



TOWARDS SMART ZERO CO₂ CITIES ACROSS EUROPE
VITORIA-GASTEIZ + TARTU + SONDERBORG

Deliverable 3.6: Electric vehicle fleet and charging infrastructure

WP3, Task 3.6

Date of document

31/01/2021 (M 60)

| | |
|----------------------|---|
| Deliverable Version: | D3.6, V.1.0 |
| Dissemination Level: | PU ¹ |
| Author(s): | Aitor Albaina, Isabel Garnika, Juan Carlos Escudero (CEA) David Grisaleña (VIS) Andoni Anero (GIR) Francisco Rodríguez (TEC) |

¹ PU = Public

PP = Restricted to other programme participants (including the Commission Services)

RE = Restricted to a group specified by the consortium (including the Commission Services)

CO = Confidential, only for members of the consortium (including the Commission Services)



Document History

| | |
|---------------------|--|
| Project Acronym | SmartEnCity |
| Project Title | Towards Smart Zero CO ₂ Cities across Europe |
| Project Coordinator | Francisco Rodríguez Tecnalia francisco.rodriguez@tecnalia.com |
| Project Duration | 1 st February 2016 - 31 st July 2022 (78 months) |

| | | | |
|-------------------------------|---|-------------------------------------|---------------------------------------|
| Deliverable No. | D3.6 Electric vehicle fleet and charging infrastructure | | |
| Diss. Level | Public | | |
| Deliverable Lead | CEA | | |
| Status | | Working | |
| | | Verified by other WPs | |
| | X | Final version | |
| Due date of deliverable | 31/01/2021 | | |
| Actual submission date | 15/02/2021 | | |
| Work Package | WP 3 - Vitoria-Gasteiz Lighthouse Deployment | | |
| WP Lead | VIS | | |
| Contributing beneficiary(ies) | CEA, VIS, GIR, AVG, TEC | | |
| Date | Version | Person/Partner | Comments |
| 21/01/2021 | REV00 | Aitor Albaina, Isabel Garnika (CEA) | First complete draft |
| 8/02/2021 | REV01 | Alberto Ortiz de Elgea (VIS) | Final draft for review |
| 12/2/2021 | REV02 | Francisco Rodríguez (TEC) | Final reviewed version for submission |
| | | | |

Copyright notice

© 2016-2018 SmartEnCity Consortium Partners. All rights reserved. All contents are reserved by default and may not be disclosed to third parties without the written consent of the SmartEnCity partners, except as mandated by the European Commission contract, for reviewing and dissemination purposes.

All trademarks and other rights on third party products mentioned in this document are acknowledged and owned by the respective holders. The information contained in this document represents the views of SmartEnCity



members as of the date they are published. The SmartEnCity consortium does not guarantee that any information contained herein is error-free, or up to date, nor makes warranties, express, implied, or statutory, by publishing this document.

Table of contents:

| | | |
|----------|---|-----------|
| 0 | Publishable Summary | 7 |
| 1 | Introduction | 8 |
| 1.1 | Contributions of partners | 8 |
| 2 | Objectives and expected Impact | 9 |
| 2.1 | Objective..... | 9 |
| 2.2 | Expected Impact..... | 9 |
| 3 | Electric vehicles and charging infrastructure deployment | 10 |
| 3.1 | New electric vehicles at AVG | 10 |
| 3.2 | New electric vehicles and charging infrastructure at VIS | 11 |
| 3.3 | New electric vehicles at GIR..... | 14 |
| 3.4 | New e-bike sharing station at AVG/CEA..... | 16 |
| 4 | Deviations to the plan | 19 |
| 5 | Annex:..... | 20 |

Table of Tables:

| | |
|---|----|
| Table 1: Abbreviations and Acronyms | 6 |
| Table 2: Contributions of partners | 8 |
| Table 3: List of electric vehicles in use by Visesa | 12 |



Table of Figures:

| | |
|---|----|
| Figure 1: Electric van in the garage of Vitoria-Gasteiz technical offices..... | 10 |
| Figure 2: Full electric vehicles in Visesa headquarters | 11 |
| Figure 3: Charging points at Visesa's parking places | 13 |
| Figure 4: Recharge of the E.V. in the Cathedral parking lot. | 14 |
| Figure 5: Recharge of the E.V. in Miñano technology park..... | 15 |
| Figure 6: Electric charging station in Miñano. | 15 |
| Figure 7: charging dock and e-bikes in VG City Council Technical Offices..... | 17 |
| Figure 8: Publication on the VG City Council website regarding the-bike sharing station | 18 |
| Figure 9: Screenshot of the mobile app to manage the rental scheme by users | 23 |

