

CiViTAS

Cleaner and better transport in cities

ARCHIMEDES

AALBORG • BRIGHTON & HOVE • DONOSTIA - SAN SEBASTIÁN • IASI • MONZA • ÚSTÍ NAD LABEM

Donostia – San Sebastian

T 18.1 Advanced Park & Ride Network in Donostia – San Sebastian

Donostia – San Sebastian

December 2011



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1. Introduction

1.1 Background CIVITAS

CIVITAS - cleaner and better transport in cities - stands for City-VITALity-Sustainability. With the CIVITAS Initiative, the EC aims to generate a decisive breakthrough by supporting and evaluating the implementation of ambitious integrated sustainable urban transport strategies that should make a real difference for the welfare of the European citizen.

CIVITAS I started in early 2002 (within the 5th Framework Research Programme);
CIVITAS II started in early 2005 (within the 6th Framework Research Programme) and
CIVITAS PLUS started in late 2008 (within the 7th Framework Research Programme).

The objective of CIVITAS-Plus is to test and increase the understanding of the frameworks, processes and packaging required to successfully introduce bold, integrated and innovative strategies for clean and sustainable urban transport that address concerns related to energy-efficiency, transport policy and road safety, alternative fuels and the environment.

Within CIVITAS I (2002-2006) there were 19 cities clustered in 4 demonstration projects, within CIVITAS II (2005-2009) 17 cities in 4 demonstration projects, whilst within CIVITAS PLUS (2008-2012) 25 cities in 5 demonstration projects are taking part. These demonstration cities all over Europe are funded by the European Commission.

Objectives:

- to promote and implement sustainable, clean and (energy) efficient urban transport measures
- to implement integrated packages of technology and policy measures in the field of energy and transport in 8 categories of measures
- to build up critical mass and markets for innovation

Horizontal projects support the CIVITAS demonstration projects & cities by :

- Cross-site evaluation and Europe wide dissemination in co-operation with the demonstration projects
- The organisation of the annual meeting of CIVITAS Forum members
- Providing the Secretariat for the Political Advisory Committee (PAC)
- Development of policy recommendations for a long-term multiplier effect of CIVITAS

Key elements of CIVITAS

- CIVITAS is co-ordinated by cities: it is a programme “of cities for cities”
- Cities are in the heart of local public private partnerships
- Political commitment is a basic requirement
- Cities are living ‘Laboratories’ for learning and evaluating

1.2 Background ARCHIMEDES

ARCHIMEDES is an integrating project, bringing together 6 European cities to address problems and opportunities for creating environmentally sustainable, safe and energy efficient transport systems in medium sized urban areas.

The objective of ARCHIMEDES is to introduce innovative, integrated and ambitious strategies for clean, energy-efficient, sustainable urban transport to achieve significant impacts in the policy fields of energy, transport, and environmental sustainability. An ambitious blend of policy tools and measures will increase energy-efficiency in transport, provide safer and more convenient travel for all, using a higher share of clean engine technology and fuels, resulting in an enhanced urban environment (including reduced noise and air pollution). Visible and measurable impacts will result from significantly sized measures in specific innovation areas. Demonstrations of innovative transport technologies, policy measures and partnership working, combined with targeted research, will verify the best frameworks, processes and packaging required to successfully transfer the strategies to other cities.

1.3 Participant Cities

The ARCHIMEDES project focuses on activities in specific innovation areas of each city, known as the ARCHIMEDES corridor or zone (depending on shape and geography). These innovation areas extend to the peri-urban fringe and the administrative boundaries of regional authorities and neighbouring administrations.

The two Learning cities, to which experience and best-practice will be transferred, are Monza (Italy) and Ústí nad Labem (Czech Republic). The strategy for the project is to ensure that the tools and measures developed have the widest application throughout Europe, tested via the Learning Cities' activities and interaction with the Lead City partners.

1.3.1 Leading City Innovation Areas

The four Leading cities in the ARCHIMEDES project are:

- Aalborg (Denmark);
- Brighton & Hove (UK);
- Donostia-San Sebastián (Spain); and
- Iasi (Romania).

Together the Lead Cities in ARCHIMEDES cover different geographic parts of Europe. They have the full support of the relevant political representatives for the project, and are well able to implement the innovative range of demonstration activities.

The Lead Cities are joined in their local projects by a small number of key partners that show a high level of commitment to the project objectives of energy-efficient urban transportation. In all cases the public transport company features as a partner in the proposed project.

2. Donostia – San Sebastian

The city of Donostia -San Sebastián overlooks the sea and, with a bit more than 180,000 inhabitants, keeps a human scale. Some people consider the balanced combination of small mountains, manor

buildings, and sea as the setting for one of the most beautiful cities in the world. We have a tradition in favouring pedestrians, cyclists and public transport.

For about twenty years, the city has been enforcing a strong integrated policy in favour of pedestrians, bicycles and public transport. Considering walking and cycling as modes of transport has led to the building of a non-motorised transport network for promoting this type of mobility around the city.

