





Sant Cugat, àrea metropolitan a de Barcelona

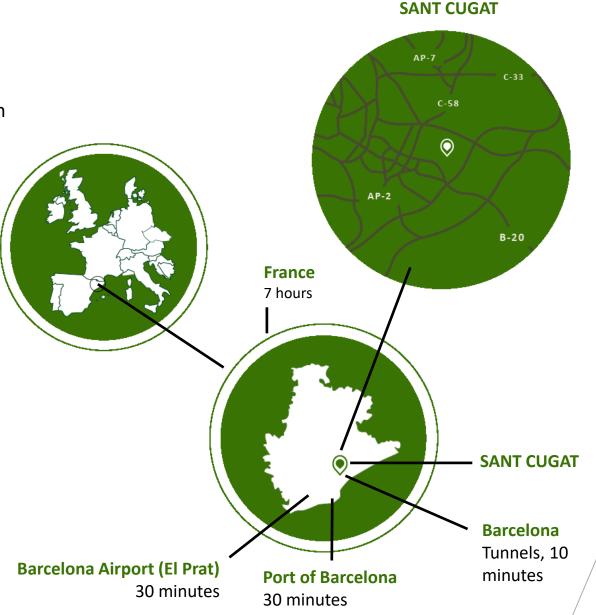
+ 90.000 inhabitants





 Directly connected to the highway infrastructure network leading to the airport and port of Barcelona in 30 min.

- Well established public transport system by train and bus
- Green, efficient and sustainable city, benchmark of quality in urban public spaces and services to citizens.
- It strongly works in favour of energy saving, use of renewable energy, sustainable water management and waste reduction.





### Location & Population: unmatched quality of life

- One of the youngest cities in Spain, with 90,000 inhabitants and an average age of 38.
- 92% of inhabitants feel happy to live in Sant Cugat and 78.5% believe it to be civic and safe.
- Sant Cugat is a town open and welcoming. A leading modern city yet maintaining old town warmth.
- Surrounded by Collserola Natural
   Park with over 8,000Ha of nature
   reserve and 13 urban parks with over
   780,000m2. 1 tree per inhabitant.
- 10 large sport areas all over the city covering a wide range of activities (athletism, basketball, hockey, swimming, horse riding, rugby, golf, soccer, etc).





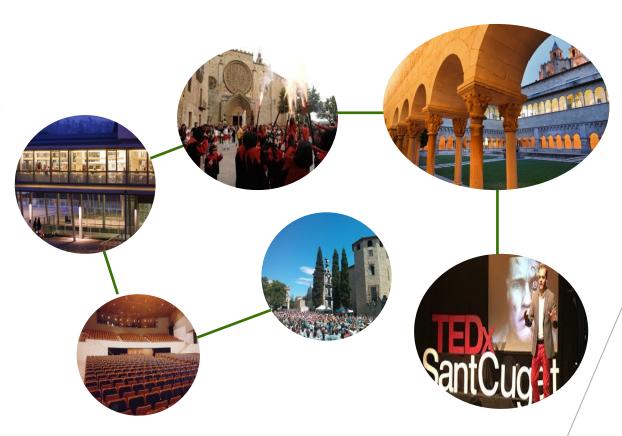
#### All year round culture and leisure activities

**Highly educated and socially participative and involved citizens**, with an average of 7 cultural activities a day for all ages and tastes.

- 200 cultural associations and a number of art and music schools.
- 3 public libraries and 1 Living Lab.
- 11 art galleries and exhibition rooms.
- 1 Concert Hall and Theatre with 800 seats and 100,000 spectators yearly.
- 3 unique museums devoted to Romanesque, Modernism and Contemporary Tapestry.

Workshops, theatre, concerts, performances, opera, classical dance, musicals, gospel, vintage markets...

 A number of routes to walk through the history and architecture of Sant Cugat to discover the old city and medieval quarter, and the Modernist and Nineteenth Century buildings





#### Plentiful creative talent

- 29 public and private schools in the primary and secondary levels, 3 of which international.
- 95% of ESADE MBA, ranked among the best in the world, are foreign students from 46 different countries.
- Ratio of new technologies
   penetration and use significantly
   above the average.
- High availability of multilingual, cosmopolitan staff.
- Citizens of **80**working in ou

  escoles universitàries
  g i m b e r n a t
  i Tomàs Cerdà
  Acient Novembet Authorima de Burcelona
  firms.