Abbreviations and Acronyms

| Abbreviation/Acronym | Description |
|----------------------|---|
| SmartEnCity | Towards Smart Zero CO ₂ Cities across Europe |
| EV | Electric Vehicle |
| CIOP | City Information Open Platform |
| SUMPSP | Sustainable Mobility and Public Space Plan |
| e-bike | Electric bicycle |

Table 1: Abbreviations and Acronyms

0 Publishable Summary

Following the principles of the sustainable mobility, several SMARTENCITY partners (AVG, CEA, VIS and GIR) decided to promote a progressive replacement of combustion vehicles with their electric counterparts. These electric vehicles (EV; cars, vans and bikes), have been incorporated within the abovementioned partners' fleets and are used in a daily basis in the city of Vitoria-Gasteiz for their respective organizational needs for everyday operations, related to SmartEnCity in many cases. These partners have also installed the required charging infrastructure when this was lacking. The EV use and charging data are to be monitored through the project's data platform (City Information Open Platform; CIOP). The direct benefits for the city will be realized in the zero emission of polluting gases and the reduction of noise.

More into detail, five EVs have been incorporated: AVG incorporated two EVs, VIS another two (plus another hybrid car) and GIR the remaining one. Apart from this CEA installed and launched a e-bike sharing system (including 6 e-bikes with their docking and charging infrastructure and a mobile and web-based App for sharing) in the garage of the Vitoria-Gasteiz city council's main technical offices building for the city workers (both AVG and CEA) regular use.

As of January 2021, all the systems/EVs were deployed and in use.

1 Introduction

The deployment of 100% electric transport is paramount for sustainable mobility and to achieve carbon neutral cities in the near future. Moreover, public administrations and public and private companies play an important exemplary role in the promotion of electric vehicles, by raising awareness and shifting their fleets, including public transport ones (see D3.5), to electric alternatives.

In this regard, the substitution of SmartEnCity partners' fleet vehicles in Vitoria-Gasteiz to their electric counterparts was a measure not originally included in the project's proposal. However, it was later incorporated as part of the new Vitoria-Gasteiz sustainable mobility pack of actions via amendment as to replace a previous measure involving EV that had to be discarded. This measure along with the one of the municipality e-bike sharing station that will be also detailed here and the electric bus line deployment (already describe in D3.5) conforms the bulk of Vitoria-Gasteiz sustainable mobility actions within SmartEnCity.

Although the city of Vitoria-Gasteiz is not looking for an increase in the number of vehicles on the street but the opposite [following the city Sustainable Mobility and Public Space Plan (SUMPSP)], it does support the electrification of the demand for motorized transport, starting a progressive replacement of the current combustion vehicles. In this regard, a key aspect in this strategy has to do with mobility generated within the daily work in the administration (AVG/CEA) and also other public (VIS) or private (GIR) companies in their tasks related to the SmartEnCity project (retrofitting and district heating actions in the demos area) the promotion of electro-mobility in this area has a remarkable importance also due to its exemplary effect within the city. More in detail, several partners (namely CEA, AVG, VIS and GIR) decided to substitute certain fleet vehicles by electric alternatives including some charging points (CPs) also in the case of VIS. Details about the associated costs and impact are in section 3.

Connection with the city platform

Both the EVs and the CPs will be monitored, and the data will be available through the CIOP.

1.1 Contributions of partners

| Participant short name | Contributions |
|------------------------|--|
| CEA | Overall content to sections 1, 2, 3 and 4, and Annex |
| TEC | Comments to the document, contributions to Section 2, overall review and QC. |
| AVG | Contents in Sections 3 |
| VIS | Contents in Sections 3, review and comments to the document |
| GIR | Contents in Sections 3 |

Table 2: Contributions of partners



2 Objectives and expected Impact

2.1 Objective

Objective(s):

- To progressively electrify municipality and public/private companies' fleets in the city of Vitoria-Gasteiz
- To progressively deploy EV charging infrastructure in the municipality
- To increase the visibility and acceptance of EVs
- To raise awareness about sustainable mobility and, specifically, fully electric transport including not only cars or vans but also e-bikes

2.2 Expected Impact

Overall estimated saving of CO₂: 30.55 tn/yr., according to the following table

| Impact | Km/Year | Fuel saving (Kwh/yr) | Annual CO ₂ reduction (tn/yr)) |
|------------------------|---------|----------------------|---|
| 6 EVs + 2 CPs | 35.110 | 122.625 | 28,4 |
| Bike station (6 bikes) | 1.200 | 8.820 | 2.15 |

3 Electric vehicles and charging infrastructure deployment

3.1 New electric vehicles at AVG

As part of its sustainable mobility strategy, the City Council of Vitoria-Gasteiz (AVG) has contracted the supply by renting of two electric vehicles (EVs; model Nissan ENV200) adapted to the needs of the Participation Department and Civic Centers, and specifically for the concierge service. These vehicles will be used mainly for internal messaging/mailling purposes (envelopes and parcels) between the various municipal offices. The two electric vehicles replace other combustion vehicles that have been used so far.

