

9th Urban Mobility India Conference 2016
Sustainable Urban Mobility Planning: lessons learned

*An Enable, Avoid, Shift, Improve (EASI)
approach in Bordeaux, France*

November 09, 2106



BORDEAUX MÉTROPOLE

AN ATLANTIC METROPOLIS IN SOUTH WEST FRANCE

> **3RD FRENCH REGION**
for its demographic dynamism

> Almost **1/4** of the regional
population lives in the Bordeaux
metropolitan area

> **40 %** of new inhabitants
are between 24 and 40 years of age



BORDEAUX MÉTROPOLE

740 000
inhabitants



1 000 000
inhabitants in 2030

58 000
hectares

7th largest French conurbation
(demographic weight)



**BORDEAUX
MÉTROPOLE**

AN ADMINISTRATIVE ENTITY

> **CREATED IN 1968** along with
lille, lyon and strasbourg

> One of the **16** urban communities
in France

> **2,700** staff
in a wide variety of fields

Public institution
for inter-municipal cooperation
handling projects of general
interest to the municipalities

> **28** municipalities centred
around Bordeaux

BORDEAUX MÉTROPOLE

POLITICAL ORGANISATION

A PRESIDENT

Alain Juppé

(since 2014)

Mayor of Bordeaux

20 VICE-PRESIDENTS

105 COMMUNITY COUNCILLORS

appointed from among the councillors of the municipalities.
Number set by law according to the number
of municipalities and their population

OFFICIAL POWERS

6 mandatory powers,
defined by the laws of 1966 and 1999

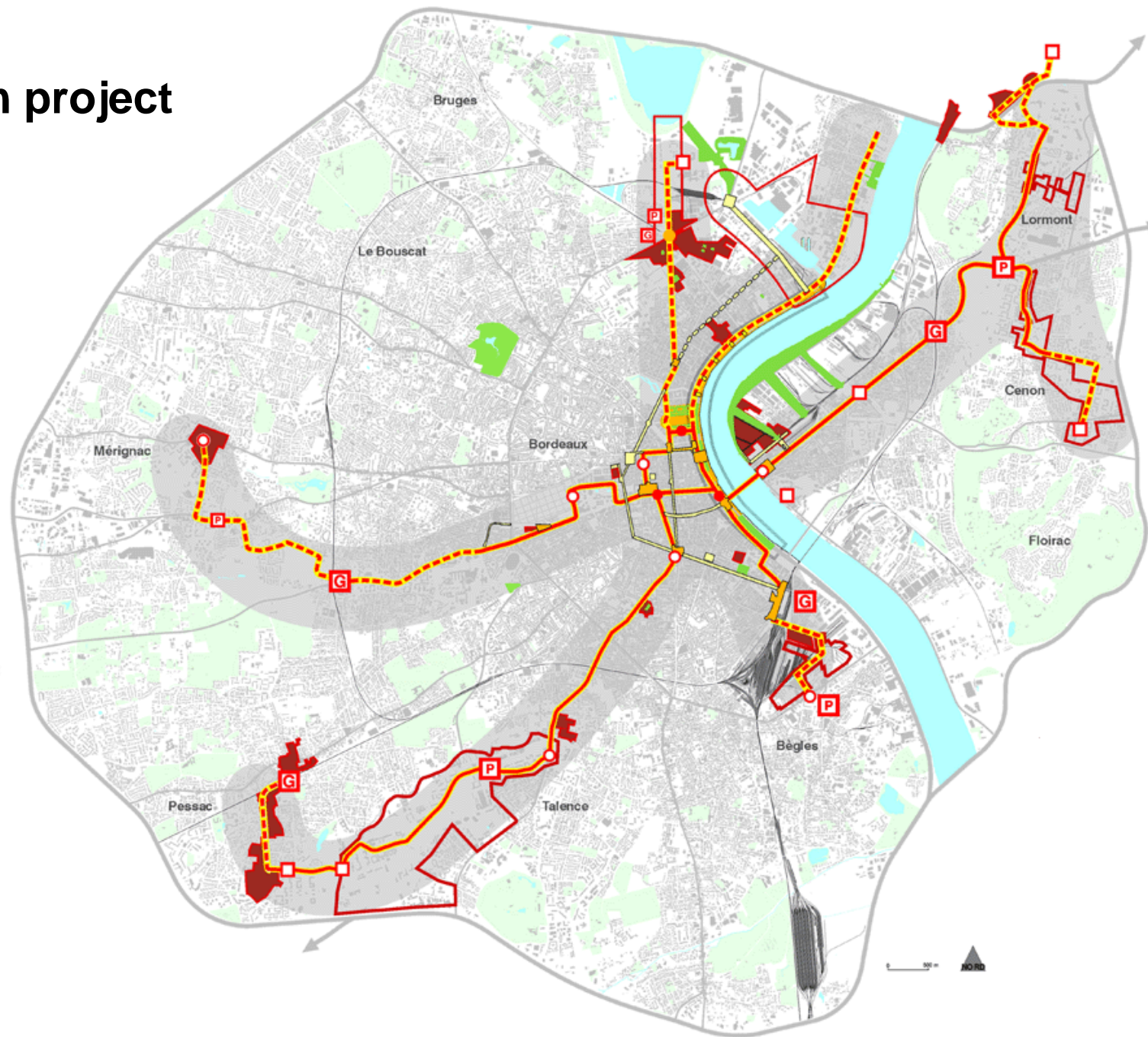
- > Economic planning and development
- > Planning and development of the Community area
- > Social housing management
- > Mobility and transports
- > Services of collective interest: water, sewerage, cemeteries, abattoirs...
- > Environment and living conditions: waste management...

A BUDGET > 1 BILLION EUROS

**DRAFT PROVISIONAL
INVESTMENT PROGRAMME 2011- 2015**

▶▶ 2.067 BILLION EUROS

The 1995 urban project



- Projets en cours de réalisation ou secteur d'étude**
- ZAC à dominante habitat
 - périmètre d'étude ou de prise en considération
- Espaces verts et espaces publics**
- projet en cours de réalisation ou à l'étude
 - projets d'espaces publics liés au tramway
 - autres projets d'espace public
 - réseau de tramway 1^{er} et 2^e phase, aménagement des espaces publics associés
- Lieux d'intermodalité**
- station de correspondance
 - pôle d'échange tram / bus
- Autres pôles d'échange**
- transport en commun urbain / vp
 - P parcs relais en superstructure
 - G transport en commun urbain / réseaux ferrés









