



ICT on Public Bicycle / Green Line Murcia / Wifi Public Network

Jai me RUIZ HUESCAR
Engi neer
ALEM,
Local Energy Agency of Murcia

GREEN DIGITAL STUDY TOUR, 5 & 6 May 2014, MURCIA, SPAIN



1. "ICT" ON PUBLIC BICYCLE

- Total cycle parking = **9 + 15**(in progress)
- 20 bicycles capacity each → **320 in total**
- Connected via wifi/3G with internal database
- **I-button & I-Reader**, personal identification
- **Security** measures guaranteed.
- Can be used with **public bicycles or private ones**.



I-Button



Outside view of a Public bicycle parking



Interior View

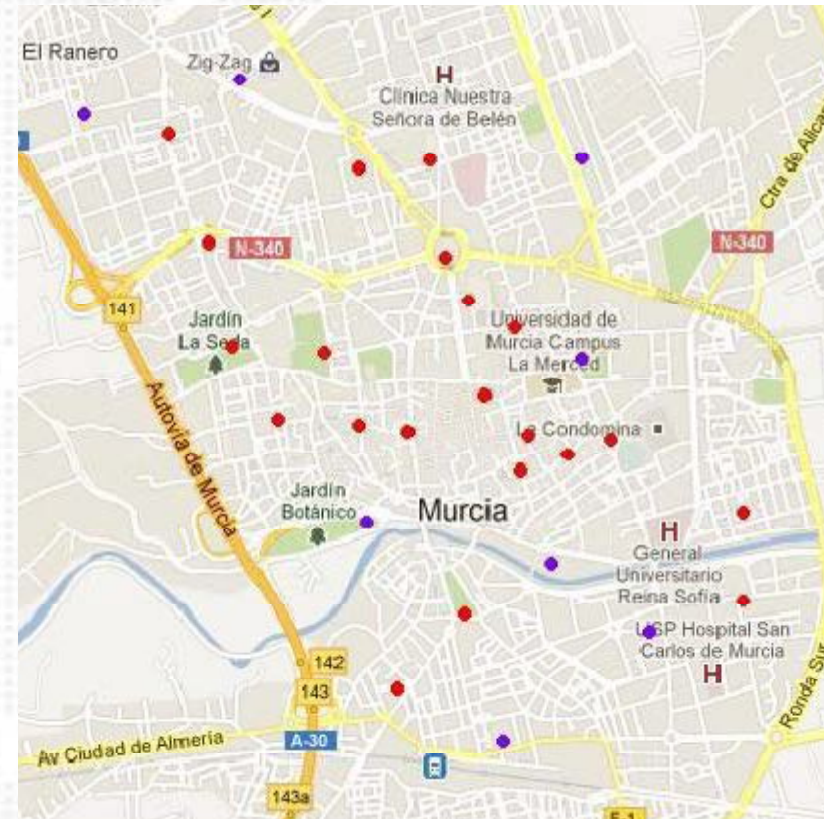
1. "ICT" ON PUBLIC BICYCLE



- A. The system is controlled by software "**Bicimurcia**"
- B. Register process is compulsory.
- C. Users have to visit the "Bicycle municipal office" in order to collect the I-Button.
- D. Scalable system, ready to grow.



Distribution of cycle parkings in Murcia



- Violet dots: Cycle parking installed
- Red dots: In progress

1. "ICT" ON PUBLIC BICYCLE

✔ Detailed info of each access and possibility to search for a specific register.

The screenshot displays the 'bicimurcia' management interface. At the top, there are navigation tabs: 'Usuarios', 'Aparcabiels', 'Estadísticas', 'Operadores', and 'Configuraciones'. The 'Estadísticas' tab is active. Below the tabs, there is a search bar labeled 'Buscar:' and a 'Mostrar:' dropdown menu. A pagination bar shows '1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 ... 1238 (12371 items)'. The main content area is a table with the following columns: '#', 'Fecha', 'Aparcabiels', 'Usuario', and 'Acceso'. The table contains several rows of data, including entries for 'Avenida de los Pinos', 'Sauce', and 'Jardín Chino' with various users and access statuses.

