

Empresa Municipal de
Transportes de Madrid



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BICICLETA PÚBLICA DE MADRID

BiciMAD: Experiences and future steps

POLIS Annual Conference, December 6th, 2017

Name: BiciMAD (www.bicimad.com)

In operation since: June 2014.

Operator: EMT- Empresa Municipal de Transportes de Madrid (www.emtmadrid.es)

Subcontractors: Bonopark & Booster-bikes

Contract duration: 12 years with a clause to extend for a period of 4 years.

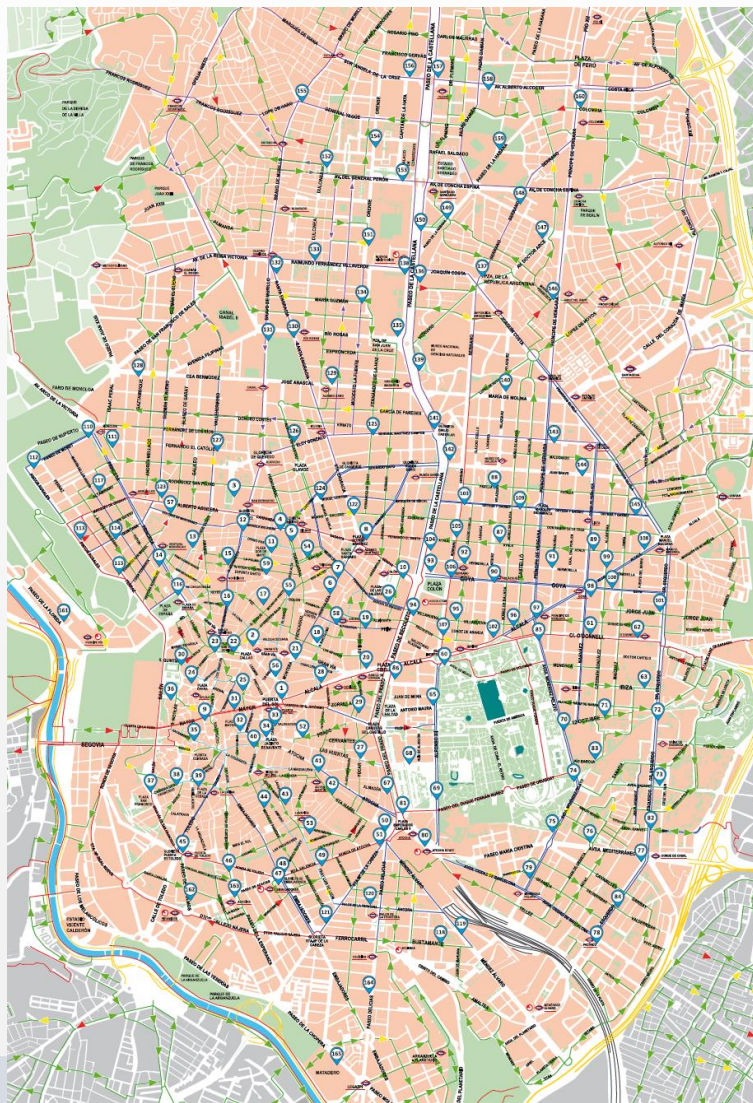
Technology: BiciMAD is a public transport service 100% provided by electric bicycles (pedelecs). Pedelecs were offered by the bidder as an add-on (improvement)



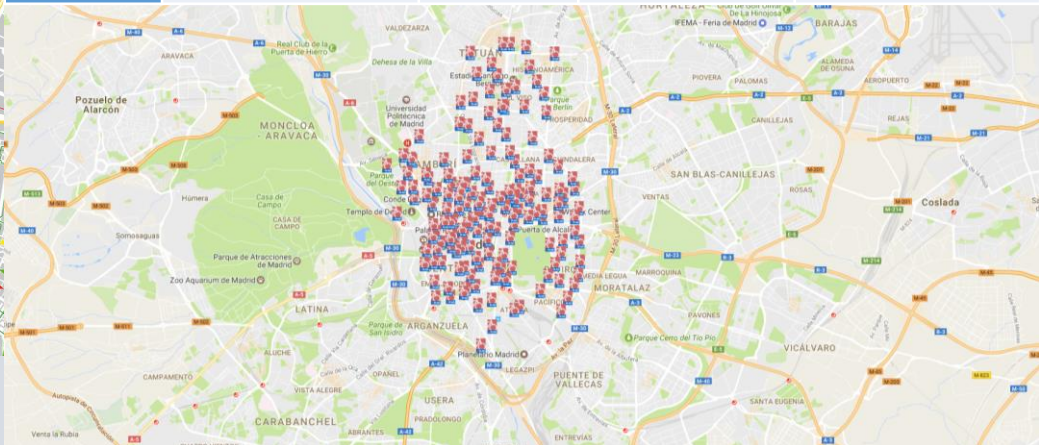
Financing:

- Holder: Madrid City Council.
- The contract establishes a payment to the operator based mainly on the availability of bicycles.
- Additionally it also establishes a system of quality indicators that influence the payment. In addition, the operator raises the money from users (payment) on which it taxes.
- The bike sharing system does not contemplate the sponsorship formula nor advertising.
- Nowadays, the service of BiciMAD costs 5.3 Million € /year. The City Council pays 2.3 million euro and the rest is obtained from the payment made by subscribers/users





Year	Stations	Bikes	Users (Annual subscription)	Rentals
2014	123 (3.120 docking slots)	1560	27.649	726.662
2015	165	2028	59.169	3.075.454
2016	165 (4.116 docking slots)	2028	60.430	2.807.137
2017	207	2496	63.300	3.003.468

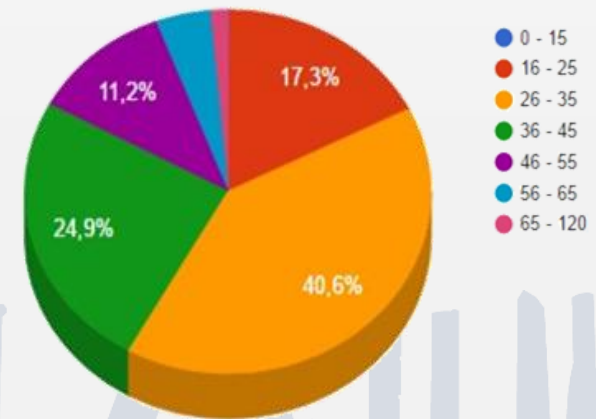


Operational aspects

- Information in real-time on available bicycles and stations.
- Instant registration with a credit or debit card:
 - Annual subscriber: annual fee + pay per use
 - Occasional user: 1, 3 or 5 days' use card. Deposit +
At the end of the selected period, user will be billed
for the total use time of the bikes.

User profile: slightly higher use among men than women.

40.6% of the users are between 26 and 35 years old (the largest age group), while 65.5% of the users are between 26 and 45 years old. This profile, together with the hours of maximum use, gives us a general profile of young users who use BiciMAD mainly in labor trips (to go back and forth to/from work).



- Battery: lithium polymer 36 V, 10 A (Currently evaluating use of lithium ion ones)
- Average cost per bike: €1,000 + VAT
- Insurance covering cases of disability and death + liability and accident insurance for all users.



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- Between June 2014 - October 2015, up to 1.000 bikes disappeared or were disabled due to vandalism
- September 2016:
 - more than 437 incidences per day
 - users' drop down to only 4.400 /day
 - 286 docking stations were out of service on a permanent basis
 - 20% failures in the docking processes
- Concessionaire asked Madrid City Council about rebalancing the concession, arguing economic losses due to, among others, vandalism



- October 20, 2016, as a result of a city mandate, EMT took over the role of the private company, and started managing the public bicycle service BiciMAD.
- The assignment of the contract was made after a complete audit that revealed the main deficiencies:
 - Unavailability of bikes
 - Deficiencies in docking and errors in the base-bicycle interconnection
 - Poor overall quality of the service
- During the transition period of six months, a first phase of improvement was carried out by EMT on the two main elements of the system: bicycles and stations.