Likewise, the city has extended its network of bus lanes. The city holds one of the higher bus-riding rates, with around 150 trips per person per year.

2.1 Objectives in CIVITAS

The CIVITAS project is a perfect opportunity to expand our Sustainable Urban Transport Strategy. With the package of CIVITAS measures Donostia-San Sebastián wants to:

- Increase the number of public transport users
- Decrease the number of cars entering in the city centre
- Increase the use of the bicycle as a normal mode of transport
- Maintain the high modal share of walking
- Reduce the number of fatal accidents and accidents with heavy injuries
- Reduce the use of fossil fuels in public transport.

3. Background to the Deliverable

This deliverable concerns ARCHIMEDES Measure 18, Advanced Park & Ride Network in Donostia – San Sebastián.

Data collected in 2006 showed a daily amount of 51,343 vehicles entering the city along the CIVITAS corridors. Although these figures do not equate to the saturation level of the roads, it is clear that for a city whose population is around 180,000 citizens, this is a worrying figure that leads to significant urban traffic problems.

There are several steps that have been conducted in order to reduce the number of vehicles entering the central areas of the city and one of them has been the provision of Park & Ride facilities. These sites are basically car parks with connections to public transport that allow visitors and commuters to reach the central city areas leaving their vehicles. The vehicle is stored in the car park during the day and retrieved when the owner returns. Park and rides are generally located in the suburbs of metropolitan areas or on the outer edges of large cities.

Park & Ride facilities are a way to avoid the difficulties and cost of parking within the city centre and also allow commuters to avoid the stress of driving a congested part of their journey. They are meant to avoid congestion by encouraging people to use public transport as opposed to their own personal vehicles.

However, some experts say that these large intermodal parking areas decrease car use in central cities at the expense of promoting the use on the peripheries. They consider that it would be preferable to allocate those spaces, already well served by public transport, to the provision of services and shops that do not force citizens to travel into the city centre.

3.1 Summary Description of the Task

Within ARCHIMEDES measure 18, task 2.12 covers the commissioning of the Park and Ride network facilities in Donostia – San Sebastian.

This deliverable provides an analysis of the location of the four existing car parks selected to operate as Park and Ride facilities in the city from the point of view of access to public transportation, parking regulation, pricing policies ...etc.

4. Advanced Park & Ride Network in Donostia – San Sebastian

4.1 Background

Three car park locations were initially selected to provide Park and Ride services taking advantage of their current good connections to the main public transport lines:

- Ondarreta car park (service frequency every 6 minutes via line 5)
- Lautximieta car park (service frequency every 6 minutes via line 5)
- Riberas de Loyola car park (service frequency every 15 minutes via line 26)

The following map shows the location of each of the three aforementioned car parks.

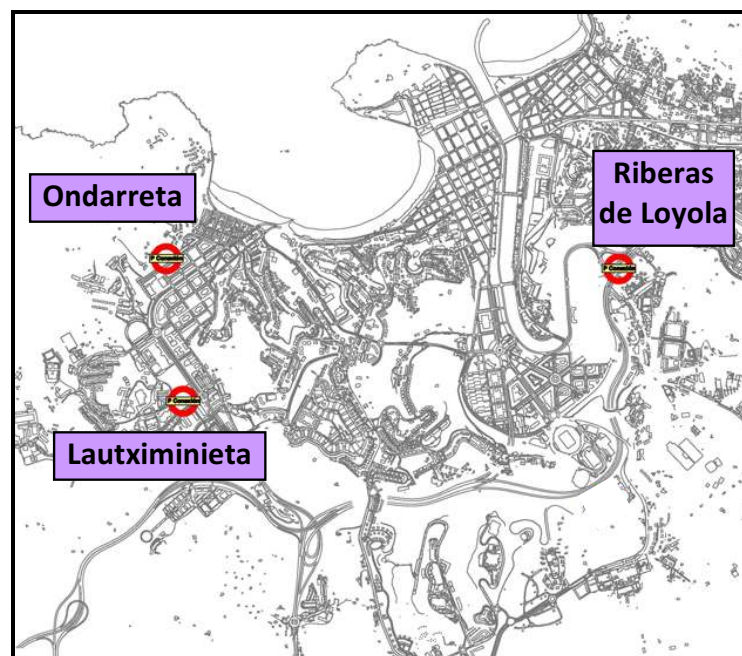


Figure 1. Location of Three car parks

With the aim to boost those facilities and to raise awareness of citizens about the new concept of Park & Ride service, a promotion campaign was launched in 2009 during the Christmas season.



Figure 2. Images of promotion campaign

The campaign was aimed at those who came in their private car to Donostia-San Sebastian and if they parked at the selected car park facilities they were given a free public transport pass (one for each occupant of the vehicle) to travel into city centre.



Figure 3. Example of PT free-pass

The free pass was valid for free travel on the lines going from the three parking areas to the city centre:

- Lautximiñeta: 5, 25, 33 & 40 bus lines
- Ondarreta: 5, 25, 33 & 40 bus lines
- Riberas de Loyola: 26 & 41 bus lines

The free-pass was given to the bus-driver to access the bus, and he returned to the user a ticket of 0 € as proof of travel.