New quaysides

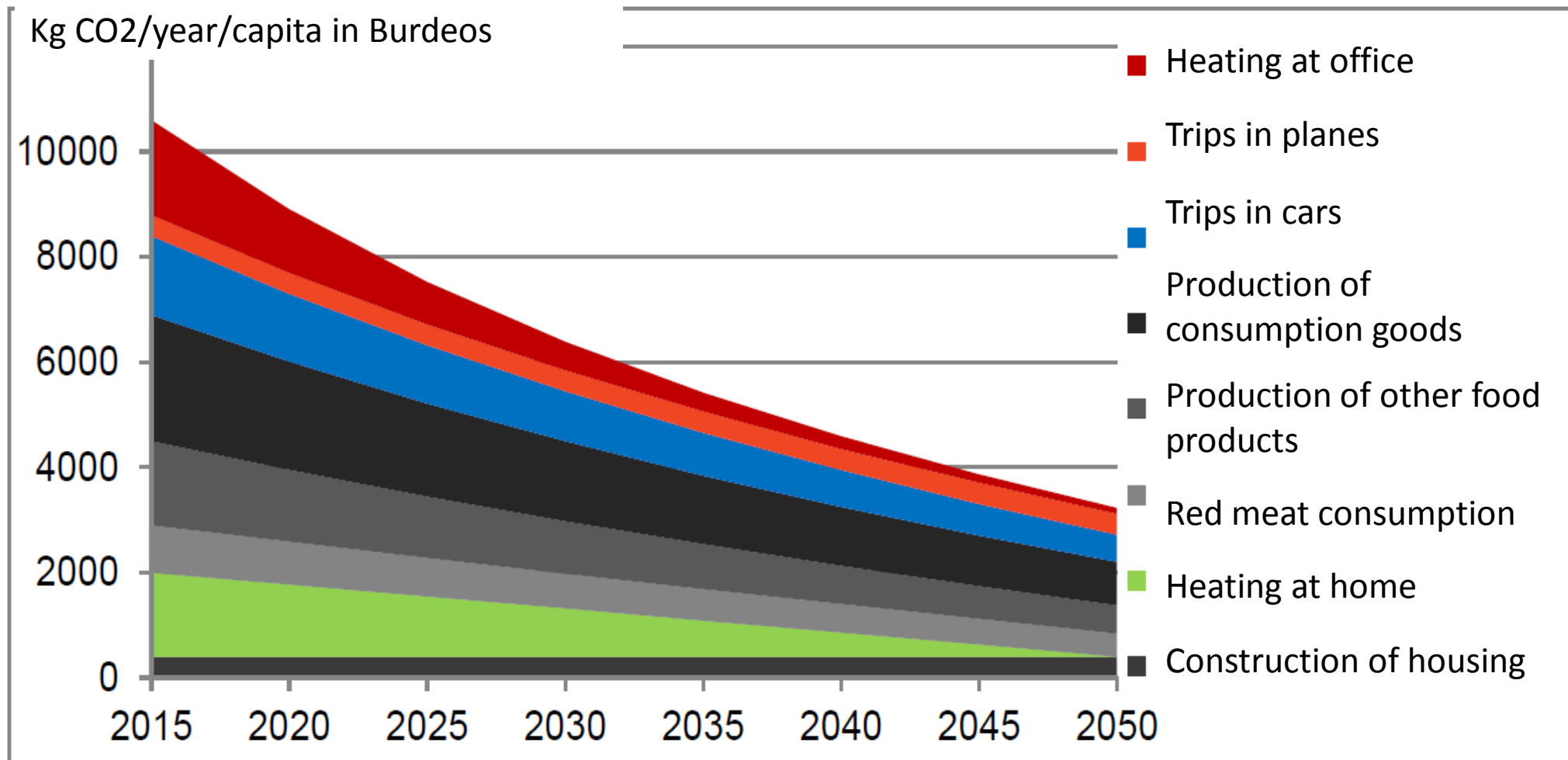


Bastide urban project on the right bank

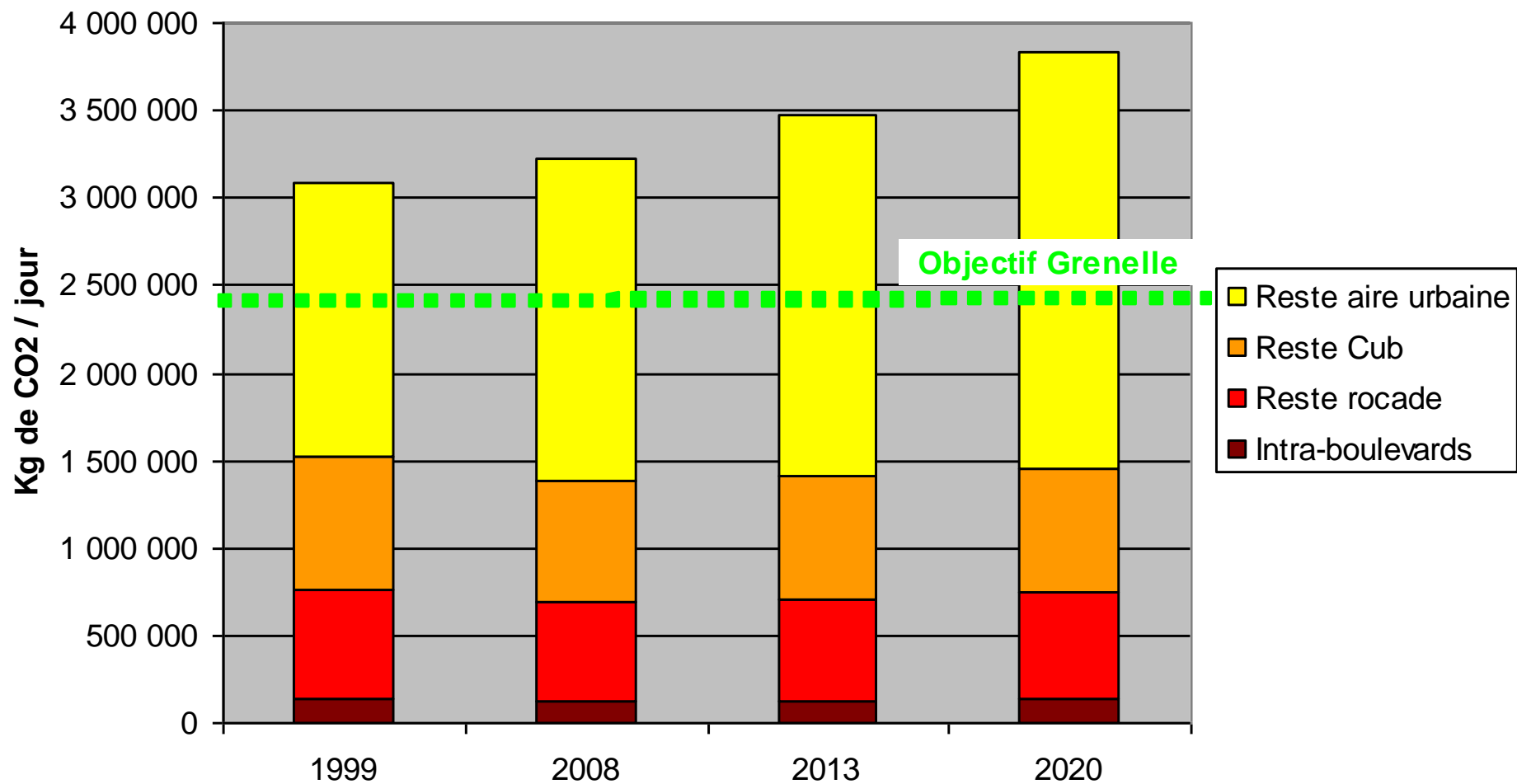


« Park system » on the « Hauts-de-Garonne » plateau

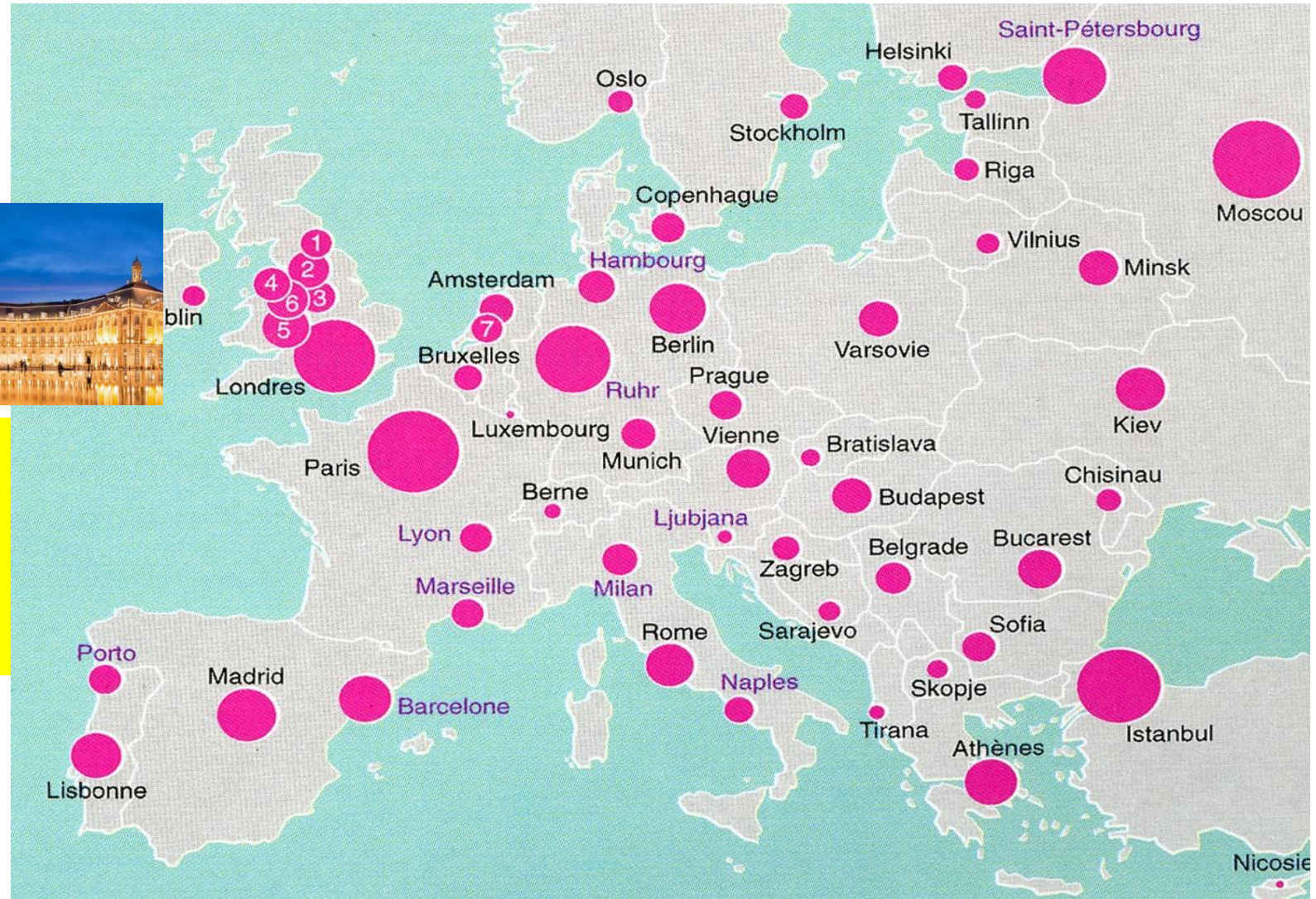
Idea #1: The road to divide by four our emissions by 