The term of the contract is 48 months (EVs were deployed the 3rd of February 2020) subject to an annual extension.



Figure 1: Electric van in the garage of Vitoria-Gasteiz technical offices

3.2 New electric vehicles and charging infrastructure at VIS

Visesa (VIS), within its sustainable mobility strategy, will substitute gradually its fleet of combustion vehicles by electric ones. Three vehicles have been already substituted so far (2 full electric and 1 hybrid), specifically those one used in Visesa's technicians' frequent visits to Coronación Demo District for retrofitting works supervision and the necessary meetings with tenants. Visibility of electric vehicles in the demo area is a useful tool in the aim of fostering the awareness in the district about sustainable mobility. VIS fleet is in a renting mode, so the acquisition of the new electric vehicles has been carried out gradually during the second part of 2020. Rental fee is around € 450 / month on average (cost differs depending on the car model).

Subsequently, it has been also necessary to install 2 Charging Points in the head office of Visesa (VIS). This allows controlling and measuring consumption and charging patterns data. Two chargers (7.2 kW/each), with two connection points each one, were installed in VIS facilities in October 2019. Being a community access garage, these CPs are configured with an access card to ensure their correct use.



Figure 2: Full electric vehicles in Visesa headquarters

| PLATE | MODEL | DATE OF INCORPORATION | COST / YEAR | CONTRACT DURATION |
|---------|---|-----------------------|-------------|-------------------|
| 3502LFY | RENAULT ZOE INTENS 50 R110 5P (Full Electric) | 02/07/2020 | 5.400 € | 4 years |
| 3488LFY | RENAULT ZOE INTENS 50 R110 5P (Full Electric) | 25/11/2020 | 5.400 € | 4 years |
| 6192LFY | REANULT CAPTUR ZEN E- TECH 5 P (Hybrid) | 25/11/2020 | 4.680 € | 4 years |

Table 3: List of electric vehicles in use by Visesa

Charging points

It was also necessary to install 2 CPs in the head offices of Visesa (VIS). This would allow controlling and measuring consumption and charging patterns data. Two “IBILBOX 132” chargers (7.2 kW/each), with two connection points each one, were installed in VIS facilities in October 2019. Contract has been awarded with a budget of € 7,683. Being a community access garage, these CPs are configured with an access card to ensure their correct use.