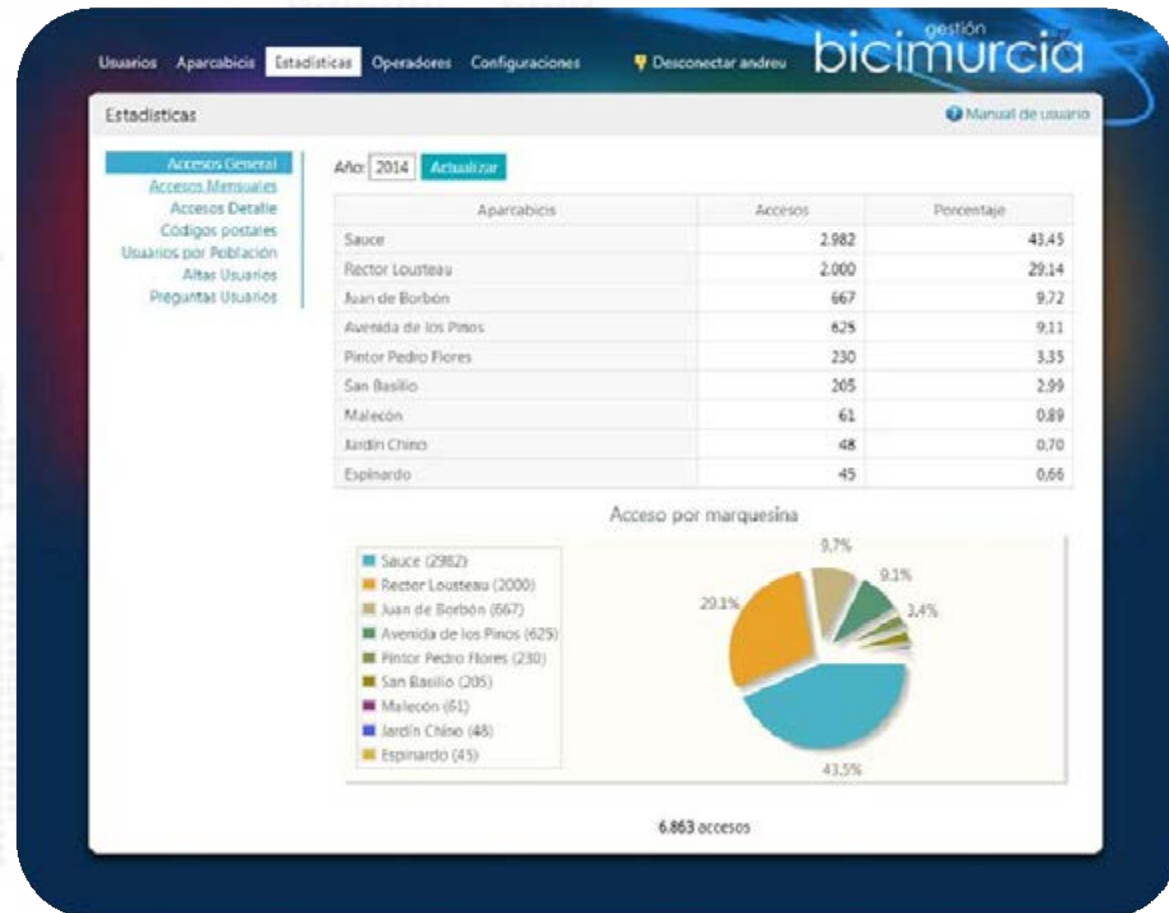
#	Fecha	Aparcabiels	Usuario	Acceso
16002	25/04/2014 14:27:41	Avenida de los Pinos	JOSE JUAN BUENDIA BALLESTER	Si
16001	25/04/2014 14:02:40	Sauce		Intrusió: E
15982	25/04/2014 12:26:30	Jardín Chino	JAIME RUIZ HUESCAR	Si
15981	25/04/2014 12:23:08	Jardín Chino	JAIME RUIZ HUESCAR	Si
15961	25/04/2014 09:02:22	Avenida de los Pinos	JOSE JUAN BUENDIA BALLESTER	Si
15941	25/04/2014 07:29:53	Avenida de los Pinos	JUAN LUIS ESTRELLA MENGUAL	Si
15928	28/04/2014 20:31:23	Avenida de los Pinos	FUENSANTA VIZUETE CANO	Si
15927	28/04/2014 19:39:25	Sauce		Intrusió: E
15926	28/04/2014 19:39:21	Sauce		Intrusió: E
15925	28/04/2014 18:22:14	Sauce		Intrusió: E
15924	28/04/2014 18:05:37	Sauce		Intrusió: E