2020 is going to be a long and difficult road



Idea #2: Even with the success of the tram system, our emissions of CO2 while driving our cars in Bordeaux are steadily increasing!

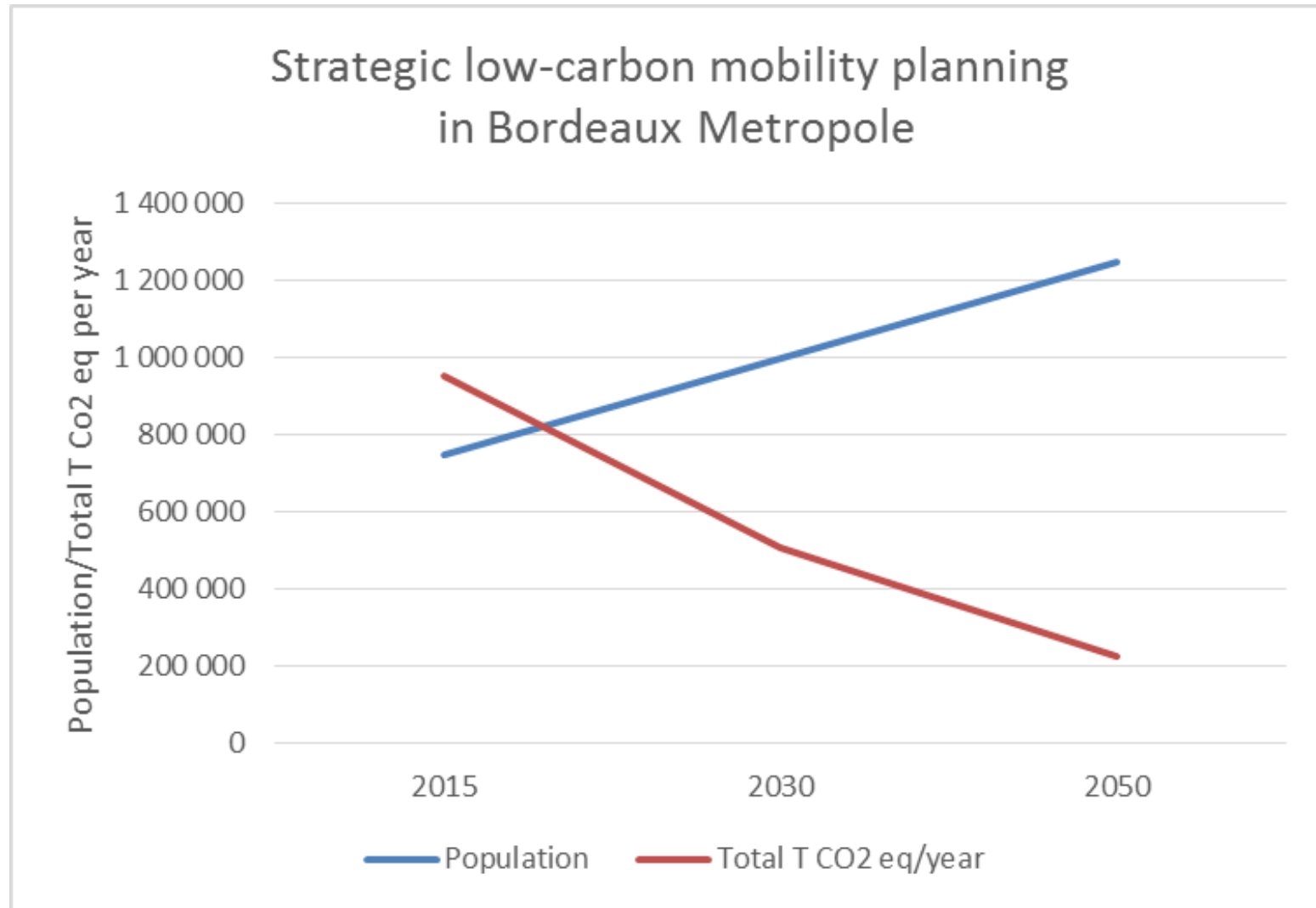


Idea #3: And more over, our population should be + 33% by 2030!