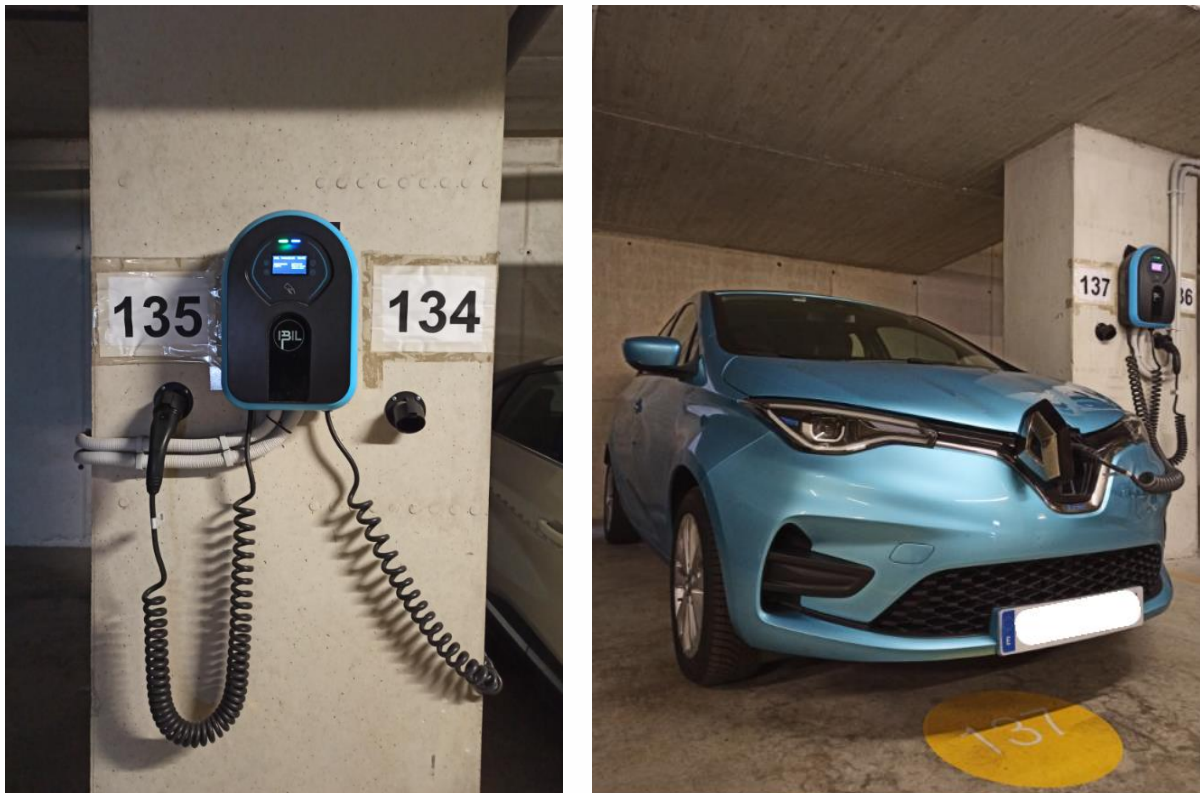


Figure 3: Charging points at Visesa's parking places

3.3 New electric vehicles at GIR

Giroa (GIR), continuing in the line of investing on renewable energies, will have an electric vehicle to travel from its offices located in the Miñano technology park, which is 10km from the Coronación neighbourhood. The vehicle will be used by people involved in the project and to be able to carry out daily contact tasks with all the professional groups involved, as well as the follow-up of the buildings retrofitting works and continue carrying out marketing and support tasks for the neighbours of the neighbourhood.

The electric vehicle used by Giroa-Veolia to move to Coronacion district works site has been a Renault Kangoo Z.E. since May 2020.

This vehicle has 2 recharging points: The Giroa-Veolia offices located in the Miñano technology park, which have 5 recharging points, and the parking lot of the new Cathedral of Vitoria-Gasteiz (700m from the biomass power plant which is under construction in the project), which has 2 recharging points. Both points use the IBIL charging system.



Figure 4: Recharge of the E.V. in the Cathedral parking lot.

The data extracted from the year 2020 reflects that recurrent recharges are done every 2 days. The vehicle makes a daily journey of about 35km on average, travelling from Coronación district where the works are carried out to the Giroa-Veolia office as well as to material warehouses or other offices where meetings are held. This recharge has an approximate price of 2 euros/recharge and its consumption is 15.45 kWh/100km. The average monthly cost is 16 euros. In addition, the cost of the vehicle rental company must be taken into account, being 297 euros per month.



Figure 5: Recharge of the E.V. in Miñano technology park.



Figure 6: Electric charging station in Miñano.

3.4 New e-bike sharing station at AVG/CEA

As a specific development of the SUMPSP, a Cyclist Mobility Master Plan (CMMP) was also drafted. This CMMP (2010-2015) was designed to promote the bicycle as an active and sustainable mode of transport and alternative to the use of the automobile. This is especially relevant when considering city council staff as they could help raising citizenry awareness and promoting the use of e-bikes as a way of commuting.

Moreover, Vitoria-Gasteiz has very favourable conditions for urban cycling: a nearly flat topography, its compactness, the available network of cycle routes and a more favourable weather conditions in comparison with other cities in northern Europe. Due to these conditions and the policies to promote its use, the weight of the bicycle in the mobility modal split of the city has improved in recent years, representing 8% of the total trips made in 2019, from a mere 3% in 2006. Although much progress has been made in the use of bicycles in recent years, their presence is still lower than in other European cities and also less than what is desirable and necessary to have a modal split and a model of sustainable mobility that allows the city to reach its goal of being the first carbon neutral city in Spain by the year 2050. The promotion of the bicycle as a vehicle of daily use is a bet that must be preceded by the cultural acceptance of the bicycle as a means of urban transport, its inclusion in the urban planning schemes and urban mobility, and the integration of the bicycle in new urban projects. A key aspect in this strategy has to do with the displacements that are generated within the daily work and, specifically, with the labour mobility generated by the city council staff. The promotion of the bicycle in this area has a remarkable importance not only for its use in the own displacements of the municipal personnel but for its exemplary effect within the city.