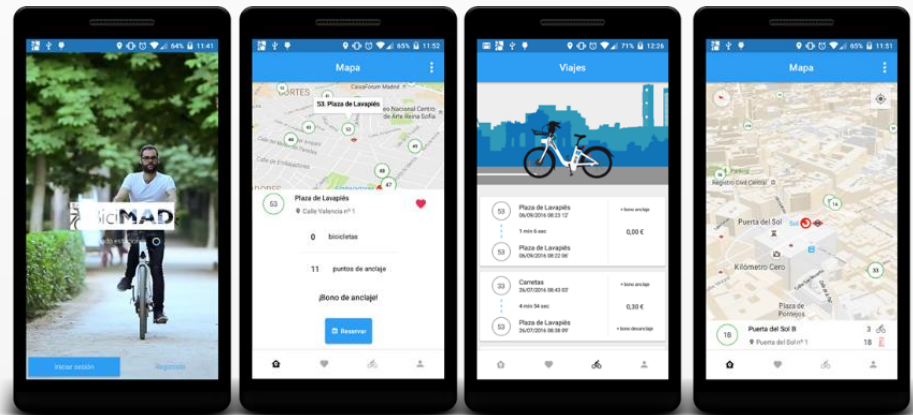
→ Improving Bicimad in 2017

Already done:

- System Audit
- Testing anchor improvements
- New GPS model (100%)
- Replacement of pins in stations (100%)
- Preventive maintenance plans
- Improving the call centre service
- New App
- 1,100 new bikes in May'17
- Technical analysis for BiciMAD expansion



EMT, ahora
también sobre dos ruedas



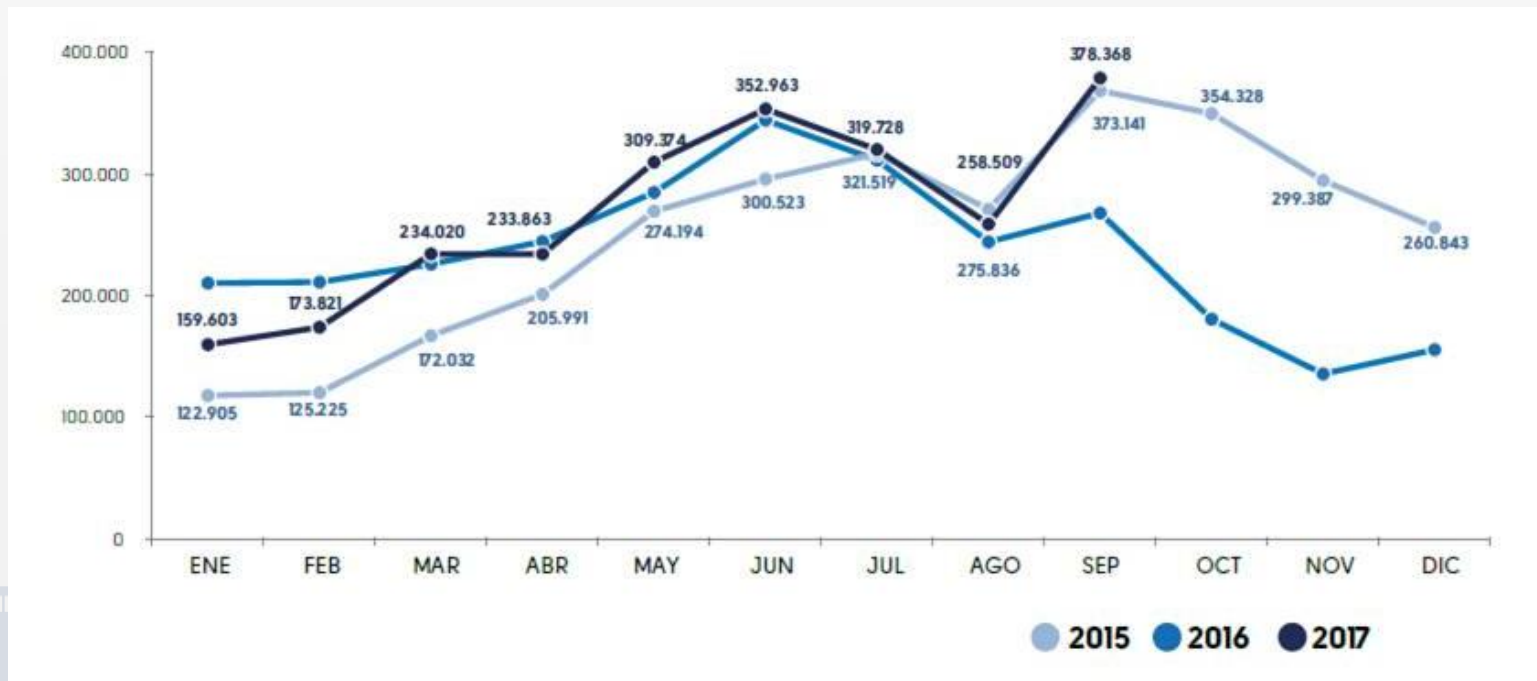
Ongoing:

- Measures against vandalism
- Installation of cameras in stations
- Optimization of the operation
- Analysis of including advertising in the system

<div>  BiciMAD </div>			
<div> CÓMO FUNCIONA PLANO & ESTACIONES ADONOS & TARIFAS SEGURIDAD INSCRÍBETE ÁREA USUARIO CONTACTO ESTADO DEL SERVICIO </div>			
Incidencias			
Estación	Estado	Fecha inicio	Fecha finalización
25b - Plaza de Celenque B	Estación no operativa por tareas de mantenimiento.	18/11/2016	Sin previsión
25a - Plaza de Celenque A	Estación no operativa por tareas de mantenimiento.	18/11/2016	Sin previsión
17 - Carlos Cambrónero	Estación no operativa por tareas de mantenimiento.	18/11/2016	18/11/2016
8 - Alonso Martínez	Estación no operativa por tareas de mantenimiento.	18/11/2016	18/11/2016
21a - Red de San Luis A	Estación no operativa debido a eventos en la zona.	17/11/2016	09/01/2017
146 - María Francisca 1	Estación no operativa por tareas de mantenimiento.	17/11/2016	19/11/2016
106b - Colón B	Estación no operativa por tareas de mantenimiento.	17/11/2016	19/11/2016
55 - Plaza de San Ildefonso	Estación no operativa por tareas de mantenimiento.	17/11/2016	18/11/2016

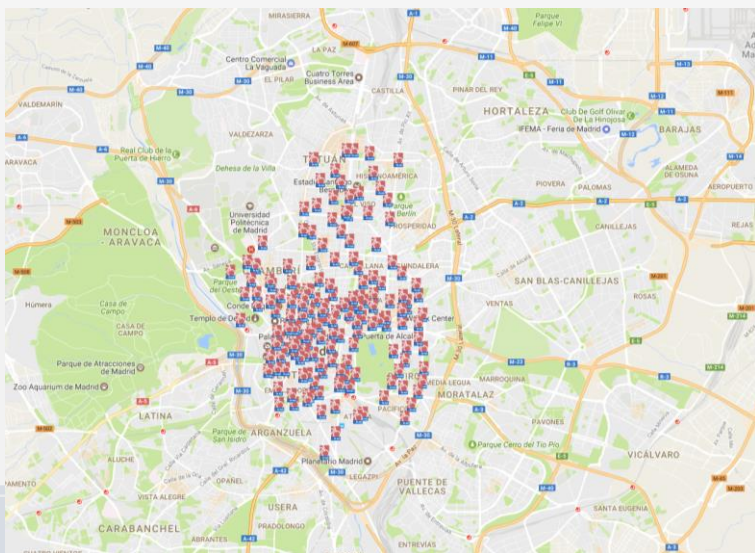
Positive results after 1 year

- After 6 months: Improving availability by 53%, 84% reduction in docking errors, clear decrease in the incidences of users: from over 10% of uses down to 4%
- Daily users raising from 4.400 up to 12.000 (the record in 2017, so far, was reached on June 22nd, with 13.910 daily uses).
- After 1 year. Stabilization of the service. Positive evolution consolidated. Significant increase in the availability of bicycles, consolidating the drastic reduction of errors in anchors and maintaining the decrease achieved in the incidents of users.



- Enlargement ongoing: 468 new bicycles and 42 new stations.
- The strategic lines of the future expansions:
 - Implementation of the system in transport nodes to reinforce multimodal use
 - Densification of the current service area
 - Enlargement of the system out of the M-30 ring (first ring of the city).
- City of Madrid has announced that, in 2019, the system will have 4,000 bicycles, that is, double its size compared to the current deployment.

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→ Importance of communication





Thanks!

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