Bordeaux a very attractive city which should join the group of millionaire cities by 2030

Idea #4: The challenge to divide by 4 the emissions of our cars with a booming demography just seems impossible to tackle!



Idea #5: Do not worry! Everything is going to be fine thanks to an Enable, Avoid, Shift, Improve (EASI) approach

- 1. Enable:** we have an overall strategy that we try to **share** with all stakeholders
- 2. Avoid:** we try to develop a **TOD** approach
- 3. Shift:** we will try to develop our **tramway** and **bus** network, and **bicycle** lanes to pull people out of cars
- 4. Improve:** we will rely on **technological** improvements for cars

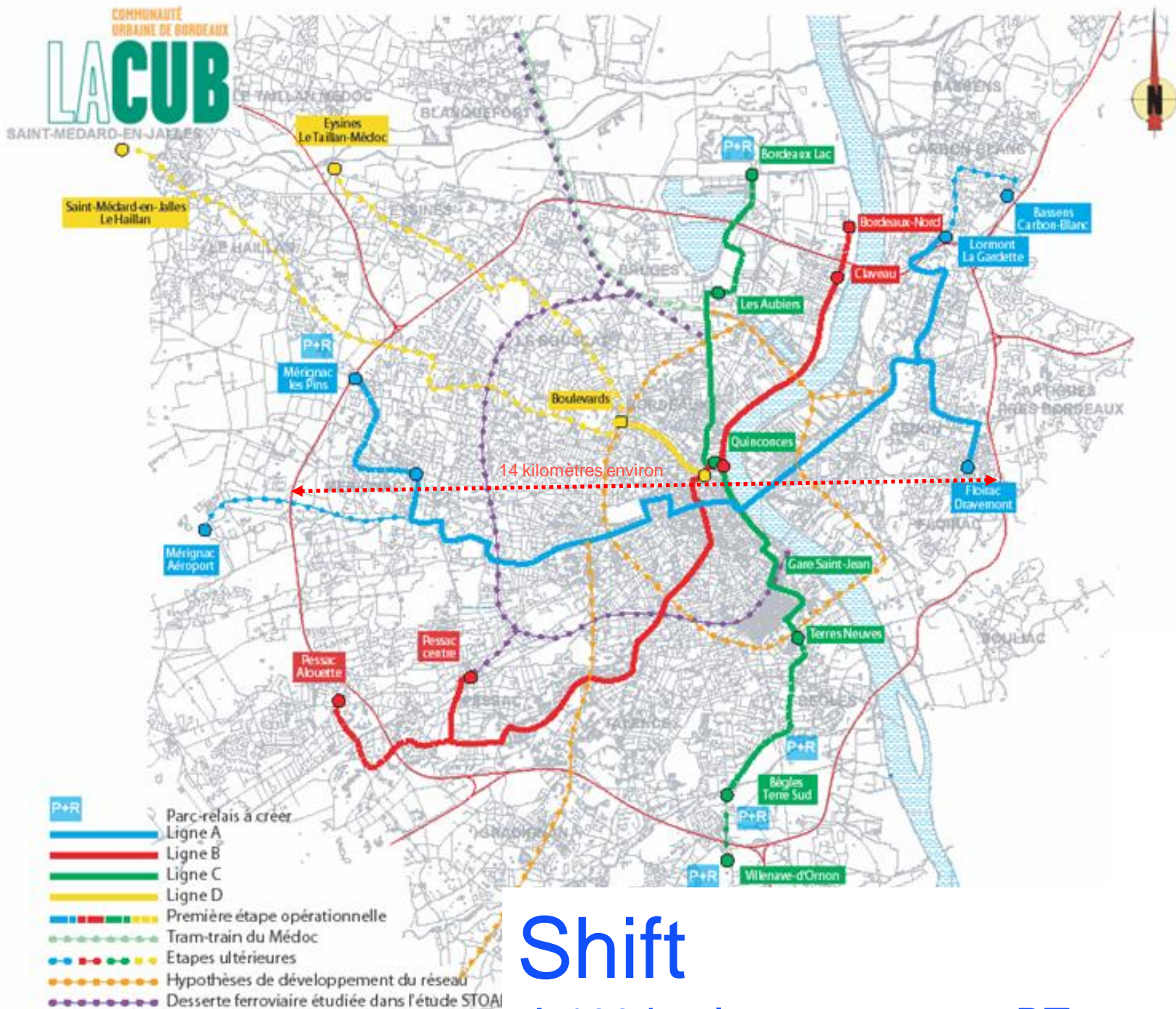
Strategic low-carbon mobility planning in Bordeaux Metropole

	2015	2030	2050
Population	750 000	1 000 000	1 250 000
Annual growth rate		1,9%	1,1%
Total growth rate / 2015		33%	67%
Cars ownership (per 1000)	650	650	650
Cars ownership (per 1000)	15 000	12 000	8 000
g CO2 eq / km	130	65	35
Total T CO2 eq/year	951 000	507 000	228 000
Proportion / 2015		53%	24%
Total kg CO2 eq/year/hab	1 270	500	200