Today, an important part of the displacement of municipal staff within their working hours is done in unsustainable ways, mainly combustion vehicles. The electric bicycle seems the ideal way to develop many of these displacements since most of them are limited to the urban environment and without the need to transport cargo. In this regard, the CMMP already included a related measure: namely “BP4. Analysis and implementation of a community bicycle park for municipal employees” that, as stated in the mid-term evaluation of the SUMPSP (published in 2018) was not implemented according to the planning.

Within this context, CEA decided to foster sustainable and active mobility among the CEA and AVG workers by installing and operating a sharing system of e-bikes for both institutions' workers at the basement of the city council's technical offices building (where both organizations shared their main working space). Details about the associated costs and impact are in section 4. The system has been already installed and after a testing phase is now operating since May 18th 2020. By the end of 2020, even considering the negative impact of the COVID19 scenario with many employees working at home, more than 2,800 km have already been covered and 52 workers have registered to use the system.

Four years ago, most of the municipal staff working in offices scattered across the city was grouped in a single building that daily houses more than 300 people. In this context, it was considered that the ideal circumstances for the implementation of this community bicycle park for municipal employees were given. In addition, in order to provide support to the use of these vehicles, it was proposed that this shared e-bike station would be equipped with a recharge system, intelligent management (through an App.) and a maintenance service for the first year of operation. The budget for this project that was already contracted, and it is in fact operative since May 2020 was 35,618.77 €.

The total investment included these concepts (euro; vat included):

- Supply of the bicycles and their accessories: 11.372,79
- Supply and installation of the docking and loading station: 15.572,70
- Management system (installation, software licenses): 3.146,00
- Maintenance of the management system and e-bikes: 5.527,28

TOTAL: 35.618,77



Figure 7: charging dock and e-bikes in VG City Council Technical Offices

Vitoria-Gasteiz City Council has published an overview of the first year of the service on its website.

https://www.vitoria-gasteiz.org/wb021/was/contenidoAction.do?idioma=es&uid=u68842af0_176fa34db6b_7e62

El personal municipal de San Martín trabaja en bici

15 de enero de 2021

La flota municipal de bicicletas eléctricas ya ha recorrido 2.800 kilómetros.



El Ayuntamiento de Vitoria-Gasteiz, a través del CEA, y con la finalidad de promover la movilidad activa y sostenible en el ámbito laboral, puso en marcha en 2020 una experiencia piloto de estación automatizada de préstamo de bicicletas eléctricas para las personas que trabajan en el edificio municipal de San Martín.

Desde febrero de 2020 hasta final de año se han recorrido más de 2.800 km con las bicis, lo que supone un ahorro de 350 kg de emisiones de CO₂. En la actualidad hay 52 personas que se han dado de alta en el servicio. Debido al buen resultado de esta experiencia piloto, se ha decidido ampliar el servicio al menos durante un año más.

Esta iniciativa pretende ofrecer al personal del edificio de San Martín una alternativa sostenible a la flota de automóviles municipal de cara a resolver sus necesidades de desplazamiento en el desempeño de su actividad laboral. La estación automatizada permite la operativa de préstamo, devolución y recarga de 6 bicicletas eléctricas, y cuenta con seis puntos de anclaje y recarga y para las correspondientes bicicletas eléctricas. La carga de la batería se realiza de manera automática cuando la bicicleta se encuentra anclada. La estación se acompaña de un teclado alfanumérico que permite interactuar con el sistema de gestión de la estación, a través de una clave personal, de cara a desbloquear la bicicleta.

La instalación y puesta en marcha de esta iniciativa ha contado con apoyo económico del Ente Vasco de la Energía EVE y del proyecto europeo SmartEnCity [\[2\]](#).

Figure 8: Publication on the VG City Council website regarding the-bike sharing station

4 Deviations to the plan

There have been no significant deviations to the plan.



5 Annex:

E-bike system description and manual for city staff (English translation below)

Bicicleta compartida para personal empleado en el edificio de las Oficinas Técnicas de San Martín



El Ayuntamiento de Vitoria-Gasteiz, a través del Centro de Estudios Ambientales, con la finalidad de promover la movilidad activa y sostenible en el ámbito laboral, ha puesto en marcha una experiencia piloto de estación automatizada de préstamo de bicicletas eléctricas. Esta iniciativa, pretende ofrecer al personal del edificio de San Martín una alternativa sostenible a la flota de automóviles municipal de cara a resolver sus necesidades de desplazamiento en el desempeño de su actividad laboral.

A tal fin se ha instalado en el **aparcamiento subterráneo** del edificio una **estación automatizada que permite la operativa de préstamo, devolución y recarga de 6 bicicletas eléctricas**.

