BUS
Subway
Tramway

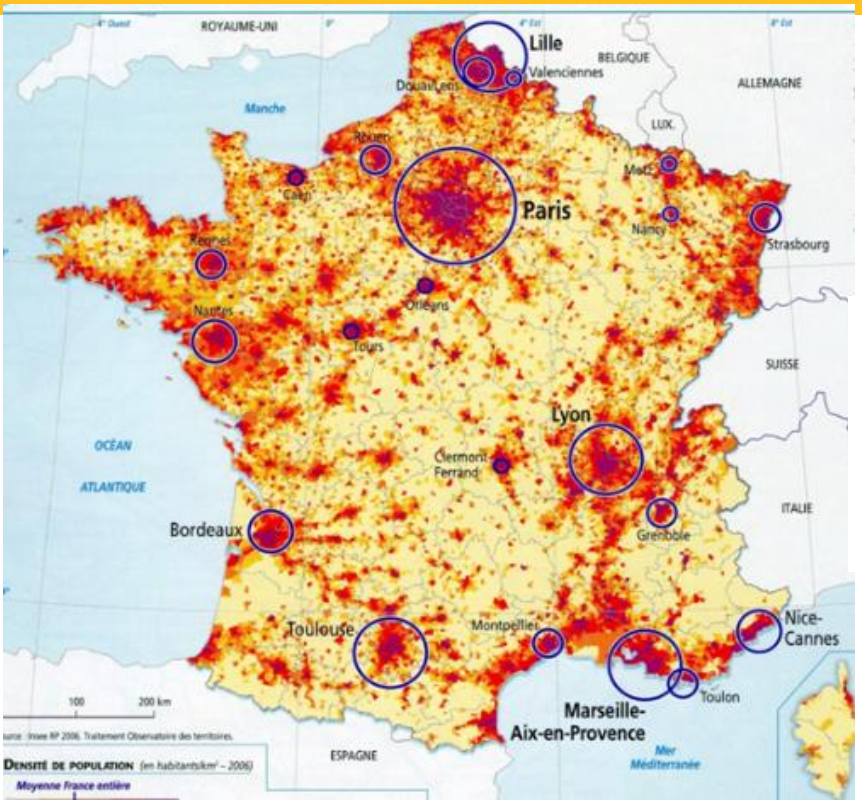
MICHELIN CHALLENGE BIBENDUM

11th to 14th November 2014

TISSEO – SMTC
Toulouse - France

SOLUTIONS PROGRAM – POLIS workshop

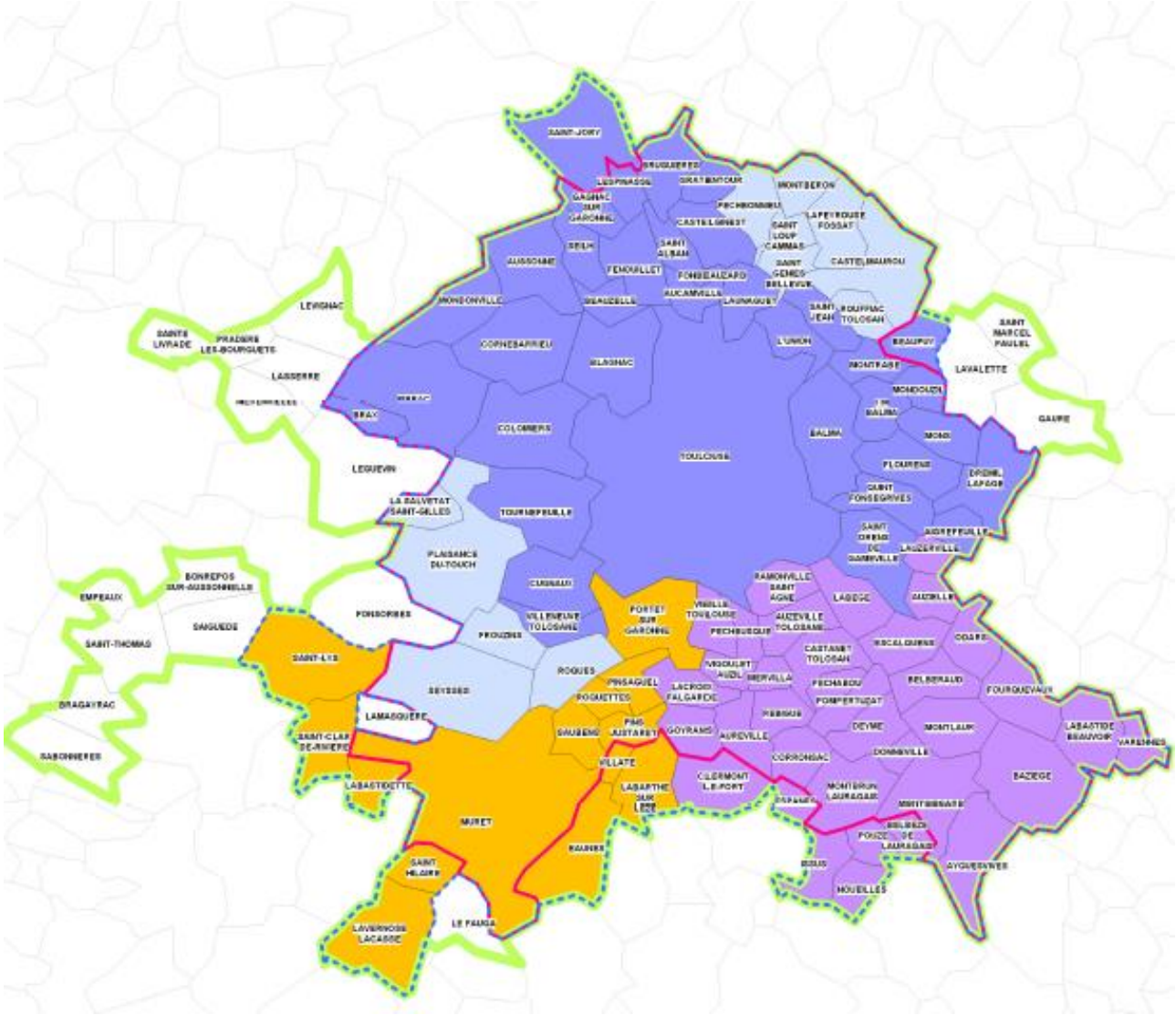
TOULOUSE Territory : demographic growth



- **4th city in France** after Paris, Marseille, Lyon
- City of Toulouse: **439 453 inhab.**
- **110 000 students** in Toulouse, 2nd rank in France
- **1st city for aerospace industry** in Europe

- Urban area served : **1 200 000 inhab.**
- Increase of **19 000 inhab. every year**

Tisséo-SMTC – Transport Area : the less dense in France



Urban PT perimeter :