Strategic low-carbon mobility planning in Bordeaux Metropole

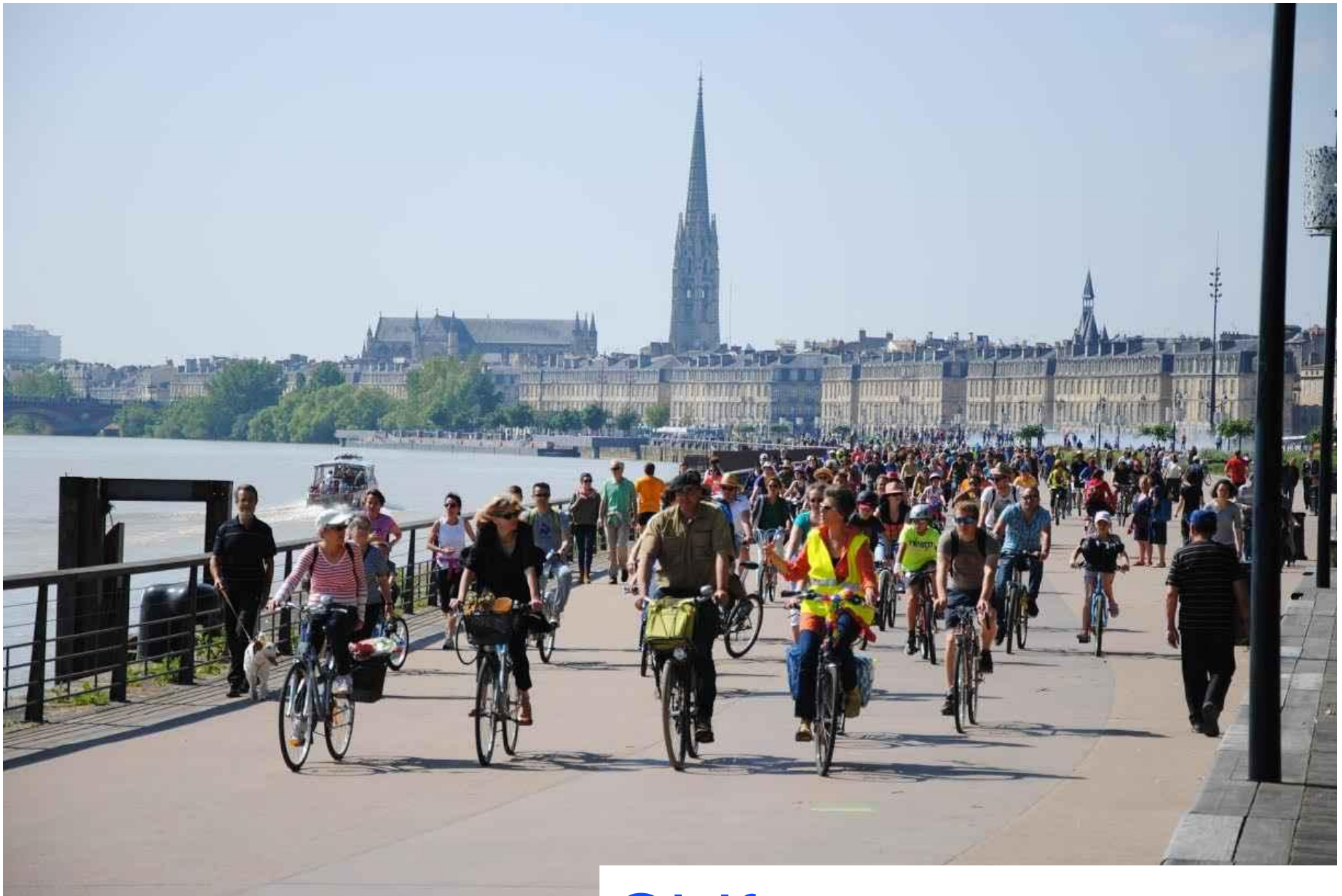
Modal split

	2015	2030	2050
Car	57%	40%	32%
Public Transport	13%	15%	20%
Bike	5%	15%	18%
Walk	25%	30%	30%
Total	100%	100%	100%
Proportion car / 2015		70%	56%



Shift

A 100 km long tramway + BT network



Shift

An ambitious bicycle policy





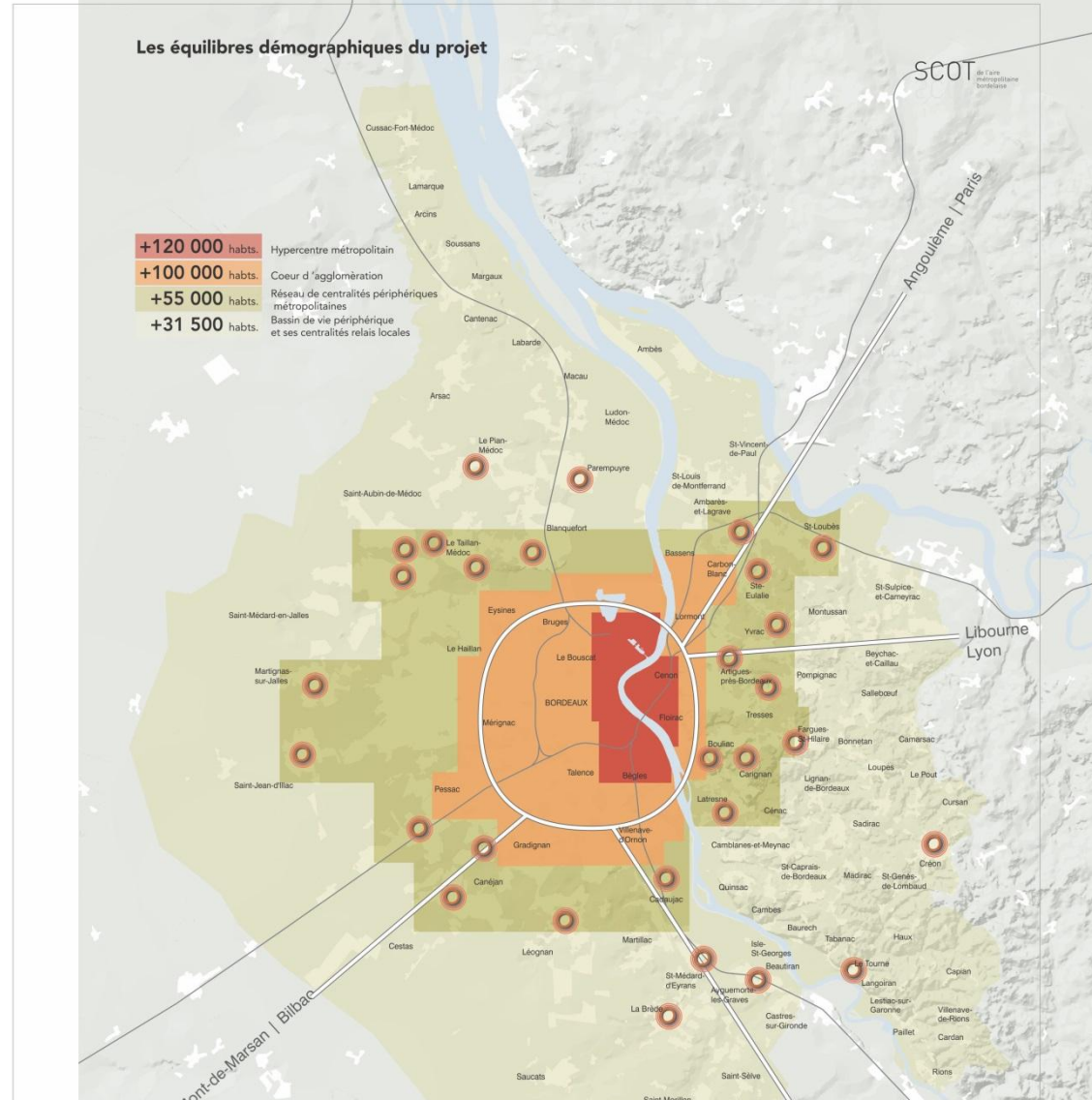
Improve

40% of electric or hybrid cars in 2030 in France, 65% expected in 2050!

Redirecting the population on the core of the urban district to limit urban sprawl

	SCoT	Cub
2011	900 000	730 000
2030	1 200 000	960 000

Reaching 960 000 inhabitants on the Cub territory requires to build 7 500 dwellings every year till 2030



Avoid
An original TOD policy

Saving the 50/50 balance



28 300 hectares



26 800 hectares

Source : Cub

Nature as a quality of life factor and as an attractivity factor












Ecological corridors

- Réseau écologique**
-  continuité fonctionnelle de la Garonne et de la Dordogne
 -  continuité fragilisée de la Garonne
 -  continuité aquatique fonctionnelle
 -  continuité aquatique fragilisée
 -  continuité terrestre fonctionnelle
 -  continuité terrestre fragilisée
 -  réservoir de biodiversité
 -  espace relais important pour la trame verte et bleue