After that, and to return to the parking for free on public transport, another pass was given in shops where purchases were made showing the ticket of 0 € provided in the PT of travel from the parking to the city centre.

Unfortunately the results were not as good as had been hoped for: in total 671 users took advantage of the campaign, compared to the maximum capacity of the scheme which was for around 250 cars per day (so 350-400 people per day at average vehicle capacity). The following table shows the uses of the free-pass according to the date and the used bus line.

0€ TICKETS DELIVERED BY BUS-DRIVERS							
Date	L5	L25	L26	L33	L40	L41	TOTAL
22/12/2009	9	3	6	5	3	0	26
23/12/2009	12	3	6	2	4	3	30
24/12/2009	20	6	9	1	3	0	39
25/12/2009	0	0	0	0	0	0	0
26/12/2009	11	5	4	2	0	0	22
27/12/2009	1	2	5	4	0	0	12
28/12/2009	23	10	9	7	0	3	52
29/12/2009	32	8	7	5	2	0	54
30/12/2009	44	6	22	13	0	0	85
31/12/2009	29	11	14	7	2	0	63
01/01/2010	4	0	0	4	0	0	8
02/01/2010	41	10	13	5	0	1	70
03/01/2010	6	0	8	1	0	0	15
04/01/2010	34	6	23	11	11	0	85
05/01/2010	42	20	25	15	7	1	110
TOTAL	308	90	151	82	32	8	671

Figure 4. Table of free-pass uses during 2009 Christmas campaign

4.2 Park & Ride Network

In addition to the three car parks mentioned in the previous section and with the intention to cover the southern part of the city a fourth Park & Ride facility was defined in **Illumbe**.

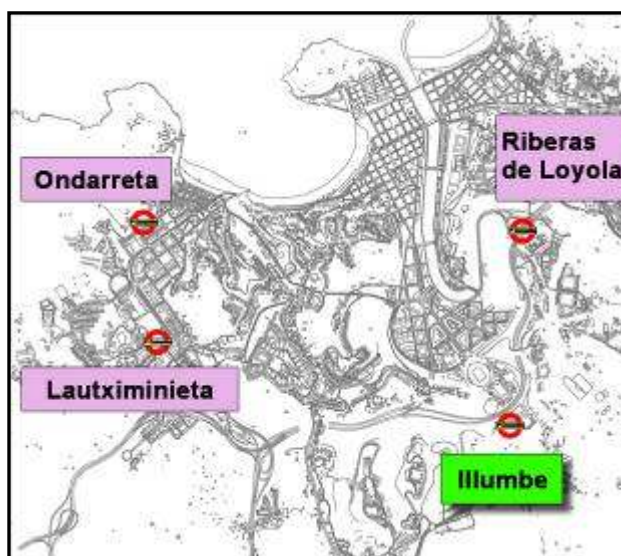


Figure 5. Location of Illumbe P&R car park

This section of the deliverable considers each of the four car parks proposed to provide the network of Park & Ride in the city, considering the different features that characterize a provision of this type.

4.2.1 ONDARRETA CAR PARK

Of the four P&R areas this one is the closest area to city centre. It is located in the Antiguo district in the western part of the city very close to Ondarreta beach and to one of the university campus zones.



Figure 6. 3D View of Ondarreta Car Park

Due to its location, this car park has its own local parking demand so that it is not possible to reserve all the spaces as Park & Ride spots. The non-P&R spots would be subject to the same pricing policy as city's regulated policy. For this area the pricing tariff will be the defined as green zone pricing. (To clarify, pricing policy is classified by colours to indicate the tariffs applied to different areas of the city. This is shown visually on a map in the Annex.)

The current periods of regulation are as follows:

- From 1st of October to 31st of May:
Monday to Friday 9:00 to 13:30 and 15:30 to 20:00.
Saturday: 9:00 to 13:30.
(Sunday and holidays the car park is not regulated.)
- From 1st of June to 30th of September:
Monday to Friday 9:00 to 13:30 and 15:30 to 20:00.
Saturday, Sunday and holidays 10:00 to 18:00

The public transport connection is mainly by bus. The closest bus stop is located in Tolosa Av. (200 m.) where bus lines 5, 25, 33 and 40 stop. These lines link the area to the city centre.



Figure 7. Aerial View of Bus stop near to Ondarreta Car Park

There is also a nearby public bicycle station in the Medical centre of Antiguo at an approximate distance of 350 meters.

The total capacity of the car park is 219 spots. The main problem of this car park is that the land where it is built belongs to Basque University and it was transferred from management by the municipality back to the university in October 2011, so there is no time to implement the project.

4.2.2 LAUTXIMINIETA CAR PARK

This car park is also located in the western part of the city. It is very close to an exit of the A-8 motorway and is also in the entrance of Igara business area.



Figure 8. 3D View of Lautximieta Car Park

Due to its location, close to Igara neighbourhood, the car park has its own local parking demand and as for Ondarreta car park, it would not be possible to reserve all the available spaces for park & ride use. The pricing policy for non-P&R use would again be according to the green tariff.

