140</td>
<td>519</td>
<td>125</td>
<td>30</td>
<td>40</td>
<td>1,854</td>
</tr>
<tr>
<td>Average age (years)</td>
<td>9.15</td>
<td>9.46</td>
<td>10.62</td>
<td>9.30</td>
<td>7.31</td>
<td>9.22</td>
</tr>
<tr>
<td>Adapted buses</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>Year passengers (2018, in M)</td>
<td>202.91</td>
<td>78.20</td>
<td>8.98</td>
<td>5.86</td>
<td>2.80</td>
<td>298.75</td>
</tr>
</tbody>
</table>

- **Public Transport Provision Models**

2018
INDIRECT MANAGEMENT

- Focus on the definition of contract: the opportunity to achieve our objectives
  - Sustainable Mobility
  - Efficiency
  - Quality
  - User requirements

- New Public Procurement Law 9/2017:
  obligation to incorporate social and environmental criteria

- Maximum contract length: 10 years (regulation 1370/2007)
Indirect Management
Private companies

**CONCESSION CONTRACTS**
- AMB i Bus Metropolità
- AMB i Nitbus

- Specific transport services
- No deficit
- Payment of a fee to the AMB
- Full risk on cost and revenues

**SERVICE CONTRACTS**
- AMB i Aerobús
- AMB i Barcelona City Tour

- Regular services
- AMB subsidizes the deficit
- Contribution regulated by contract
- Full risk on cost and partially on revenues
SERVICE CONTRACT: THE LAUREÀ MIRÓ CASE
Background

- **Heterogeneous service**: 11 lines in operation with different basic characteristics (geographical area, length, demand, speed)

- **Territorial scope**: 4 municipalities and their connections with Barcelona (Esplugues de Llobregat, Sant Just Desvern, Sant Feliu de Llobregat and Molins de Rei)

- In 2018 the Laureà Miró service transported **2,029,205 passengers** with a yearly output of 884,651 km

In May 2018 a new tendering process was launched:

- **Service contract** according to the new Public Sector Procurement Act
- **7 years** contract, with a potential extension for a maximum period of **3 years**
Service definition

- **Base service**: 960.536 km / year. Routes, stops, calendar, number of expeditions and frequencies are defined in the ToR.

- **Base service variations**: up to +/- 10% of the contract price (not considered contract modification)

- **Optional service**: new line (L30). Up to 287.853 km / year and + 7 vehicles. Cap at 20% of the contract price
Fleet

- **Minimum fleet requirement**: 29 vehicles

- **Subrogated fleet**: 20 vehicles + 7 vehicles (provisional)

- **New fleet to be provided by the successful bidder**: 9 vehicles, according to technical specs included in ToR (hybrid)

- **Transition period** (provisional vehicles): 9 months from start of operation

**Additional obligations:**

- **Ascription to the contract**

- **“Half-life adequacy”** > 7 years old

- **Fleet renewal** < 14 years old

- Fleet acquisition according to public procurement rules (Law 31/2007)

- When finalizing the contract, all vehicles will revert to AMB
Equipment

- **On board equipment** is mandatory by contract and must be provided by the successful bidder:
  - GPS + Intelligent Transportation Management System (ITMS)
  - Information screens on board
  - Sales and validation system
  - New video surveillance system
  - New passenger counting system

- When finalizing the contract, all on board equipment **will revert to AMB**

- The successful bidder provides other auxiliary installations (depots, offices...) and vehicles, without reversion obligations.

- The successful bidder must provide **toilet facilities** for drivers at line ends.
Sustainable Mobility obligations

The successful bidder:

- Must provide a **new fleet** of 9 **hybrid vehicles**
- Must **renew the fleet** (< 14 years old)
- Must implement an **Environmental Plan focused on reducing**:
  - energy consumption
  - air and noise pollution
- Must manage **all the activities under environmental criteria**: vehicles, bus depot, waste, etc.
- **Compulsory environmental certification**: EMAS
Other obligations

The successful bidder:

- Is responsible for information on all stops, as well as for maintenance and renewal of infrastructure on some stops.

- Must subrogate the current staff. The reduction in number and characteristic of current staff will be considered a breach of contract.

- Must join the Integrated Fare system (ATM).

- Is responsible for information and user attention through different channels.

