

Design Resources > Design Responses >
About Parking Facilities > Examples > **Public
Realm**

Biceberg, Barcelona, (ES)

July 2008



How to use a Biceberg –
Stage 1 (photo: Biciberg)



How to use a Biceberg . -
Stage 2 (photo: Biciberg)



Biceberg at Passeig de García y Fària and Calle Selva de Mar

Facility:

Biceberg - Automatic underground bike park

Provider:

Company: MA-Sistemas, S.L
Crtra.Nacional 330 km 647,500 Polígono Charlé-Calle 2ª
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Designer/ Architect:

Jaime Palacios



How to use a Biceberg – Stage 3
(photo: Biciberg)

Cost of Provision:

Cost of installation/ build (not use)
46 bikes - €120,000 euros
69 bikes - €135,000 euros
92 bikes - €150,000 euros

(based on costs of facilities installed in Spain)

Project Manager(s):

Jaime Palacios Tel. + 34 974 357 074

General Description:

Biceberg is a cycle storage system based on the concept of an iceberg, where most of the contents, the parked bicycles in this case, are not seen since they are stored below ground level. It has a small part of its installation at ground level, which is the main public presence of the facility. It is at this point the user interface for delivering and collecting bikes to the parking system can be understood. It is designed as a system that can either be installed 'stand-alone', or integrated into existing underground cavities, such as car parks etc. The company states that 92 bicycles can be stored in space typically allocated to 4 cars in an underground carpark.

Aim:

To keep bicycles in a secure cycle park, short or medium term

Location:

Town centres, Transport interchanges, stations, University campus, sports/ leisure centres etc. in Paseo Garcia Faria. In Catalonia there are seven further Bicebergs located in Quatre Camins, UAB (Universitat Autònoma de Barcelona), Vilafranca de Penedés, San Feliu de Guíxols, one close to Tossa del Mar (Palau Roger), Tortosa and Valls.



Location del Biceberg en Barcelona. Source: BACC/ googlemaps

Scale/ Capacity:

Variable according to the facility, in carousel stacks of 23 bikes per level. Barcelona Biceberg accepts up to 46 bikes, others take 92.

Length of Stay:

Short – medium - long term (the most common use is medium: 1-8 hours), this depends on the location. For example in areas with sports' centres the average use is 1.5 hour. They are especially successful in areas where there are sport centres, stations for medium length journeys, shopping areas.

Charges/ Cost to User:

Conditions of UAB Barcelona: The monthly instalment quota is €6 and for the first three months it is free. The rate is €0.30 euros / hour or €0.15 euros / hour for members of the Physical Activity Service. The opening hours of Biceberg are from 06.00am - 23.30 and it is located next to the car park in Plaza Cívica.

Other Bicebergs are usually free for the first six hours of cycle parking. After that it is €2 euros / hour.

Access:

Access from the street. Normally they are built where many users are anticipated and located where it is possible to build underground. Recently there have been projects for movable Bicebergs (which do not require building work) (see evaluation)



Figure 16 Biceberg model, showing underground installation



Figure 16 Context of Biceberg installation at Passeig de García y Fària and Calle Selva de Mar

Signage:

There is signage but very little, It is usually either near the Biceberg or near the area in question.

Furniture:

All the components of the installation are custom made and/ or specified. Each cycle is stored in its own reinforced GRP cubicle, each respectively designed as one of 23 wedges of a carousel, which make up the storage for each level of the system.

Technical Requirements:

Advanced. It is an expensive installation (see Figure 22) that needs a good software and hardware system and a structural project. The system needs an ongoing management structure to remotely monitor and maintain the hardware and software. The movable Biceberg will not need as much building work but there is not much data available on this yet.

Security, Guardianship and Lighting:

It has good security (because it is underground and because it is guarded by an automatic system).

Maintenance and Servicing:

It is necessary to undertake preventive maintenance and software

update (since the life of Biceberg is about 25 years). Maintenance is the obligation of the company (clearing and software maintenance). The software maintenance is preventative and active 24 hours a day online. It is activated remotely, but if anything malfunctions, the staff will attend in person.

Clearing is carried out once a year. There is drainage for water and it is generally clean. The only part of the bicycle that sometimes gets dirty are the tyres and the line where the bicycle is parked.

In northern countries, the Biceberg service has systems which resolve problems related to snow and ice.

Strengths:

- Very secure against theft
- The bicycle can be taken out fast (an average of 30 seconds)
- In shopping areas, areas with sporting facilities etc. where it is free, it is a good option for bicycle parking

Weaknesses:

- Relatively high installation costs (until now). There is no data available yet on movable Bicebergs

Evaluation:

Very good. There is now a new, cheaper cycle park that does not need underground building work and can be moved.

See “Bigloo” Project



Figure 20 “Bigloo” concept from Biceberg (MA Systems)



Figure 20 “Bigloo” concept from Biceberg (MA Systems)

Useful References:



<http://www.biceberg.es>

http://www.youtube.com/watch?v=r_m5Udy3D5U&feature=related

<http://www.youtube.com/watch?v=TAr64tk8i-E>

<http://www.bacc.info/documents/bigloo.pps>

Original research by Marcus Wilcocks.