50,000 university students.

6 university campus.

 One of the 10 European cities with 60% of graduate population.





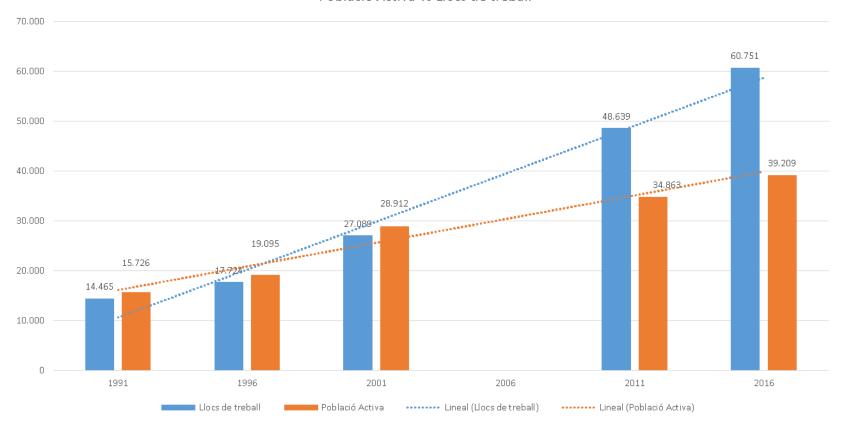








#### Població Activa vs Llocs de treball



	1991	1996	2001	2006	2011	2016
Jobs	14.465	17.724	27.089		48.639	60.751
Active population	15.726	19.095	28.912		34.863	39.209

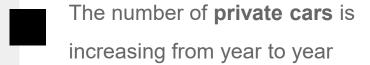
### What happened in the past?

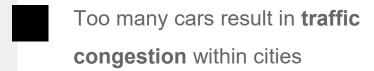
Cities were planned for cars

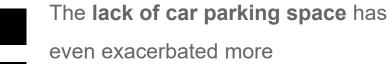
No awareness of air quality

Services centralized in the city centre

## What's happening now?









Cities need to find solutions, specially for first and last mile routes



## What should we tackle to sort it out?

- Urban planning
- > Public transport
- Citizens participation





#### **Ajuntament** dé SantCugat

#### **HIGH-QUALITY ENVIRONMENT FOR** WELL-BEING IN **SANT CUGAT 2050**

In 2050, the citizens of Sant Cugat enjoy a high-quality environment for well-being. People feel responsible for sustainability and engage in collaborative urban planning, use and maintenance.

A high-quality living environment supports healthy lifestyles, An ecological system connects the green areas and enables multifunctional use of urban spaces. The result is an increase in social activities, and in walking and cycling.

The newest technologies are applied in the materials used in buildings and urban spaces, For example, materials that can clean the air and take advantage of the kinetic energy of cars, bikes, and pedestrians transforming this energy into other forms that are useful for citizens. Circular systems for water, food, waste and energy are managed efficiently for maximum re-use of resources.

The environment is designed around people as users of different urban spaces, such as school areas, parks, streets and urban green (visualised in the top lauer of the desired future scenario). The spaces are supported by smart systems to allow for a variety of services, All subsystems are balanced by the city 'brain' (top right) This is all brought together in the city landscape as a holistic city ecosystem, in which all materials, water and air flows are of high quality.

Elements of the desired future scenario are:

Version 15 June 2016









Cugat, They drive initiatives, supported by the administration, Social discussion groups (with good representation of the community) co-create their living environment. A database with the latest data and historical knowledge supports living with lower use of resources, Visibility of the (now invisible) infrastructure and resources enables responsible management and anticipation by citizens themselves.

#### Multi-use of urban space

People are proud to live and/or work in Sant The urban spaces all over the city are used more flexible and cater for different activities. Spaces can be rented for short-term use (e.g. playing football) or for longer-term use (e.g. urban gardening) through an app, Facilities activity (business meetings, sports and activities with respect for the environment and for other people. The elderly, children and the disabled can use the spaces safely.