Appel à projets 50 000 logements

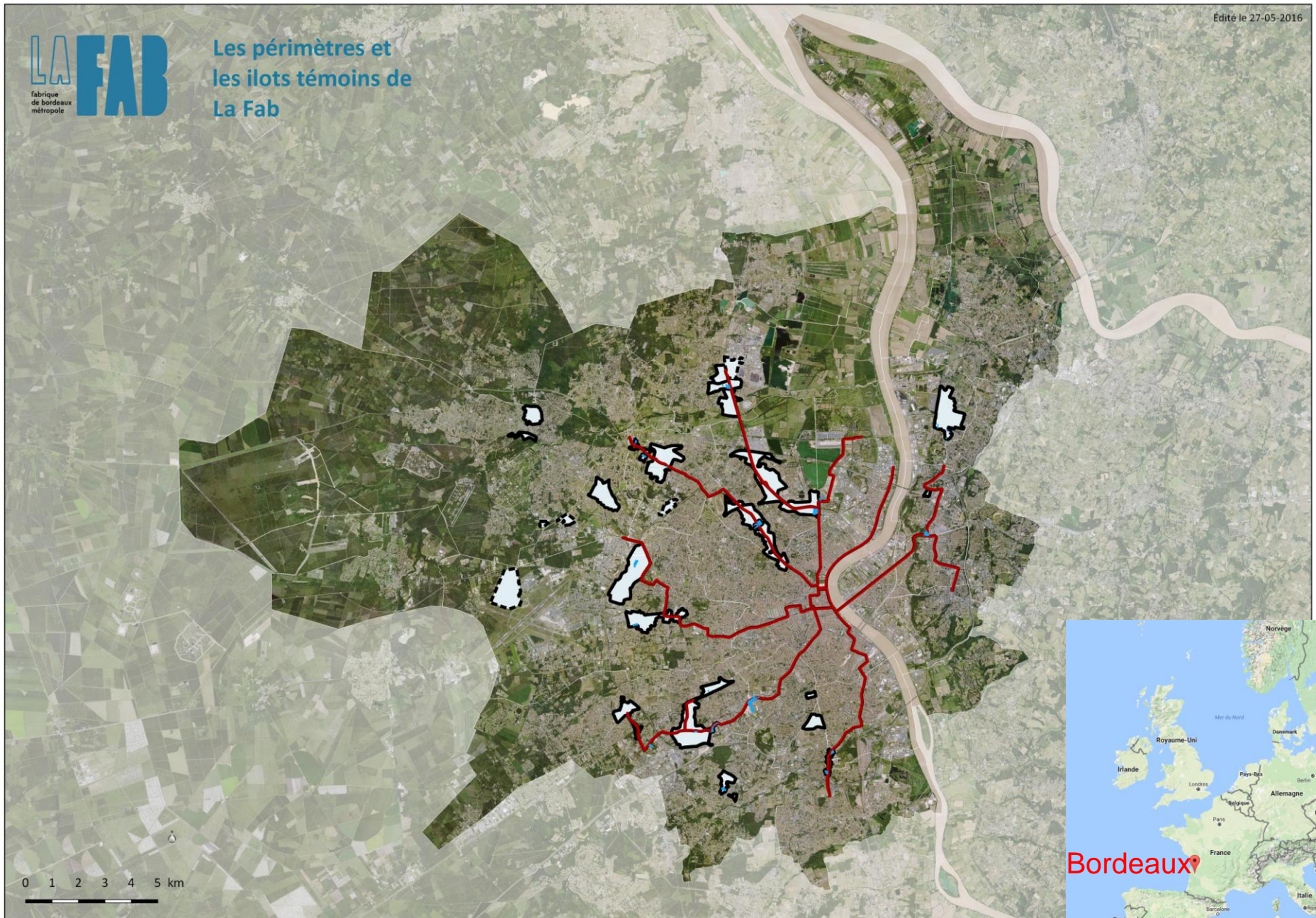
Le transport public et l'armature urbaine

-  réseau de tramway phase 1 et 2 (existant/mis en service 2019)
-  station de correspondance
-  projet de tramway 3^e phase et tram-train
-  parcs relais existants et programmés
-  gare et arrêt ferroviaire
-  gare secondaire
-  franchissements urbains en projet et prévus à terme
-  tache urbaine
-  corridors phase 1-2-3 TBC 500 m
-  aire d'influence Pôle d'échanges 1000 m
-  évolution probable du réseau structurant

a'urba.
agence d'urbanisme
Bordeaux métropole Aquitaine

LACUB
LABORATOIRE
URBAIN
CUBAIN

50,000 housings around the public transport axes in Bordeaux



Ambitions and challenges

- ▶ Provide **new answers** to the need of housing by increasing the **production of housing** / year
- ▶ **Question our ways to make the city** through housing by developing innovative urban forms and habitats
- ▶ Lead **strategic thinking** to the metropolis by confrontation with localized operational situations

The Local Public Company "La Fabrique of Bordeaux Métropole"

- ▶ A **tool dedicated to the implementation** of policies supported by the Metropolis
- ▶ A **local public company with a private status**
- ▶ A **Board of Directors** composed of 50% of elected members from the Metropolis and 50% of elected members from the municipalities
- ▶ A high-level **operational team** of about 30 staff (planners, architects, engineers, lawyers, ..)