- **99 municipalities**
- **937 000 inhabitants**
- **1 018 square km**

An overview of the Urban Public Transport Network in Toulouse

- **2 metro lines**

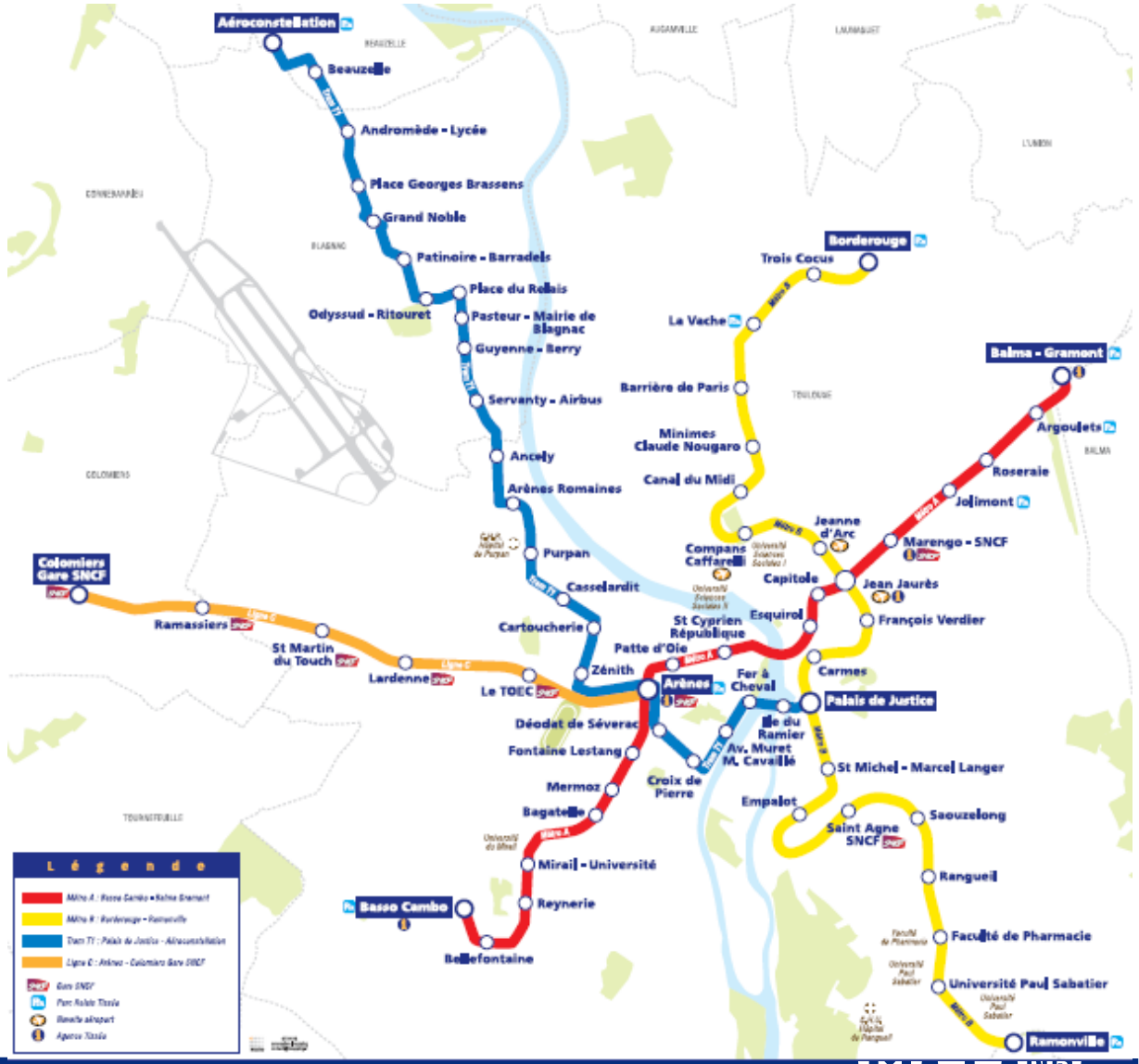
Line **A** (1993 et 2003)
18 stations, 12.5 km

Line **B** (2007)
20 stations, 15.7 km

- **1 light rail line** (2010 and 2013)

24 stations, 14,9 km

- **1 train line**



Toulouse bus network

- **91 regular bus lines** (800 km – 600 buses)
- + 18 subcontracted
- **18 TAD** (demand responsive transport services, including 1 for PRM)
- **5 thematic shuttles**

  (Airport, Exhibition centre, Stadium, E Wallon, Town Center)
- **20 school lines**
- **1 night network** (10 lines)
- **1 overnight line**

Tisséo metro, tramway and bus park Park

Toulouse

➤ **Metro : VAL (Siemens) – 116 trains**

Automatic driverless metro
for 5 am to 12 pm (1 am on fridays and saturdays)
Frequency until 65 seconds during peak hours

➤ **Light train : Citadis 302 (Alstom) – 24 rames**

Same timetable as metro
Frequency 7’30 during peak hours

➤ **Bus : 600 buses including 80 articulated, 40% GNC**

+ 79 for the subcontracted lines

which 208 GNV buses , representing 38% of bus fleet
5 electric buses
338 diesel buses which 17 are hybrid