#### Resilience of the citu

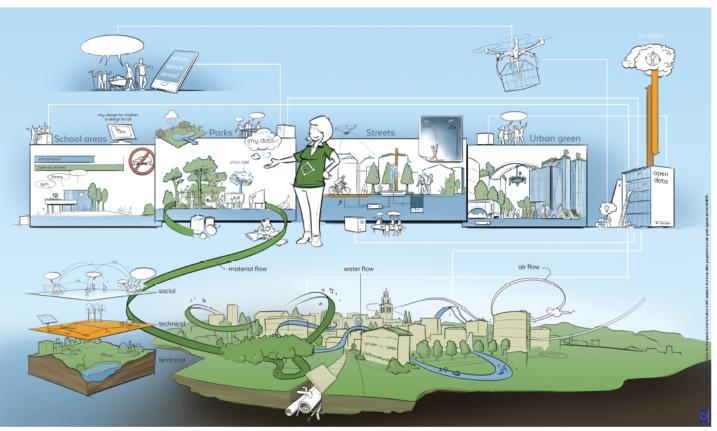
The resources available in the different areas are shared at city level in a circular system. This is done territorially - to understand and monitor the (natural) resources; socially - to enable the awareness and interests of people; can also be booked, and will be tuned to the technologically — a system and grid to make the resources accessible and to respond to - to allow continuous improvement, In a 'system- of-systems', everything is connected and maintained as a single infrastructure,

#### Open data & smart grid

The system includes a centralised data base containing different types of data from different stakeholders on all services and assets in the city, The 'brain' of the system anticipates the expected use and conditions, suggests actions suited to users' needs and optimises the use of the infrastructure and games, picnics etc.), Citizens engage in social changes and emergencies; and economically resources. It enables people to make choices in complex situations. The data is accessible for the development of new apps and services by entrepreneurs,

#### Financina model

New solutions and systems are needed, and these require new financing models and cooperation by the stakeholders, The administration and social conscious citizens jointly invest in the living environment, Public spaces, resources and data are used for valuable new services (e.g. food delivery for picnics in the park or the use of spaces as terraces) to generate revenue enabling sustainable business and further investments.



## CITY CENTRE PROTECTION. Removing cars form the street









Promoting bike paths. CARRIL BICI PROJECTE CARRIL BICI TERME MUNICIP DE CERDANYOI NICIPAL Avantprojecte d'Hineraris accessibles per a vianants l' biblidetes als PAES de la zone nord de Sant Cugat del V sende de l'accessibles de l'accessible de l'ac Φ Planta de traçatı TRAMS CB-1501



## Pacifying the streets. Low speed.









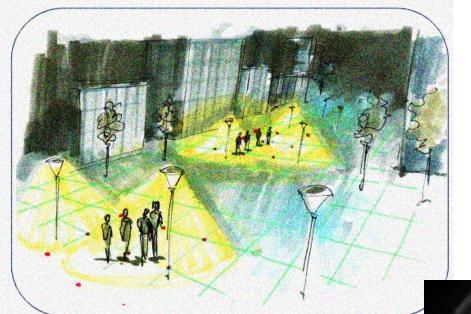
## Improving the mobility to disabled people.







Improving services to increase safety feeling.









CAMERA DETECTS PEDESTRIANS, INCREASES THE LIGHT LEVEL, AND REDUCES IT ONCE THEY'VE GONE.

- ✓ STREET LIGHTING WORKS WHEN
- ✓ WE NEED IT



## **CONTROL ROOM**FOR A BETTER AND SAFE COMMUNITY LIFE



✓ SINGLE AGENT WITH A GLOBAL VISION OF THE INSTALLATION









Com funcionarà?