The current period of regulation is as follows:

- Monday to Friday 9:00 to 13:30 and 15:30 to 20:00.
- Saturday, Sunday and festive the car park is not regulated.

Regarding the public transport connection, there are two bus stops close to this car park. The first one, in a corner of the car park where bus lines 33 and 40 stop and run into the city centre. The second bus stop is in Tolosa Avenue and connects with bus lines 5 and 25.



Figure 9. Aerial View of Bus stops near to Lautximieta Car Park

There is also a nearby public bicycle station in the University campus at a distance of approximately of 600 metres.

The total capacity of the car park is 229 spots.

4.2.3 RIBERAS DE LOYOLA CAR PARK

This car park is in the east part of the city. It is quite far from the urban road network although recent developments mean that the edge of Riberas de Loyola quarter of the city is coming closer to it.



Figure 10. 3D View of Riberas de Loyola Car Park

There is no charge for use of this car park because it does not have its own local demand. There are some peak demands linked to events in the area of Amara Nuevo¹, but the nearby parking areas (Loyola, Riberas and Eguia) are not regulated so it has no sense regulating this one.

There is a bus stop at the entrance of the parking area where bus lines 26 and 41 stop and run into the city centre.



Figure 11. Aerial View of Bus stop near to Riberas de Loyola Car Park

A train station is also very close to the car park, at a distance of 175 metres. The total capacity is 300 spots.

4.2.4 ILLUMBE CAR PARK

The car park of Illumbe is the latest car park in the city, conceived specifically as park & ride facility. It is situated in the south part of the city.

¹ Football matches, concerts, athletics events etc.



Figure 12. Illumbe Car Park

As for the Riberas de Loyola Car Park, its parking demand is linked to weekend events in the area of Amara Nuevo, because it is close to football stadium. It will have the same regulation policy as Anoeta (the closest existing parking regulated area). It is also close to a municipal underground parking.

Connection with the public transport is not very good. The nearest bus stop is about 550 metres away. It connects with the city centre through bus lines 28 and 37.



Figure 13. Aerial View of Bus stop near to Illumbe Car Park

Regarding other means of transport there is a train station (Euskotren) and public bicycle station to a distance of 800 metres. The total parking capacity is 371 spots.

4.2.5 OTHER CAR PARKS

Because it has lost the ability to use the Ondarreta car park and the limited utility of Illumbe, other locations have been studied. The following table summarises these locations:

Car Park Location	City Access	Capacity	PT connection	Features	Comments
Herrera	East	50	BUS: Herrera st. 3, lines 13 & 24	Local Government land. High residential demand. Closest parking areas not regulated	Lack of short stay parking demand
Marrutxipi	East	262	BUS: -Fernando Sasiain st. Lines: 9, 27,29,33 & 41 - Zubiaurre st. Lines: 8, 9, 29, 31 & 33	Municipal land. There is a surface parking project. The closest parking areas not regulated.	Lack of short stay parking demand
Urumea	All	100	BUS: Sancho el Sabio Av.: Lines: 21, 26 & 28	Private land. There is an agreement possibility with the owner to use as surface parking.	It is included in the parking bylaw so it would not need any change.
Hospital	All	200-400	BUS: Dr. Begiristain, Line 28	Municipal and local government land. Detailed study is being performed.	Its regulation would be joined with Hospital area

Figure 14. Table summarizing the study of alternative P&R facilities

The map in figure 16 shows the location of alternatives studied.

4.3 Pricing Policy

It seems necessary to establish a financial incentive to encourage people to park in long-stay parking areas linked to each neighbourhood rather than going on by car to the central areas of the city.

At the time of considering a pricing policy for the Park and Ride areas two options were proposed: Establish a specific pricing policy for P & R equipment, or use any of the existing reduced rates (Tariff 2 or 3).

Considering that these kind of car parks will be destined mainly for workers and people who have planned to be in the city for a relatively mid to long stays during the day, an analysis has been conducted from which we have seen that parking in these P&R is more economically advantageous than going to the city centre, for 5 hours of parking or more.

It is clear that there are other conditions that may influence the choice of P&R facilities rather than continue using the private car (traffic congestion in central areas of the city, time spent on parking searching...etc) but one of the first issues that the user cares about is that the service is more economical than the currently used.

The Park and Ride network is intended to serve those citizens who work in the central areas of the city and live outside them in locations that do not have a good direct connection by the collective public transport. It is intended to provide an alternative to them travelling by private car and parking either in long-stay regulated areas in the centre of the city, or outside the regulated areas.

In this way, a new option is offered to this group that is cheaper than long stay parking for general use, in easily accessible places and well connected by collective public transport.

User ID in the Park & Ride facility

For a user to take advantage of the P & R service they will need to be identified as a P&R user and this will require them to use a “travel card”. The travel cards are widespread among the different modes of transport and they are currently used to get various benefits (mainly economic) to users of the modes of transport covered by each specific travel card.