Bègles



Architectes : Localarchitecture + Vaam



Bordeaux Lac



Architectes : Bruno Rollet – DND architectes



Bruges Petit Bruges



Architectes : A+Samuel Delmas + Shurdi Levraux



Concession Le Bouscat



Mérignac - Langevin



Pessac - Cité des Métiers

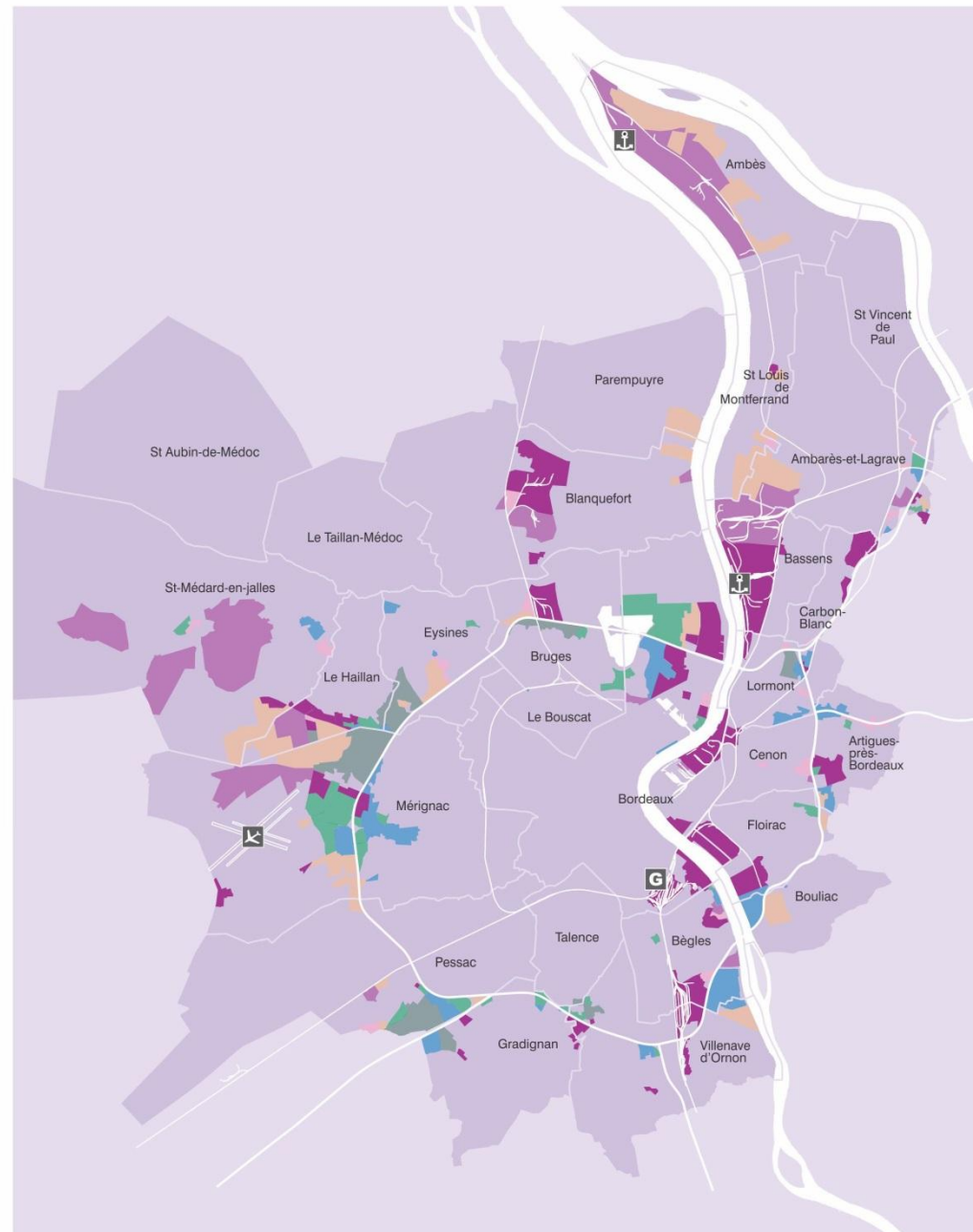


Architectes : Emmanuelle Poggi / Sophie Dugravier








Economical sites

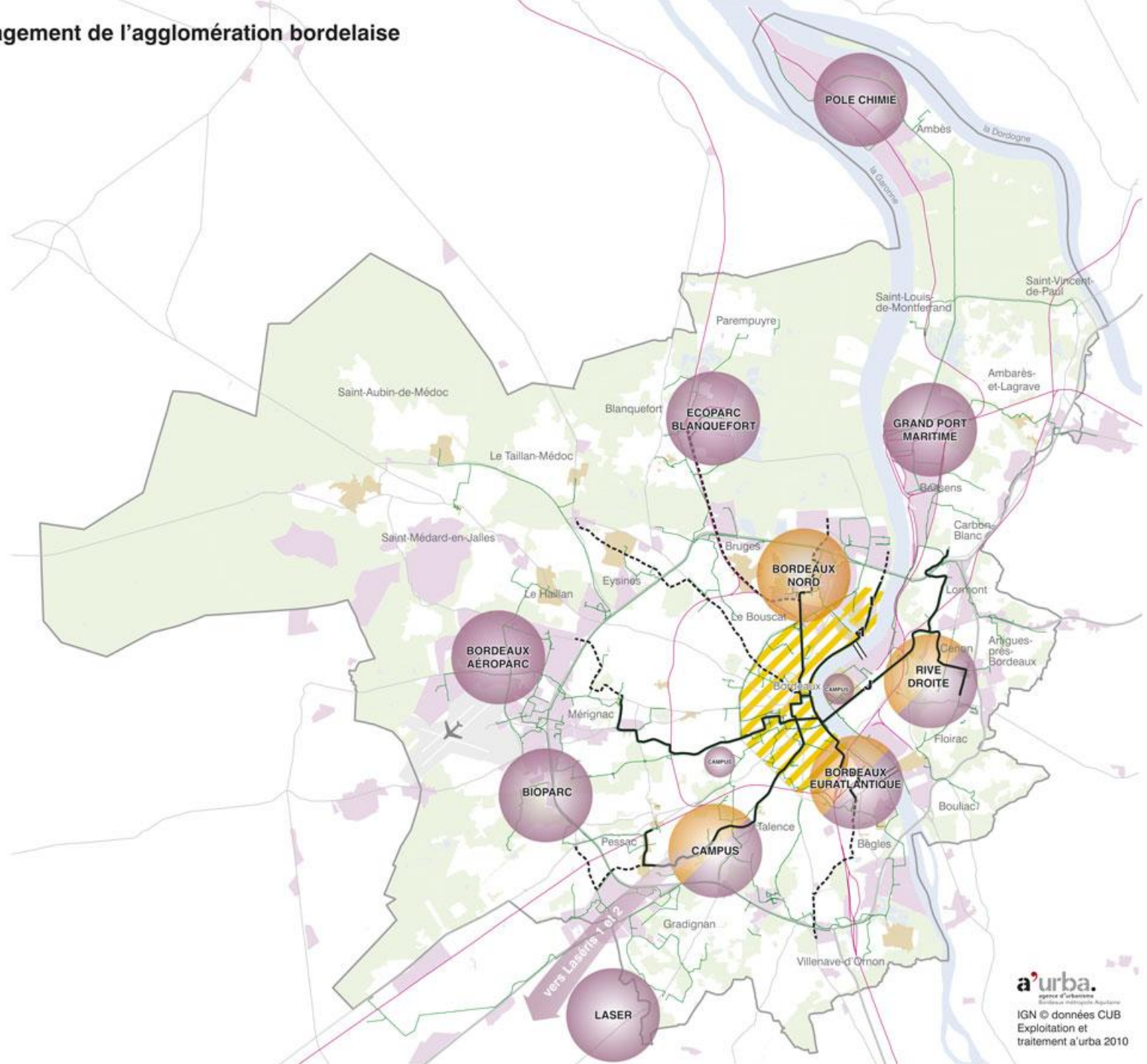
Today



	surface (en ha)	part
bureau	618	8 %
commerce de détail	717	9 %
industrie	2144	28 %
artisanat/petite industrie	192	3 %
logistique/commerce de gros	1849	24 %
mixte	559	7 %
majorité de terrains libres	1470	19 %