Cald abar

Una càmera llegirà la matrícula del vehicle



Com dade està

Si està autoritzada, el semàfor li donarà pas canviant a ambre intermite



Els v disp 20 m



# **MOBILITY CONTROL** SUPPORTED BY THE STREET LIGHTING NETWORK FOR A BETTER AND SAFE COMMUNITY LIFE





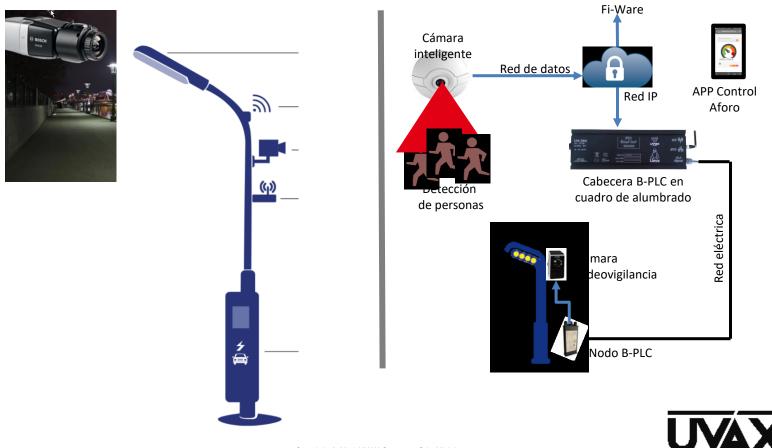






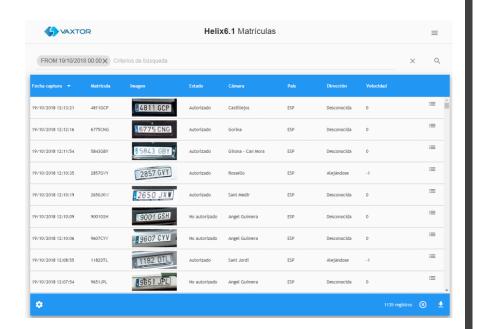
## **UVAX** "Smart City Solution"

Steet lighting management+ surveillance cameras+ sensors; all through the electric wire

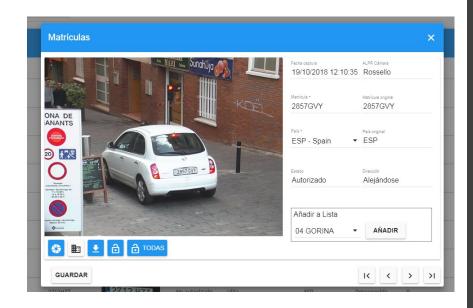


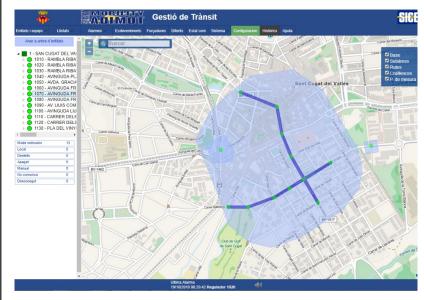
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Technology In Action









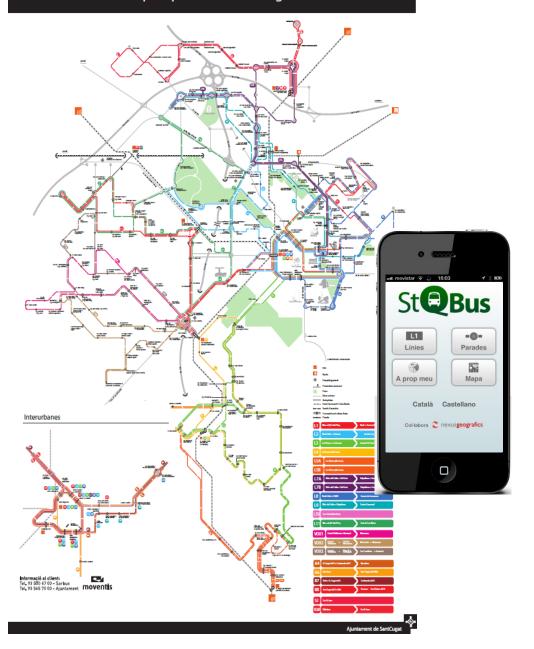
- Urban planning
- > Public transport
- Citizens behaviour
- Energy