There is a proposal by the local government to unify all these cards in a single one; the idea would be to use this card to identify the P & R service user within the parking, so that they can take advantage of the reduced rate they will enjoy during the parking time.

The identification process would be that, having arrived at the parking area, they would initially introduce their travel card into the ticket machine which would serve as user identification and then the machine would apply the appropriate rate as a P&R user. The user will choose the parking time and he will get the corresponding parking ticket to be placed inside the vehicle.

Because the user will use the same travel card for public transport they will be given a specified time between the time of getting the parking ticket in the P & R and the time of boarding the public transport, in order to control the way that they make the connection between the parking and public transport.

Legal Basis

It seems that the fastest option in legal terms to set up the network is to apply the existing tariff 3. To do this it will be necessary to define this specifically in the bylaw, i.e. it will be necessary to modify the bylaw indicating that the tariff 3 would also apply to P & R facilities

The other option of the two we mentioned at the beginning of the pricing policy section, to establish a specific pricing policy for P&R equipment would also require the amendment of the tax bylaw which would lengthen in time the process of commissioning the service.

In both cases, there will be another modification in parking bylaw which corresponds to the definition and regulation of new Park & Ride facilities.

The following table shows the proposed pricing policy:

T 18.1 ADVANCED PARK & RIDE NETWORK IN DONOSTIA-SAN SEBASTIAN

TARIFA	TIEMPO	Zona Especial	Zona Roja €	Zona Azul €	Zona Verde €
1	15	0,68	0,55	0,44	0,27
	60	1,94	1,48	1,12	0,87
	90	2,69	1,95	1,49	0,98
	180	5,11	3,72	2,82	1,42
	270	7,59	5,53	4,15	1,91
	300	8,43	6,16	4,59	2,06
	540				3,49
2	15	0,59	0,49	0,38	0,24
	60	1,69	1,30	0,98	0,76
	90	2,35	1,71	1,31	0,86
	180	4,47	3,25	2,47	1,24
	270	6,64	4,84	3,63	1,67
	300	7,38	5,39	4,02	1,81
	540	13,30	10,20	7,08	3,05
3	15	0,20	0,17	0,13	0,08
	60	0,58	0,44	0,34	0,26
	90	0,81	0,59	0,45	0,29
	180	1,53	1,12	0,85	0,42
	270	2,28	1,66	1,24	0,57
	300	2,53	1,85	1,38	0,62
	540	4,56	3,50	2,43	1,05
Anulación de denuncias		9,15	7,10	5,05	4,05

Figure. 15. Proposed price rate (Green column)