- Must implement different plans: Promotion Plan, Training Plan, Service supervision Plan.
Other obligations

The successful bidder:

- Has to deliver **periodic reports to AMB** and allow direct access to ITMS.
- Has to keep a **separate accounting** for the service and carry yearly financial **audits**.
- **To ensure the proper execution of the service**, the contract includes possible penalties.
Quality indicators

The contract enforces several quality indicators:

- **Punctuality Index (IP):** A bus is punctual at one stop if the difference between scheduled time and real time is less than 3 to 5 minutes. It is obtained from data provided by the Intelligent Transportation Management System (ITMS).

- **Bus vehicle quality Index (IQA):** Evaluates on-board information, maintenance, cleaning, security and customer support. It is obtained with the technique of mystery shopping.

- **Bus stop quality index (IQP):** Evaluates the quality of the stops (information, maintenance and cleaning). It is obtained from fieldwork.

- **Dynamic information Index (IQI):** Evaluates the quality of ‘on time’ information. It is obtained from data provided by the Intelligent Transportation Management System (ITMS).

- **Claims response time Index (IQR):** Measures the % of operator answers to complaints within 10 days.

- **Customer Satisfaction Index (ISC):** Evaluates bus user satisfaction. It is obtained from surveys to the users, which evaluates the importance and satisfaction of the most important items of the service.
Economic regime

- Net cost with reduced demand risk

Cost

- Bonus / Malus
- Investment
  - Initial
  - Contract life
- Operation (Cuo x Kmu)

Income

- Tariff income
- Other income & subsidies
- Compensation

Net cost with reduced demand risk
• **Net cost with reduced demand risk**

![Diagram showing Economic regime]

- **Cost**
  - Bonus / Malus
  - Investment
    - Initial
    - Contract life
  - Operation (Cuo x Kmu)

- **Income**
  - Tariff income
  - Other income & subsidies

- **Payment pax**
  - Demand target
  - Adjusted Demand target

- **Demand**
  - Real demand

- Year 1, 2, 3
**Economic regime**

- **Net cost with reduced demand risk**

Diagram showing cost and income with various components such as:
- **Bonus / Malus**
- **Investment**
  - Initial
  - Contract life
- **Operation** (Cuo x Kmu)
- **Other income & subsidies**
- **Tariff Income**

Graphical representation includes:
- Payment pax
- Real demand
- Adjusted Demand target
- Demand target
- Year 1, 2, 3
Tendering process

- In October 2016 a prior information notice was published in UE Official Journal.
- In May 2018 the tendering notice was launched.
- The new service started in March 2019.
- Awarding criteria:

<table>
<thead>
<tr>
<th>Criterion</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Non-formula criteria</td>
<td></td>
</tr>
<tr>
<td>1.1 Service operation</td>
<td>15</td>
</tr>
<tr>
<td>1.2 Service quality</td>
<td>20</td>
</tr>
<tr>
<td>1.3 User relationship</td>
<td>5</td>
</tr>
<tr>
<td>2. Formula criteria</td>
<td></td>
</tr>
<tr>
<td>2.1 Unitary Cost</td>
<td>38</td>
</tr>
<tr>
<td>2.2 Payment passenger target</td>
<td>11</td>
</tr>
<tr>
<td>2.3 Environmental criterion</td>
<td>11</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>
CONCESSION CONTRACT: THE AEROBUS CASE
Since 2009, AMB provides a shuttle bus service between Barcelona and the Prat de Llobregat Airport:

- **High frequency** express service
- Working **365 days a year**
- **Specifically tailored** to the Airport's demand (information, luggage, seated passengers)
- **Two lines** in operation: A1 and A2 (Plaça Catalunya - Terminals T1 and T2)
- By 2018 the Aerobús service transported **5,861,630 passengers** with a yearly output of **4,307,510 km**

**Background**

In November 2017 a **new tendering process was launched**:

- Public service management contract, in the form of **concession** (Public Sector Procurement Act)
- **6 years** contract, with a potential extension for a maximum period of **2 years**
Service definition

- The **two lines** (A1 and A2) are maintained

- It is planned to extend the current service hours (from 5:30 to 1:00) to a **24-hour service**

- Minimum frequencies in daytime **5' (A1) and 10' (A2)**

- Obligation that all travelers who access the service at the terminals **travel seated**

- Limitation of travelers' queues at stops to a **maximum of 65 people waiting**

- The successful bidder expressly agrees to incorporate any additional means required to provide the service according to these requirements
The successful bidder will provide the vehicles needed for the service, with a **minimum number of 30 new vehicles** at the time of starting the service.