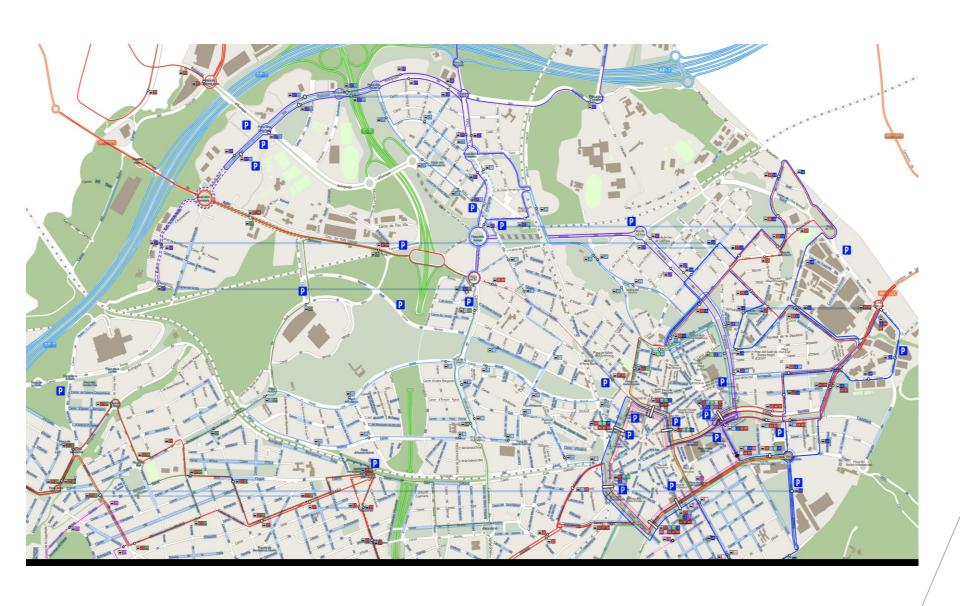




#### Transport públic de Sant Cugat



#### MATCHING PARKING PLACES AND PUBLIC TRANSPORT





- Urban planning
- Public transport
- Citizens participation
- Energy
- Air Quality



## We need answers for their problems...



...transforming data into services



## participation and local business ecosystem...





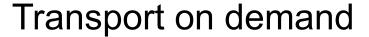






**SOLUTIONS** 

CITIZENS' NEEDS







As a **NEIGHBOUR OF A SUBURBAN AREA**,
I'm affected by the low frequency of public
transport services

I want a system that responds to my irregular schedule at the same price of the public transport, so that I can visit my grandson more often and go to the doctor when I need it and not only when my daughter can take me to it.







#### As a UNIVERISTY STUDENT,

I have very flexible schedules and need to attend to different places everyday

I want a shared vehicle service that responds to my needs and minimises costs and emissions,
 so that I don't need to buy my own private vehicle.
 Besides I don't like to be waiting for the bus alone

at the bus stop.

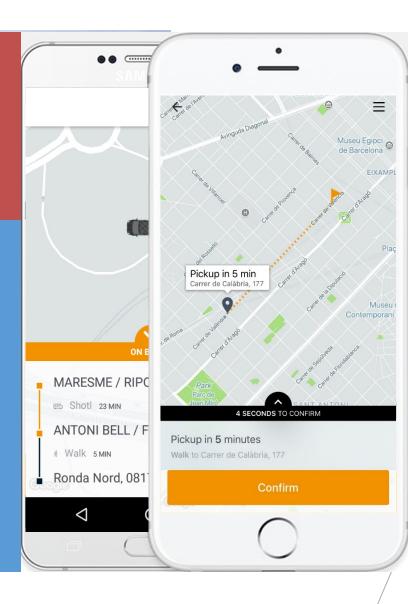




**PARTICIPATION** 

Most of the neighbours have taken pa in real needs identification

## SOLUTION TRANSPORT ON DEMAND





### Itinerari per a bici i vianants Coll Favà-Can Sant Joan

Objectiu: Crear un itinerari segur per a bicicletes i vianants que connectiel barri de Coll Favà amb l'avinguda Via Augusta i l'avinguda Alcalde Barnils, a l'inici de Can Sant Joan.

Descripció: La proposta consisteix en la conversió del camí de Sant Cugat a Sabadell a un únic sentit de circulació i aprofitar l'espai sobrant per fer-hi un camí segur per a bicicletes i vianants. També preveu un accés directe del camí de Sabadell a l'estació de RENFE. Facilitarà un accés amb bicicleta i a peu a tots els equipaments educatius, empreses i serveis del polígon Can Sant Joan.