Desde la concepción de esta iniciativa, se ha pretendido que el uso del sistema sea lo mas sencillo y funcional posible. Tras un periodo inicial de puesta a punto, la implantación operativa será progresiva, por departamentos, a fin de poder garantizar, de la mejor manera posible, una entrada en carga progresiva y poder ir solventando aquellas incidencias que cualquier iniciativa piloto acarrea.

En función del éxito de esta **experiencia piloto**, que tendrá una duración de **seis meses**, se evaluará la continuidad de este sistema de bici compartida, por lo que os animamos a participar en ella y a mejorarla con vuestras aportaciones.

Elementos que componen el sistema

El sistema de bicicleta compartida está compuesto por una estación provista seis **puntos de anclaje y recarga** y por las correspondientes **bicicletas eléctricas**. La carga de la batería se realiza de manera automática cuando la bicicleta se encuentra anclada.

La estación se acompaña de un **teclado alfanumérico** que permite interactuar con el sistema de gestión de la estación, a través de una clave personal, de cara a desbloquear la bicicleta.

El sistema se gobierna por un sistema informático que amplía además las posibilidades de interactuar con la estación, permitiendo formalizar reservas anticipadas, vía web o **App** o, incluso acceder a la bicicleta prescindiendo del teclado alfanumérico.

Cada uno de los anclajes dispone de un piloto luminoso, que mediante un código de colores informa de diversas situaciones relativas a lo operativa del mismo.

Si la plaza no tiene bicicleta

El indicador muestra la luz amarilla fija, indicando que se puede devolver una bici en esa plaza

Si la plaza tiene bicicleta

El indicador puede mostrar dos estados diferentes dependiendo del nivel de carga de la batería de la bicicleta

- Parpadeo verde cada segundo indica batería cargada
- Parpadeo verde más rápido indica batería en carga

La plaza tiene bicicleta, pero se ha abierto el cierre para ser retirada

El indicador muestra un parpadeo en rojo

Indicaciones tras la devolución de la bicicleta

- Si se sigue mostrando el parpadeo rojo y hay un zumbido, hay un problema de cierre, recoloca la bicicleta
- Si se muestra un parpadeo naranja se está detectando la bicicleta, cuando acabe pasará a verde intermitente

Recogida y devolución

Las bicicletas se pueden coger sin reserva, siempre que existan unidades operativas libres o sin reserva previa. Existen dos alternativas de cara a formalizar el préstamo y liberar la bicicleta:

- Tecleando el código personal en el teclado. El sistema liberará la bicicleta asignada.
- Usando la app *PVerde* en el móvil, seleccionando la bicicleta que se quiere utilizar. A tal fin, la App muestra los anclajes con bicicleta disponible en color verde. (Si la bicicleta había sido previamente reservada por el usuario, este anclaje se muestra en la App en color azul)

Una vez liberada la bicicleta, el anclaje asignado cambiará su piloto de color verde a color rojo. Es importante proceder inmediatamente a retirar la bicicleta asignada ya que, transcurridos diez segundos, si no se retira la bicicleta del soporte, ésta será bloqueada de nuevo.

Una vez finalizado el uso, al llegar al aparcamiento, el procedimiento es muy sencillo, bastando con introducir el buje de la rueda delantera en cualquiera de los anclajes disponibles, cerciorándose que ésta queda convenientemente bloqueada. El piloto del anclaje cambiará a color verde y parpadeará. La recarga de la bicicleta se inicia automáticamente.

Procedimiento de reserva

Previamente habrá sido necesario haberse dado de alta en el sistema (ver apartado correspondiente)

Las reservas se pueden hacer con una semana de antelación.

El sistema ofrece dos alternativas de cara a formalizar las reservas:

- A través de la app Pverde (será necesario que facilites tu número de teléfono móvil en el formulario para darte de alta en el sistema)
- Descarga para Android (Se abre en una ventana nueva)
- Descarga para iOS (Se abre en una ventana nueva)
- A través de la WEB (Se abre en una ventana nueva)

En la app, para localizar la estación de bicicletas del Ayuntamiento se debe primero seleccionar el icono de bicicleta (número 1 en la imagen de abajo), y posteriormente seleccionar "Bici compartida Ayuntamiento Vitoria-Gasteiz" (número 2 en la imagen).



Figure 9: Screenshot of the mobile app to manage the rental scheme by users

Si se utiliza la app, en algunas ocasiones puede haber problemas de cobertura en el sótano donde se ubican las bicicletas. Suele haber más cobertura cuanto más cerca estemos de la puerta de salida del garaje.

Si la persona ya está registrada en la aplicación *Pverde* con anterioridad porque ya hace uso de otro servicio con *Pverde*, las notificaciones de correo electrónico se recibirán en la dirección de correo que aportó inicialmente.