When finalizing the contract, the vehicles will revert to AMB.

The vehicles will have similar characteristics to the current ones: a length of **15 m approx.**, a minimum of 45 seats and space for a wheelchair.

The vehicles may be **hybrids (diesel / electric) or electric**.

The vehicles have to go through a **“Half-life adequacy” > 7 years old**.
Equipment

- **On board equipment** is mandatory by contract and must be provided by the successful bidder:
  - **GPS + Intelligent Transportation Management System (ITMS)**
  - **Information screens on board**
  - **Sales and access control system**, including on-board payment with contactless devices (credit card and / or mobile phone)
  - **New video surveillance system**
  - **New passenger counting system**

- When finalizing the contract, all on board equipment will revert to AMB

- The successful bidder can provide **additional equipment**

- In order to facilitate the operation, the successful bidder must have a **depot in the metropolitan area** (radius <20 km)
Other obligations

The successful bidder:

- Is responsible for information, maintenance and renewal of infrastructure on all stops.

- Must subrogate the current staff. The reduction in number and characteristic of current staff will be considered a breach of contract.

- The successful bidder will be responsible for the distribution and commercialization of Aerobus tickets through different channels and for the information and attention to the user.

- To promote the service, the successful bidder will have to develop a Promotion Plan, renew the image of the service, develop a Web and App of the service and rent advertising spaces at the Airport.

- Must implement different plans: Training Plan, Environmental Plan, Service supervision Plan.

- Has to deliver periodic reports to AMB and allow direct access to ITMS.

- Has to keep a separate accounting for the service and carry yearly financial and ticket audits.
Quality indicators

The contract enforces several general quality indicators:

- **Punctuality** Index (IP)
- **Bus vehicle quality** Index (IQA)
- **Dynamic information** Index (IQI)
- **Claims response time** Index (IQR)
- **Customer Satisfaction** Index (ISC)

Specific quality indicators for the Aerobus contract are:

- **Queue** Index (IQC): Measures the length of queues at terminal stops
- **Passenger occupancy** Index (IQV): Measures percentage of expeditions with all travelers seated
- **Service regularity** Index (IQE): Measures percentage of planned expeditions effectively performed
Economic regime

- The provision of the service is at the **full risk** of the successful bidder

- The **evolution of service rates will be determined by AMB** and may not be less than the evolution of certain reference titles (title integrated ATM T-10 of zone 1)

- The successful bidder will pay AMB a fee for every ticket sold

<table>
<thead>
<tr>
<th>Trajectes venuts en l’exercici (Y)</th>
<th>Valor del cànon corresponent a l’exercici</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 &lt; Y ≤ 5,000,000</td>
<td>Y * Xi</td>
</tr>
<tr>
<td>5,000,000 &lt; Y ≤ 7,500,000</td>
<td>(1,05 * Y – 250,000) * Xi</td>
</tr>
<tr>
<td>7,500,000 &lt; Y ≤ 9,000,000</td>
<td>(1,10 * Y – 625,000) * Xi</td>
</tr>
<tr>
<td>Y &gt; 9,000,000</td>
<td>(1,20 * Y – 1,525,000) * Xi</td>
</tr>
</tbody>
</table>

- The total fee due for a given year will be increased or reduced according to the **bonus / malus system**

- The only **revision of the financial balance** of the concession set forth in the contract is the result of the reduction of demand as a consequence of the future railway connection to the airport (loss of more than 25%).
Tendering process

- In July 2016 a prior information notice was published in UE Official Journal
- In November 2017 the tendering notice was launched
- In October 2018 the preferred bidder was identified

- Awarding criteria:

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<td>2. Formula criteria</td>
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<td>2.1. Fee for AMB</td>
<td>51</td>
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<tr>
<td>Total</td>
<td>100</td>
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</tbody>
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Thank you for your attention
INDIRECT MANAGEMENT OF BUS TRANSPORT SERVICES IN THE METROPOLITAN AREA OF BARCELONA

Transport Contract Management Service of the Mobility Area of the AMB

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