Oll Favà - Can Sant Joan

© Cost aprox.: 45.000 € Àmbit: Mobilita

> Termini aprox. execució: 6 mesos

Proposta petita a executar Itinerari per a bici i vianants Coll Favà-Can Sant Joan

2.119 vots





# What should we tackle to sort it out?

- Urban planning
- > Public transport
- Citizens participation





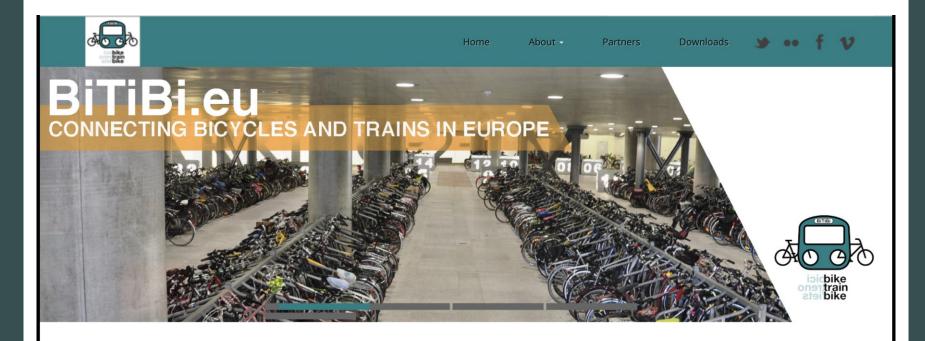
### e-BICIBOX. Keeping bikes safe











### BiTiBi - Bike Train Bike

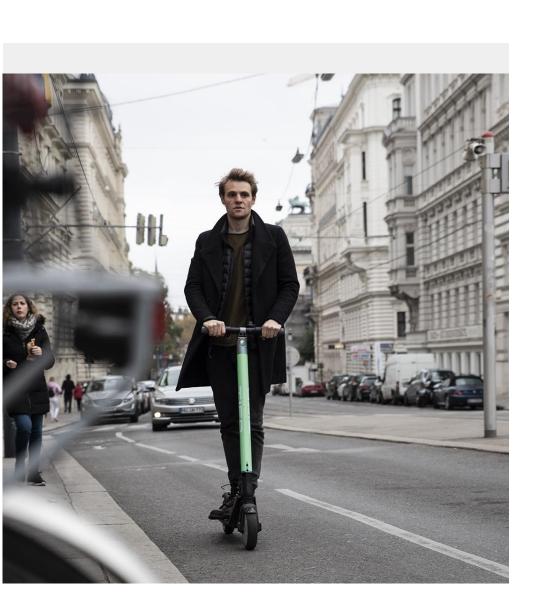
The future of urban mobility is a return to a tried and tested combination of bicycles and trains. BiTiBi was an innovative, three-year project co-funded by the European Union aimed at improving the livability of European cities and improving the energy efficiency of our transport. Combining the two most energy efficient modes of transportation - the bicycle and the train - provides a seamless door-to-door transport connection. Faster, easier and cooler.

During the course of the BiTiBi project, pilot projects were implemented in the regions of Barcelona, Milan, Liverpool and in Belgium with the help of our ten partners, in order to inspire all European