Para retirar la bicicleta reservada, bastará con introducir el código personal en el teclado alfanumérico de la estación, o bien seleccionar el anclaje en cuestión a través de la App.

Una vez que se haya iniciado el tiempo de reserva, dispondrás de 30 minutos para retirarla. En caso de que no sea así, la bicicleta se bloqueará de nuevo y volverá a estar disponible para otras personas.

La bicicleta dispone de dos candados, uno tradicional de cadena y otro de herradura que bloquea la rueda trasera para aquellos casos en los que el estacionamiento va a ser breve y la bicicleta queda a la vista. Los dos candados se abren y cierran con la misma llave, pudiéndose utilizar, indistintamente cualquiera de los dos, o ambos simultáneamente. Siempre que sea posible, es recomendable bloquear ambos candados.

Tu navegador no soporta este tipo de contenido.

La bicicleta se puede aparcar en los aparcamientos de la red VGBiziz durante el periodo de uso.

Alta en el sistema

Para darse de alta en el piloto es necesario completar y enviar el siguiente formulario por correo electrónico a la dirección cea@vitoria-gasteiz.org

[Impreso de solicitud](#)

Datos necesarios: nombre, departamento, e-mail corporativo. El **teléfono móvil es opcional:** instalando la **app Pverde**, facilita recibir mensajes informativos, reservar bicicletas, etc, de manera más ágil que por email.

Una vez aceptada la solicitud, se remitirá a la dirección de correo indicada la clave personal que permitirá operar con la estación. Esta clave es personal e intransferible, siendo responsable la persona usuaria de cualquier utilización negligente del servicio.

Normas de uso

La persona usuaria del sistema se compromete a:

- Emplear la bicicleta únicamente para desplazamientos laborales y realizar un uso responsable de la misma.
- Garantizar la seguridad de la bicicleta, utilizando los candados siempre que ésta se estacione fuera de la estación, aun cuando sea por un corto espacio de tiempo.
- Retornar la bicicleta a la estación una vez finalizado el uso de cara a favorecer una rotación adecuada de la misma y en cualquier caso antes de terminar la jornada laboral.
- Comunicar cualquier tipo incidencia, tanto de la estación como de las bicicletas y del propio sistema (ver el apartado de comunicación de incidencias).
- Respetar las normas de circulación y de seguridad vial.

Si los plazos de reservas y entregas no se respetan, se inhabilitará a la persona usuaria un tiempo determinado. En caso de incumplimiento reiterado, la inhabilitación podrá ser definitiva.

Comunicación de incidencias

| Momento de la incidencia | Acción |
|---------------------------|--|
| Antes/durante la recogida | Llamada o whatsapp al <i>call center</i> técnico o comunicación a través de la app |
| Durante el uso | Llamada o whatsapp al <i>call center</i> técnico o comunicación a través de la app. Será necesario retornar la bicicleta a la estación |
| Accidente | Si los desperfectos no permiten retornar la bicicleta hasta la central, se comunicará el hecho al <i>call center</i> , que le pedirá que la ancle adecuadamente e indique el punto exacto, para que el equipo de mantenimiento pueda pasar a recogerla |

Número del call-center técnico [629 957 191](tel:629957191)

ENGLISH TRANSLATION:

Shared bicycle for staff employed in the San Martín Technical Office building

The City Council of Vitoria-Gasteiz, through the Centre for Environmental Studies, in order to promote active and sustainable mobility in the workplace, has launched a pilot project for an automated electric bicycle station. This initiative aims to offer the staff of the San Martín building a sustainable alternative to the municipal car fleet in order to meet their travel needs in the course of their work activities.

To this end, an automated station has been installed in the building's underground car park to allow the loan, return and recharging of 6 electric bicycles.

Since the conception of this initiative, the aim has been to make the use of the system as simple and functional as possible. After an initial period of fine-tuning, the operational implementation will be progressive, by department, in order to guarantee, in the best possible way, a progressive use and to be able to solve those incidents that any pilot initiative entails.

Depending on the success of this pilot experience, which will last six months, the continuity of this shared bicycle system will be evaluated, so we encourage you to participate in it and improve it with your contributions.

Elements of the system:



The bicycle sharing system consists of a station with six docks and recharging points and the corresponding electric bicycles. The battery is charged automatically when the bicycle is parked in the dock.

The station is accompanied by an alphanumeric keypad that allows the user to interact with the station's management system, using a personal password, in order to unlock the bicycle.

The system is managed by a computer system that also extends the possibilities of interacting with the station, allowing reservations to be made in advance via the web or App, or even access to the bicycle without the alphanumeric keypad.