1. "ICT" ON PUBLIC BICYCLE

✔ Statistics section to check the usage of the network.

✔ It allows to evaluate demand of cycle parking on every district.



1. "ICT" ON PUBLIC BICYCLE

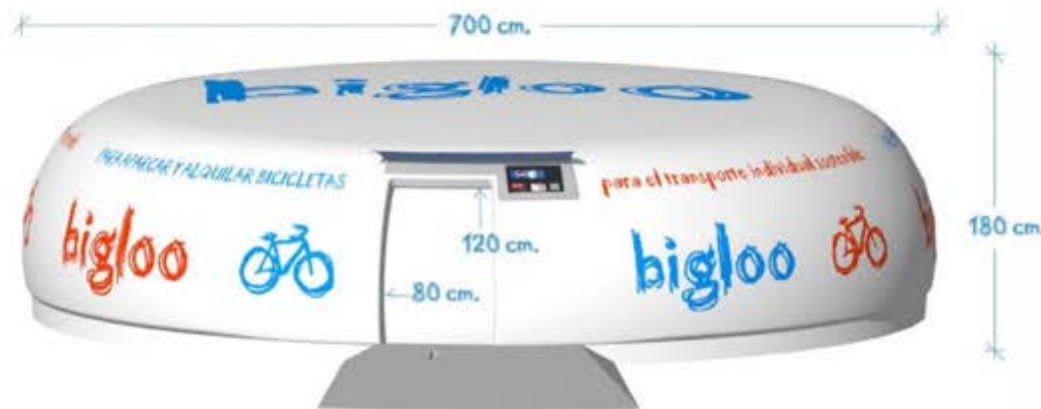
✔ Total monthly access records.

✔ Comparison with previous years.



1. "ICT" ON PUBLIC BICYCLE

- ✓ New intelligent bicycle parking
- ✓ Automatic bicycle delivery and collecting
- ✓ 24 bikes capacity
- ✓ RFID access
- ✓ Quicker and safer than the conventional system
- ✓ It allows an easier integration with the environment



1. "ICT" ON PUBLIC BICYCLE

★ "MUyBICI" ★

- ✓ New planned **public bicycle sharing system** in Murcia: "**MUyBICI**".
- ✓ **+40 sharing stations** and **+250 bicycles** will be available for users.
- ✓ Great expectation among Murcia citizens.
- ✓ Will be provided with **latest ICTs tools**.
- ✓ Previous experiences in other Spanish cities have been a round success: Barcelona, Valencia, Sevilla...(see pictures below)



2. "GREEN LINE" MURCIA

1. Allow citizens to **notify incidents on the streets** via this specific Smartphone APP.
2. A smartphone can be used to **take a picture of the incident** and send it to "GREEN LINE"
3. The system **warns the civil servant** responsible to fix it.
4. Once the problem is solved **the citizen receives confirmation**.
5. **Free service** to improve public management and **get citizen involvement**.

The screenshot shows the web application interface for 'Línea Verde' (Green Line) in Murcia. At the top left is the 'murcia.es Ayuntamiento de Murcia' logo. To the right, the text 'Línea Verde Murcia' is displayed. Below this, the user information 'Su usuario : direccion.agenciaenergia@ayto-murcia.es' and a 'Cerrar Sesión' (Logout) button are visible. The main content area features the 'Línea Verde SMART CITY' logo and a central graphic showing a hand interacting with a smartphone, surrounded by circular icons representing various smart city services like energy, water, and waste management. At the bottom, a navigation menu includes buttons for 'Inicio', 'Mapa', 'Nueva incidencia', 'Gestión de incidencias', 'Informes', 'Alertas', and 'Manual'.