T 18.1 ADVANCED PARK & RIDE NETWORK IN DONOSTIA-SAN SEBASTIAN

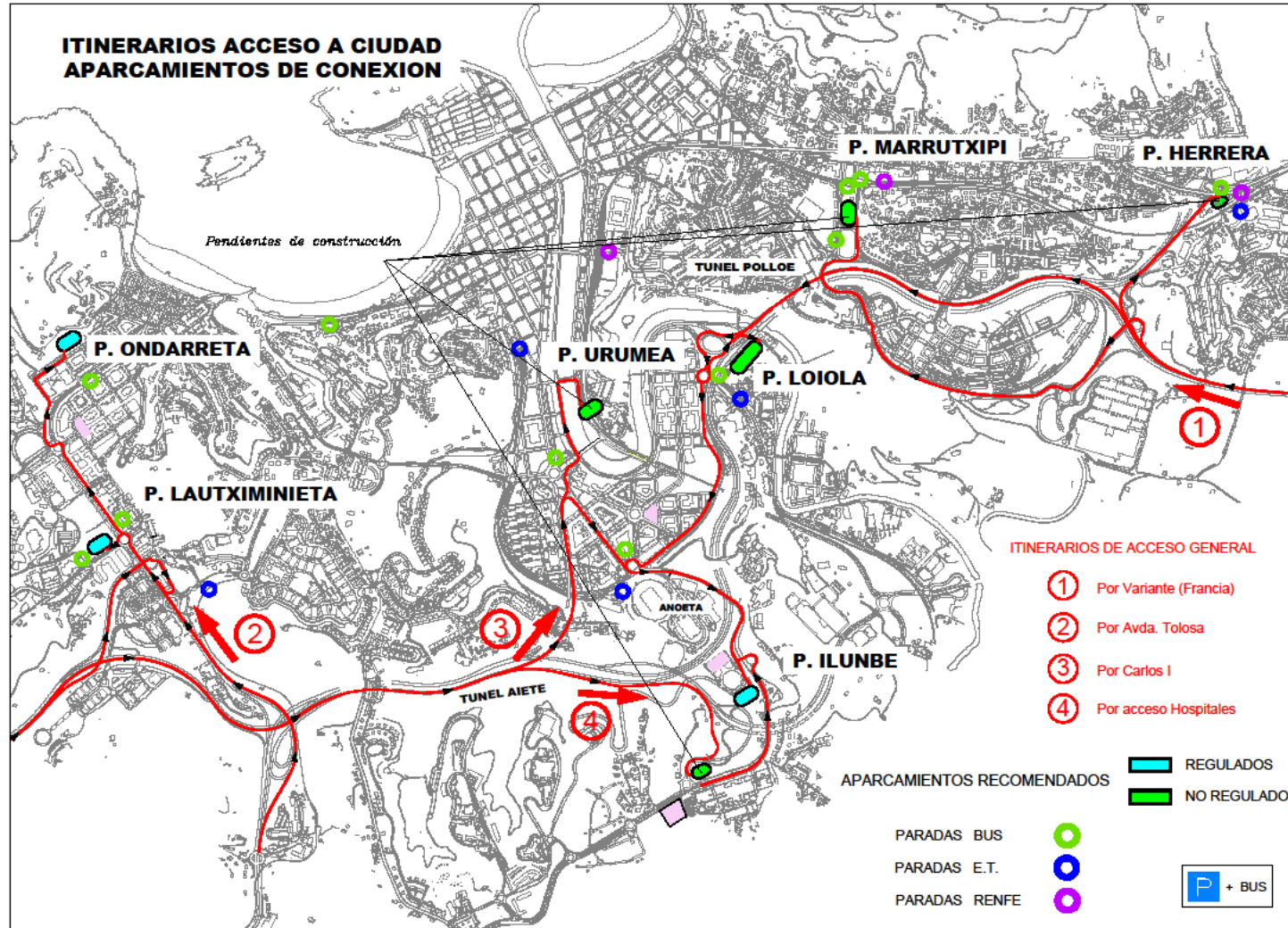


Figure 16. Map of studied Park & Ride alternatives

Information to the user

It is necessary to inform the user about the existence and location of these Park & Ride facilities, and its connection options with the public transport:

- Marking the road access routes from the entrances to city to which they are linked
- Informing in the Park & Ride facility about connection options (Bus stops location, bus lines, train...) The following images show the proposed vertical signposting to inform about P&R locations.
- Preparing an information campaign by explaining the system and its advantages.

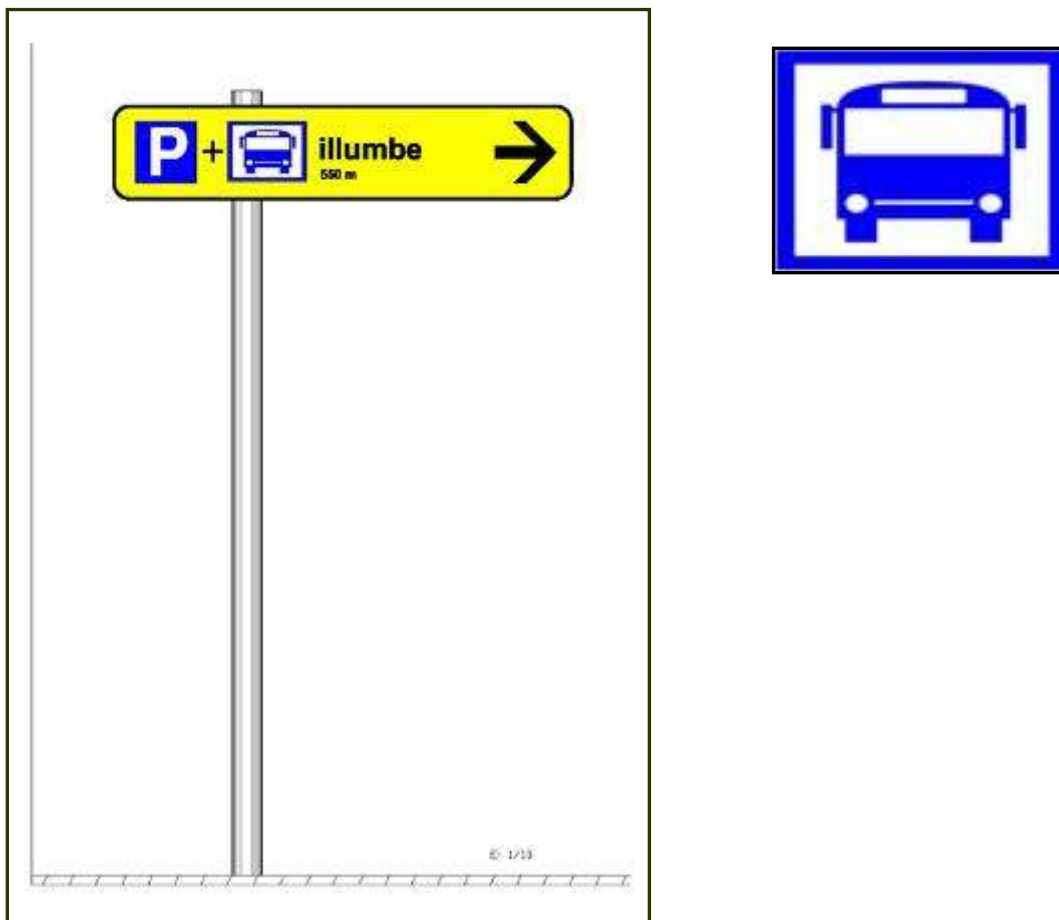


Figure 17. Proposed vertical signposting and BUS logo example

The map in figure 18 shows the location of proposed signposts near the P&R facilities (marked with p symbol).