Each one of the anchorages has a pilot light, which by means of a colour code informs of various situations related to the operation of the anchorage.

If the dock does not have a bicycle

The indicator shows the fixed yellow light, indicating that a bike can be returned to that dock.

If the dock has a bicycle

The indicator can show two different states depending on the battery level of the bicycle

- Flashing green every second indicates battery charge
- Faster green flashing indicates battery in charge

The dock has a bicycle, but the lock has been opened to be removed

The indicator shows a blinking red

Instructions after returning the bicycle

- If the red flash continues to be displayed and there is a buzzing sound, there is a problem with closing, reposition the bike
- If an orange flash is displayed, the bike is being detected, when it is finished it will switch to green flash

Collection and return

Bicycles can be taken without reservation, as long as there are free or unreserved operating units. There are two alternatives for formalising the loan and releasing the bicycle:

- By entering your personal code on the keypad. The system will release the assigned bicycle.
- Using the PVerde app on the mobile phone, selecting the bicycle you want to use. For this purpose, the App shows the available bicycle docks in green (if the bicycle had been previously reserved by the user, this anchor is shown in the App in blue)

Once the bike is released, the assigned dock will change its rider from green to red. It is important to proceed immediately to remove the assigned bicycle because, after ten seconds, if the bicycle is not removed from the rack, it will be locked again.

Once you have finished using the bike, when you arrive at the car park, the procedure is very simple. All you have to do is insert the front wheel hub into any of the available dock points,

making sure that it is properly locked. The dock light will change to green and will flash. Reloading of the bike starts automatically.

Reservation procedure

You must have previously registered in the system (see corresponding section)

Reservations can be made one week in advance.

The system offers two alternatives for making reservations:

- Through the Pverde app (you will need to provide your mobile phone number in the form to register in the system)
- Download for Android (opens in a new window)
- Download for iOS (opens in a new window)
- Through the WEB (It opens in a new window)

In the app, to locate the Town Hall bicycle station you must first select the bicycle icon (number 1 in the image below), and then select "*Bicicleta compartida Ayuntamiento Vitoria-Gasteiz*" (number 2 in Figure 9: **Screenshot of the mobile app to manage the rental scheme by users**).

If the app is used, sometimes there may be problems of coverage in the basement where the bicycles are located. There is usually more coverage the closer we are to the exit door of the garage.

If the person is already registered in the Pverde app before because they already use another service with Pverde, the email notifications will be received at the email address they initially provided.

To remove the reserved bicycle, simply enter the personal code on the alphanumeric keypad at the station, or select the relevant attachment via the App.

Once the reservation time has started, you will have 30 minutes to withdraw it. If this is not the case, the bike will be locked again and will be available for other people.

Bicycle

The bicycle has two locks, one traditional chain lock and one horseshoe lock that locks the rear wheel for those cases where parking will be short, and the bicycle is in sight. Both locks can be opened and closed with the same key, and either or both can be used simultaneously. Whenever possible, it is advisable to lock both locks.

The bicycle can be parked in the bicycle parkings of the VGBiz network during the period of use.

Registration in the system

To register for the pilot, please complete and send the following form by email to cea@vitoria-gasteiz.org



Application form

Necessary data: name, department, corporate e-mail. The mobile phone is optional: by installing the Pverde app, it makes it easier to receive information messages, reserve bikes, etc, more quickly than by email.

Once the application has been accepted, the personal password that will allow you to operate the station will be sent to the e-mail address indicated. This password is personal and non-transferable, and the user is responsible for any negligent use of the service.

Rules of use

The person using the system undertakes to:

- To use the bicycle only for work journeys and to use it responsibly.
- Guarantee the safety of the bicycle, using the locks whenever it is parked outside the station, even if it is only for a short time.
- Return the bicycle to the station after use to encourage proper rotation of the bicycle and in any case before the end of the working day.
- Communicate any type of incident, both of the station and of the bicycles and of the system itself (see section on communication of incidents).
- Respect traffic and road safety regulations.

If the reservation and delivery periods are not respected, the user will be disqualified for a certain time. In the event of repeated non-compliance, the disqualification may be final.

Communication of incidents

Time of the incident: Action

Before/during collection: Call or WhatsApp to the technical call centre or communication through the app

During use: Call or WhatsApp to the technical call centre or communication through the app. It will be necessary to return the bike to the station

Accident: If the damage does not allow the bicycle to be returned to the centre, the call centre will be informed and will be asked to anchor the bicycle properly and indicate the exact point so that the maintenance team can pick it up

Technical call centre number 629 957 191