Tomorrow

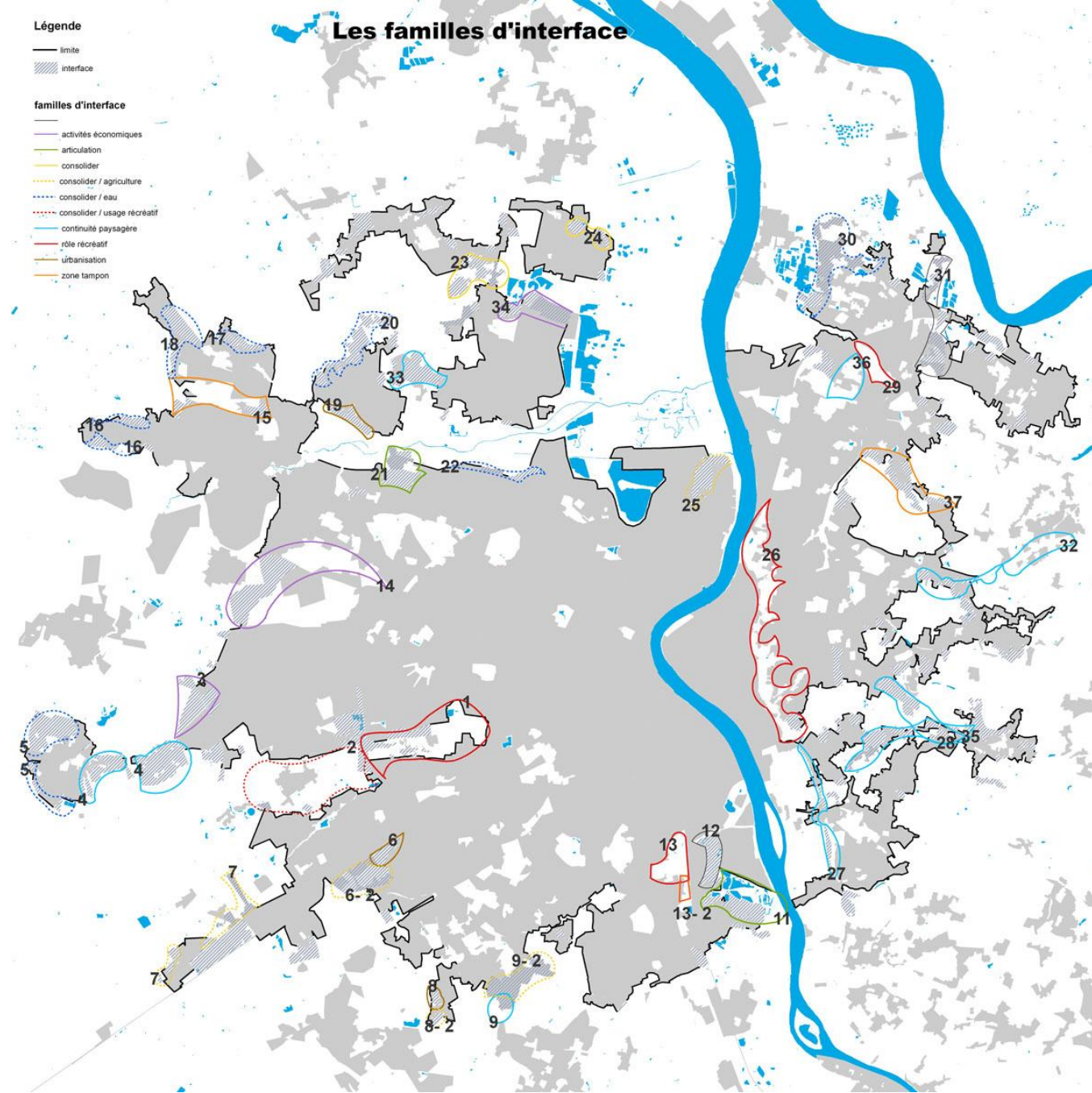
-  sites économiques
-  projets urbains
-  UNESCO
-  tramway phases 1 et 2
-  tramway phase 3
-  réseau haut débit Iniolia
-  espaces naturels



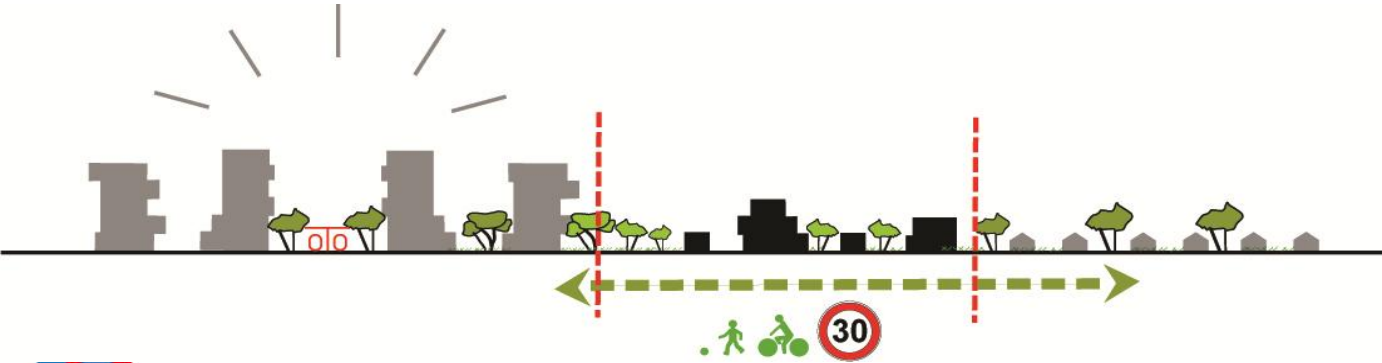
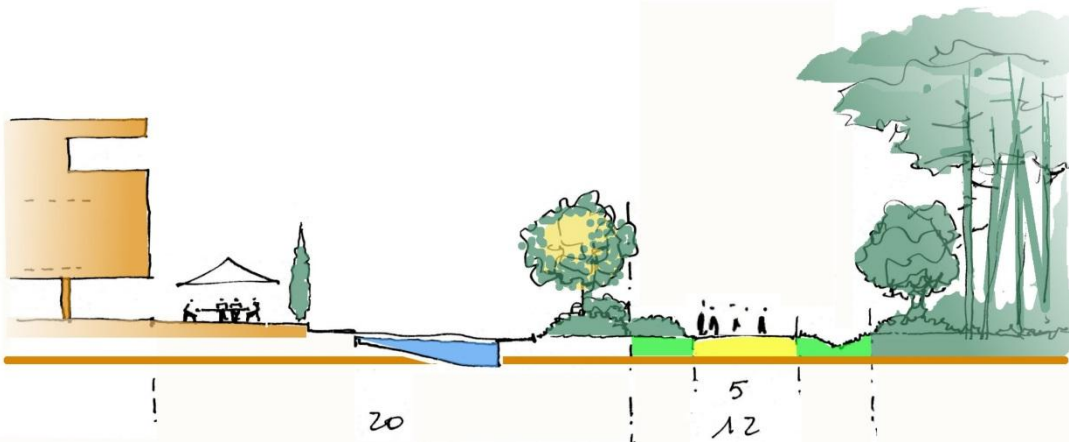
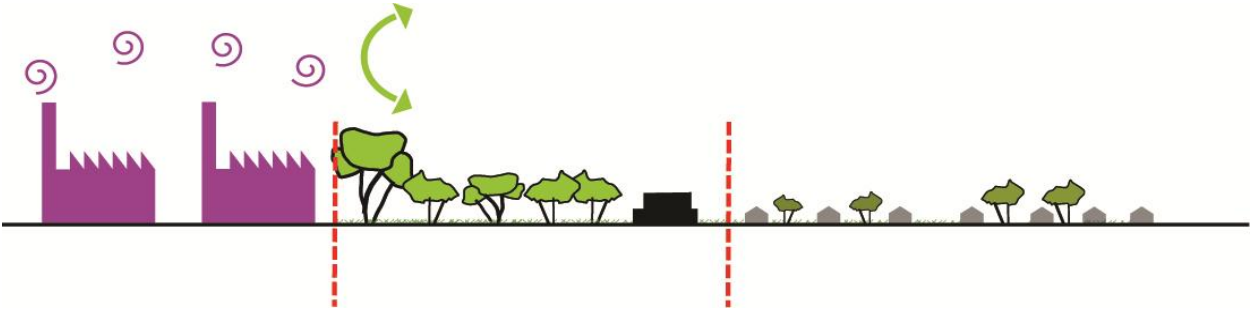
Designing the limits

Designing the limits with :

- Water
- Agricultural areas
- Forest
- Economical zones
- Leisure areas...



Designing the limits



Work is still
in progress !



Work is still
in progress !



Work is still
in progress !



Thank you
very much for
your attention !