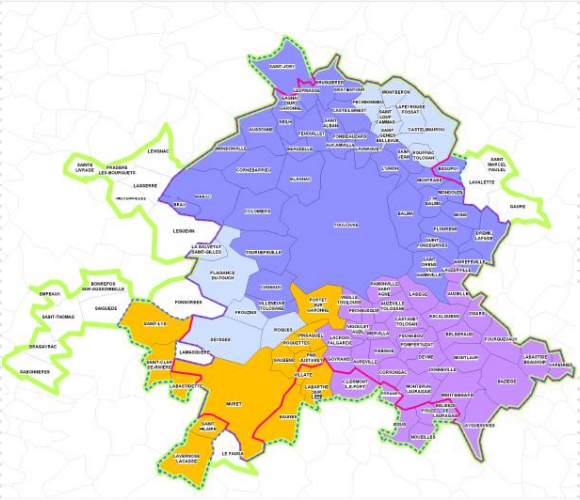
Transport Institutions in Toulouse Area

Strategy, design and organization of PT in Toulouse area

4 Public communities members

A deliberating assembly of 20 representatives

- TOULOUSE METROPOLIS
- SICOVAL
- SITPRT
- CAM



Ressources

Contributions	102 million €
Transports Taxes	225 million €
Tickets revenues	75 million €

Tisséo – Organisation

Tisséo SMTC

100 employees

Strategy, design and organization of PT in Toulouse area

SMAT

80 employees

Infrastructure studies and works

Tisséo Régie

2 400 employees

Operation of metro and bus network

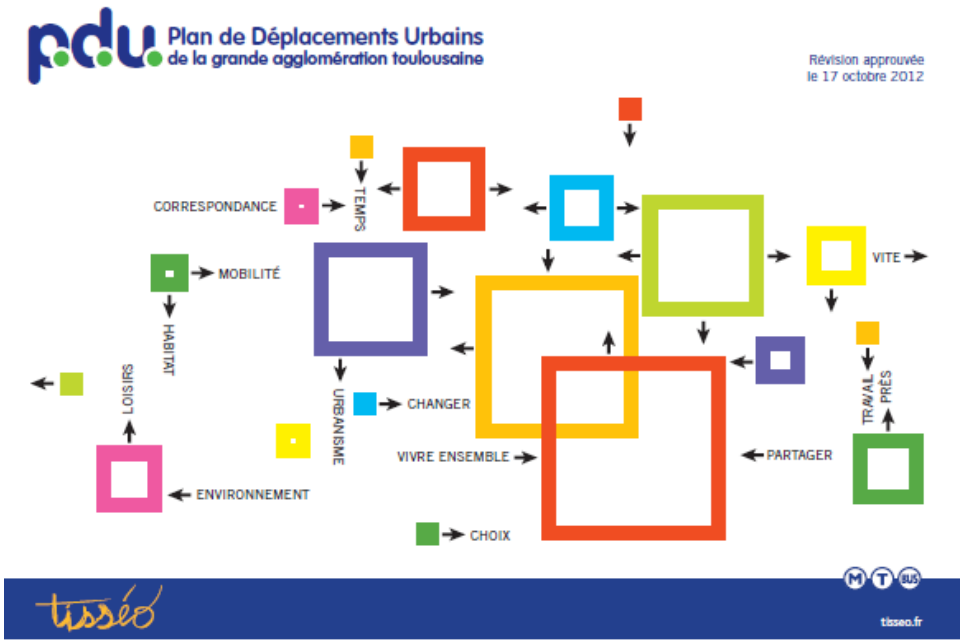
Tisséo Mobibus

30 employees

Operation of Mobibus network

The Sustainable Urban Mobility Plan and its planification

The SUMP states the principles concerning public transport organization for people as well as goods adding also recommendations for trafic and parking policies



It includes on a long term scale :