2. "GREEN LINE" MURCIA

✓ When an incident is registered the information provided is:

- ✓ Date
- ✓ Status
- ✓ Address
- ✓ Kind of incident
- ✓ Comments
- ✓ Picture

Datos de la incidencia


Referencia: 6513
Enviada desde: APP
Fecha y hora de alta: 05/07/2013 12:30:43
Estado Actual: En Proceso

Dirección aproximada:
Calle Saavedra Fajardo, 17, 30001 Murcia,
España (37.9868726057709,
-1.12718560489782)

Tipo de incidencia:
Vías ciclabiles, bicicleta pública y carriles bici.

Comentario:
Hola, en Avda. Marques Vélez cruce con Avda.
Príncipe Asturias (frente "el calcetín") una valla
está casi caída. Si vas con la bici te puedes
arañar la cara. Gracias


Fotografías:








2. "GREEN LINE" MURCIA




















This panel is used to manage the incidents. It allows to set an status to such incident, make internal notes , filter them or communicate with the "user"

Gestión de incidencias 

Mostrar todas  Pendientes  En Proceso  Solucionadas  Denegadas  Eliminadas Registros por página 20

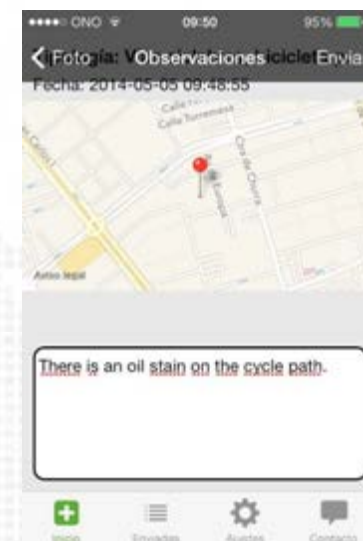
Tipo: Desde Hasta

Código: Texto: Creadas por Gestor

Opciones	Código	Fecha	Tipología	Observaciones	Fecha Mod.	Estado
 	25451	06/04/2014	Vías ciclables, bicicleta pública y carriles bici.	La señal de Stop está torcida y no se ve bien, en la calle Adelfas		
 	17373	09/01/2014	Vías ciclables, bicicleta pública y carriles bici.			
 	17106	05/01/2014	Vías ciclables, bicicleta pública y carriles bici.	contenedor pie roto		
 	15575	11/12/2013	Vías ciclables, bicicleta pública y carriles bici.	señal en mal estado		
 	15463	09/12/2013	Vías ciclables, bicicleta pública y carriles bici.	El carril bici de La Costera Sur se satura de peatones que muchas veces impiden el paso de ciclistas, que a pesar de avisar con el timbre la gente que va a pie no se aparta. Los ciclo turistas y los ciclistas buscamos una solución ¿Es un carril bici, como pone en las señales, o es una vía verde para compartir entre las bicis y los peatones?		
 	15342	05/12/2013	Vías ciclables, bicicleta pública y carriles bici.	arqueta en la carretera de Alicante junto al cementerio del esparragal Murcia. está sin tapadera más de 2 años para cuando se puede solucionar esto cuando se caiga una persona y se mate señor Don Miguel Ángel cámara pongamos solución		

2. "GREEN LINE" MURCIA

✓ Screenshots from the "GREEN LINE" App for Smartphones



[Link to the video](#)

3. "WIFI" PUBLIC NETWORK IN MURCIA

- ✓ +200 Free Wifi access points in Murcia, running since January, 2011
- ✓ The network serves both citizens and Municipal services such as irrigation, cameras for traffic management among others.
- ✓ 1,2 M € cost. stations.
- ✓ There are 5 central base & 60 Mb broadband.

2 available networks

"Web-AytoMurcia_y_AAPP"
To navigate on Murcia city council websites only.

"Internet-AytoMurcia"
To free navigation on internet, speed limited to 256 Kpbs.