4.4 Problems Identified

The main problem that has faced is to find a right pricing rate for the service. Initially it was necessary to identify the groups who might be targeted and based on their average stay time, a rate that was beneficial to all was found.

Legal conditions of implementing a new pricing rate were also considered because the commissioning of a new rate which is not covered in the current bylaw would require its modification which could significantly delay the implementation of the service.

4.5 Risks and Mitigating Actions

The main risk is the potential for a lack of users who may choose to use the service. A proper information campaign will be vital for people to know how the system works and how they can benefit from it.

In car parks which have their own park demand, it can also be risky the definition of spots that applies for each type of service. Anyway, in this case, this is a reversible measure that can be redesigned, for example by changing the relative numbers of spaces allocated for normal parking of the P&R service.

4.6 Next Steps

The first step will be the agreement of the pricing policy among mobility commission members.

Once approved, the implementation should be immediate after the launch of the information campaign. Each Park and Ride will be properly equipped with the necessary information signposts and posters.

T 18.1 ADVANCED PARK & RIDE NETWORK IN DONOSTIA-SAN SEBASTIAN

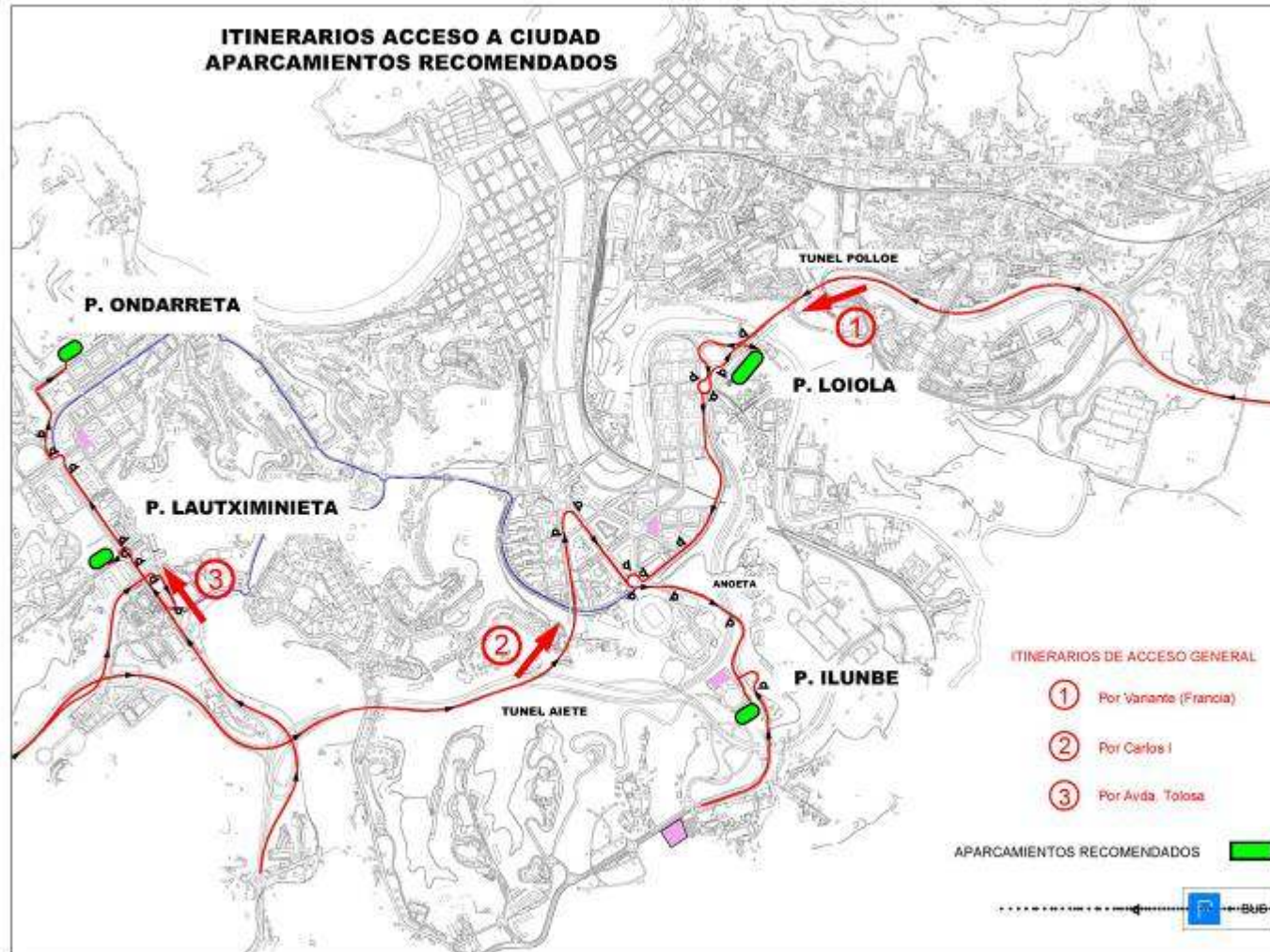
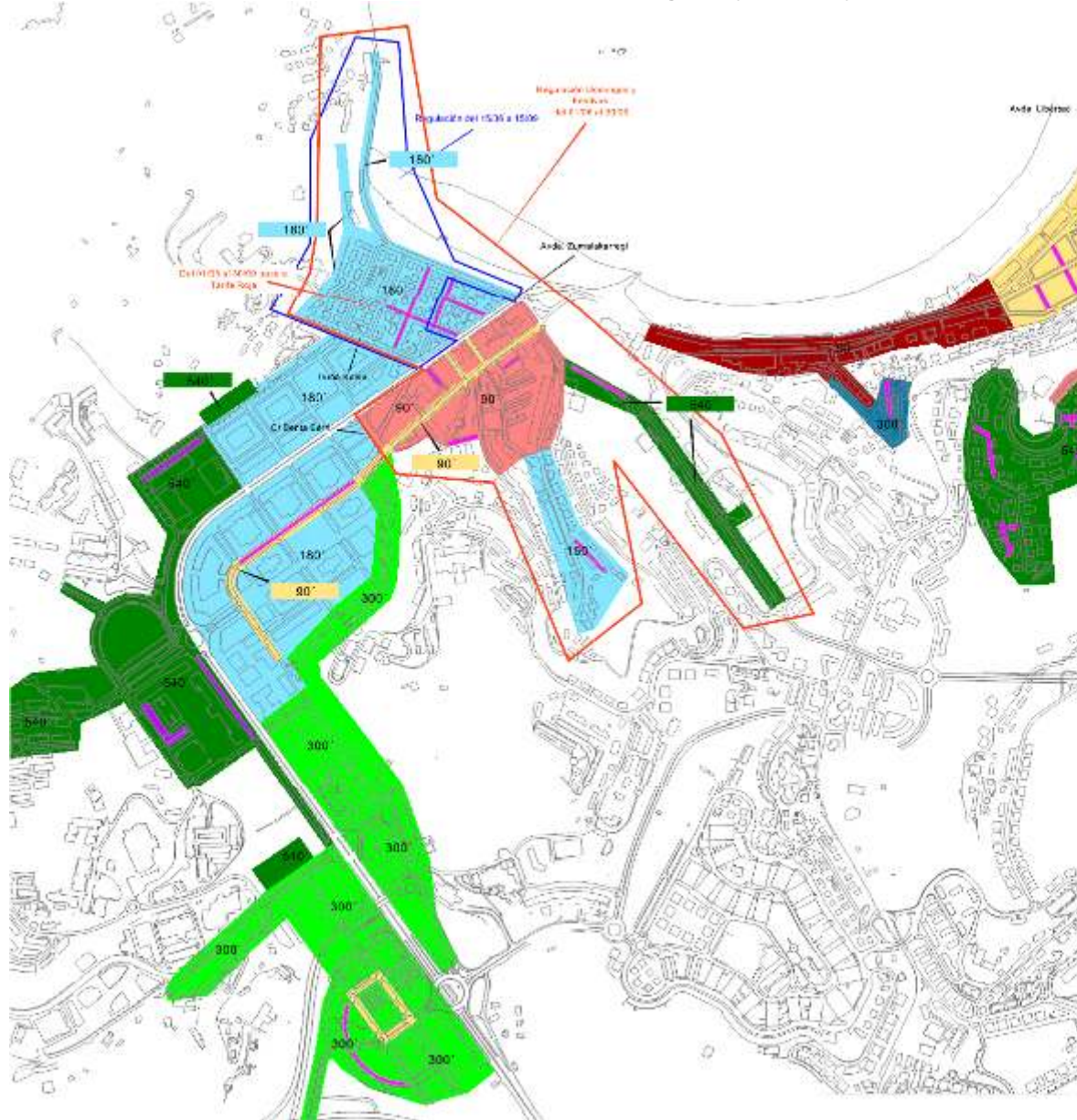


Figure 18. Proposed location for vertical signposting for guiding to P&R facilities

ANNEX I

Parking Pricing Policy in the City

Colour codes for pricing policy in the city map



TARIFAS Y TIEMPOS MÁXIMOS DE PERMANENCIA

	COLOR	TIEMPO MÁX.
T. ESPECIAL		15 HORAS
		3 HORAS
		6 HORAS
T. ROJO		15 HORAS
		3 HORAS
		6 HORAS
T. AZUL		15 HORAS
		6 HORAS
		6 HORAS
T. VERDE		3 HORAS
		3 HORAS
		3 HORAS
GRUPOS DE CALLES RESIDENTES		
GRUPOS DE CALLES ESPECIALES		
POSIBILIDAD DE SERVICIOS ESPECIALES		
REGLAMENTO, ORDENANZAS Y PROHIBICIONES		
REGULACIÓN ESPECIAL		
RESERVA LUPV		