### SCOOTER SHARING AS PART OF THE SOLUTION

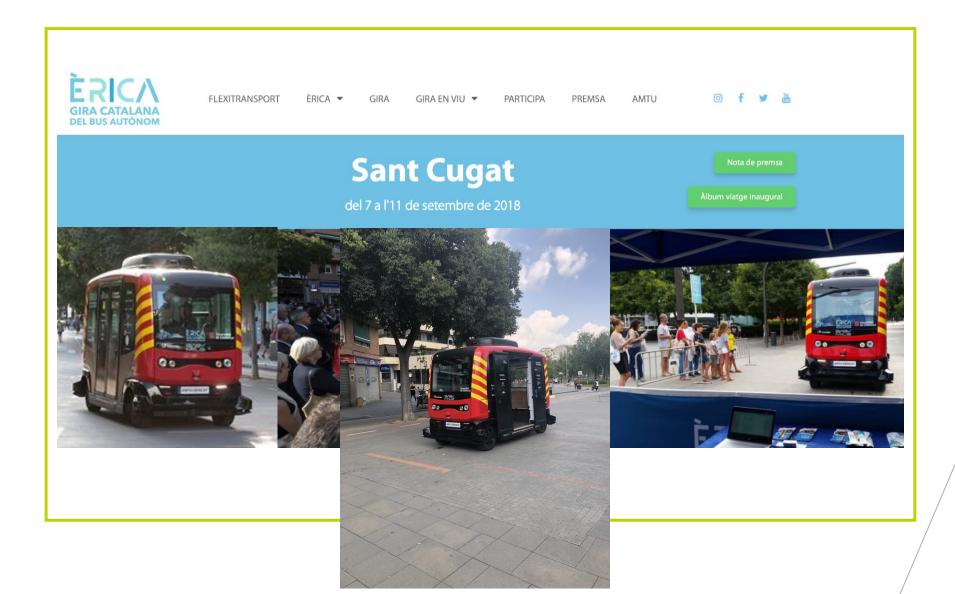


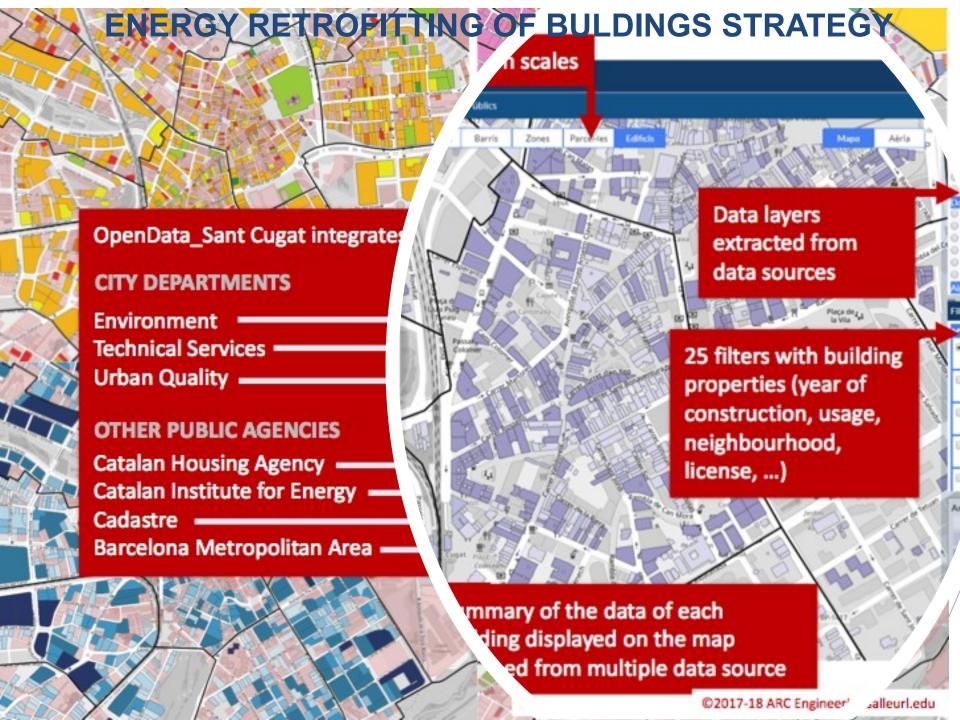
 Multimodality as key solution approach



- Public transport and car sharing are successful alternatives for covering large distances
- However, first- and last mile rides are not adequately covered by bike sharing services

### DRIVESLESS VEHICLES AS PART OF THE SOLUTION







# PROMOTING e- CHARGING POINTS



# What should we tackle to sort it out?

- Urban planning
- > Public transport
- Citizens participation
- Energy, e-mobility

Air Quality



### Benvolgut/da.

Sant Cugat s'encamina cap a un nou model de **mobilitat sostenible** amb l'objectiu de racionalitzar l'ús del vehicle privat i millorar la **qualitat de l'aire**. La contaminació de l'aire és un perill invisible amb un efecte directe a la nostra salut.

A partir de l'1 de gener, Sant Cugat i altres municipis de l'Àrea Metropolitana de Barcelona hem acordat que en dies d'alta contaminació atmosfèrica activarem una Zona de Baixes Emissions al centre de la ciutat on no podran circular els vehicles més contaminants per preservar la salut de les persones.

Hem creat un **Distintiu de Resident** per identificar els vehicles censats a Sant Cugat. Va adreçat a les persones empadronades al municipi que paguen l'impost de circulació a la nostra ciutat. En dies d'alta contaminació ambiental només podran accedir a la Zona de Baixes Emissions els vehicles amb aquest distintiu de resident o els vehicles que disposin d'alguna de les etiquetes ambientals de la DGT (ECO / 0 / B / C).

Li adjuntem el distintiu perquè l'enganxi al seu vehicle.

Pot consultar el plànol de la Zona de Baixes Emissions de Sant Cugat així com altres iniciatives per impulsar un model de mobilitat més sostenible al web www.santcugat.cat/qualitataire.

En cas de dubte, també pot trucar al telèfon 010.

Moltes gràcies per la seva col·laboració.



#### MOLT IMPORTANT

enganoeu el distintiu per la part del darrere d'aquest: locu-lo a l'angle inferior esquerre del parabrises lar. En el costat del conductor.

ta etiqueta només pot ser utilitzada pel vehicle al serrespon la matrícula impresa.

inipulació o utilització incorrecte d'aquest ient donarà lloca la seva immediata cancel·lació, go de qualzevol responzabilitat legal.





# En episodis de contaminació, aparquem el cotxe





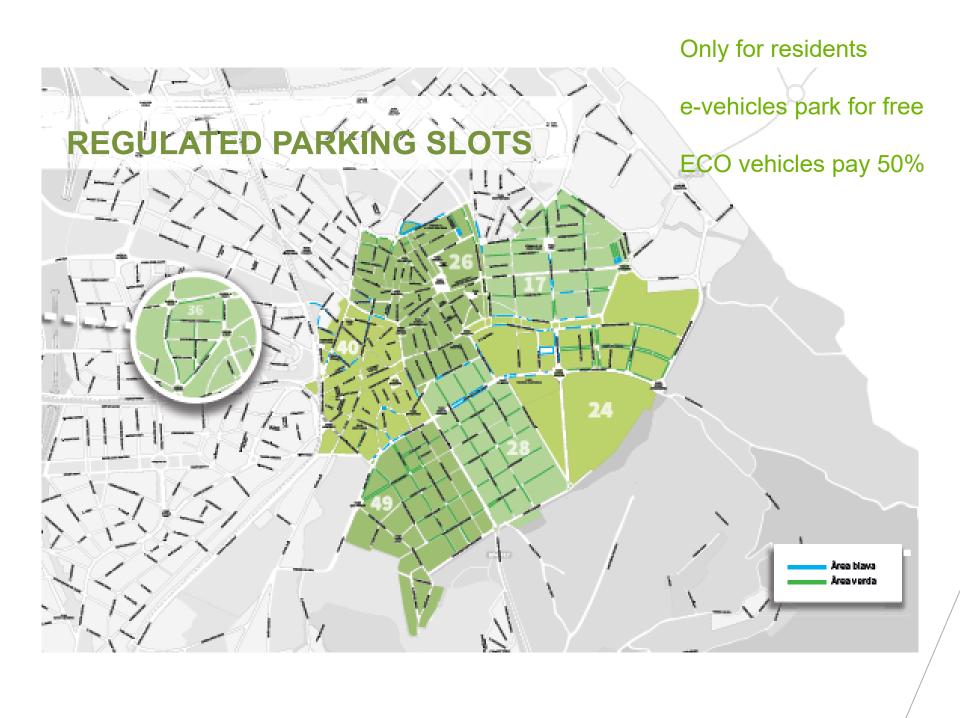






A partir de l'1 de gener, en episodis de contaminació, quedarà restringida la circulació de vehicles més contaminants dins la Zona de Baixes Emissions (ZBE). L'objectiu és vetllar per la qualitat de l'aire que respirem i garantir un entorn més saludable.







Forstering car sharing

eniu a treballar en cotxe?

Irtiu amb altres companys i comp

pteu a una plaça gratuïta i rotativa

l'aparcament de l'Ajuntament

rument adjunt i envieu-lo a mobilitat@sa