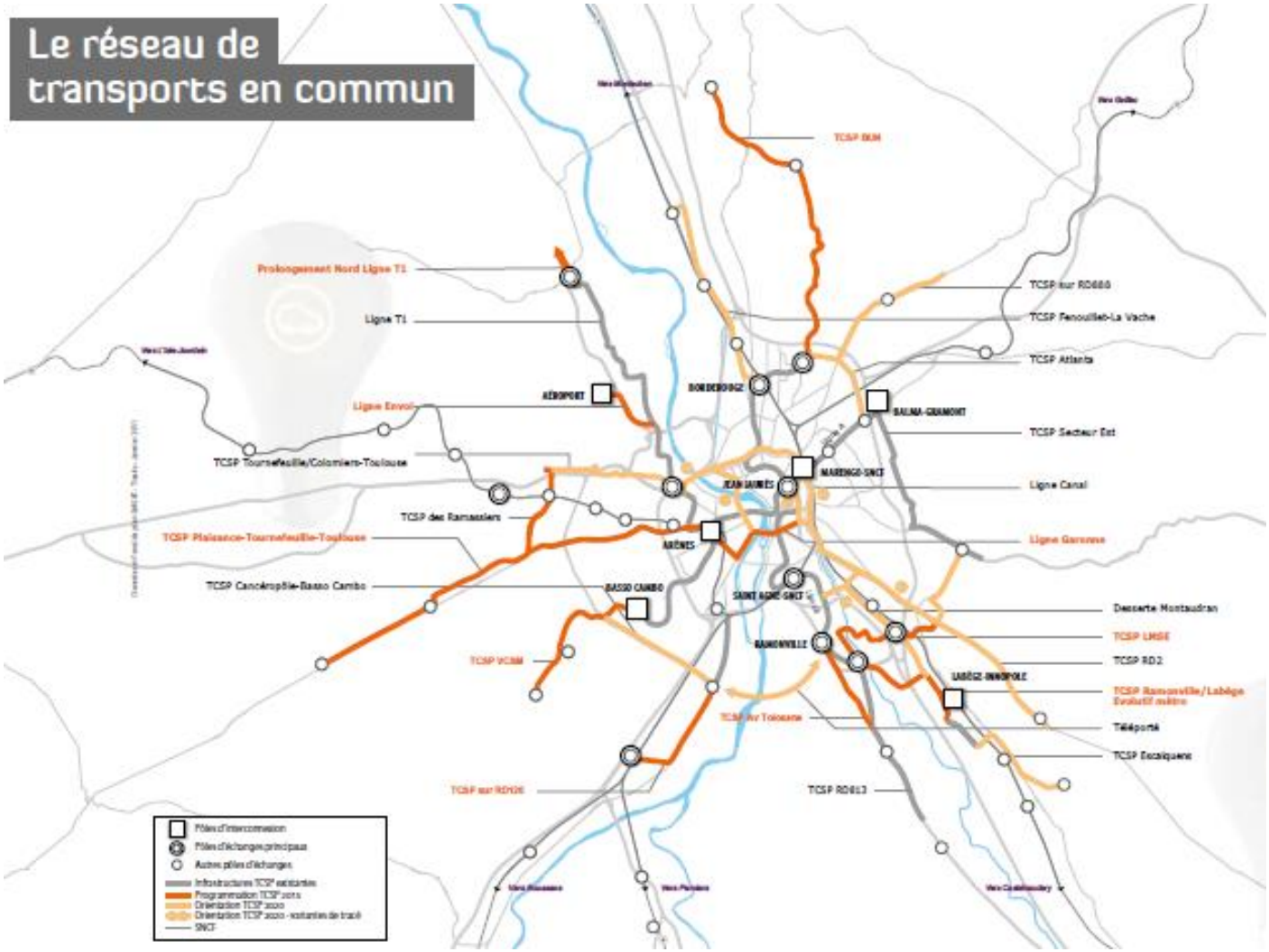
- ➔ **a financial projection (trafic – costs – deficit – contributions of the institutions)**
- ➔ **A planning for infrastructure projects**

An urban mobility plan (SUMP) revised in 2012

- **9** themes
- **43** actions

By 2020 :

- **1.9** billion € investment in PT
- **170** km of dedicated infrastructures
- Introduction of BHLS ←→ LINEO
- PT modal shift: **23%**
- **163 million trips**
- PT network **100% accessible**
- Development of
  - soft modes
  - multimodality



Organization of the PT network: sharing/ meshing/ phasing

Sharing of public space :
quantified objectives per modes

	Situation actuelle		PDU 2020
	80 %	→	67 %
TC	16 %	→	23 %
	4 %	→	10 %

Meshing of the network:
from the structuring lines of the network
And articulated over the interchanges

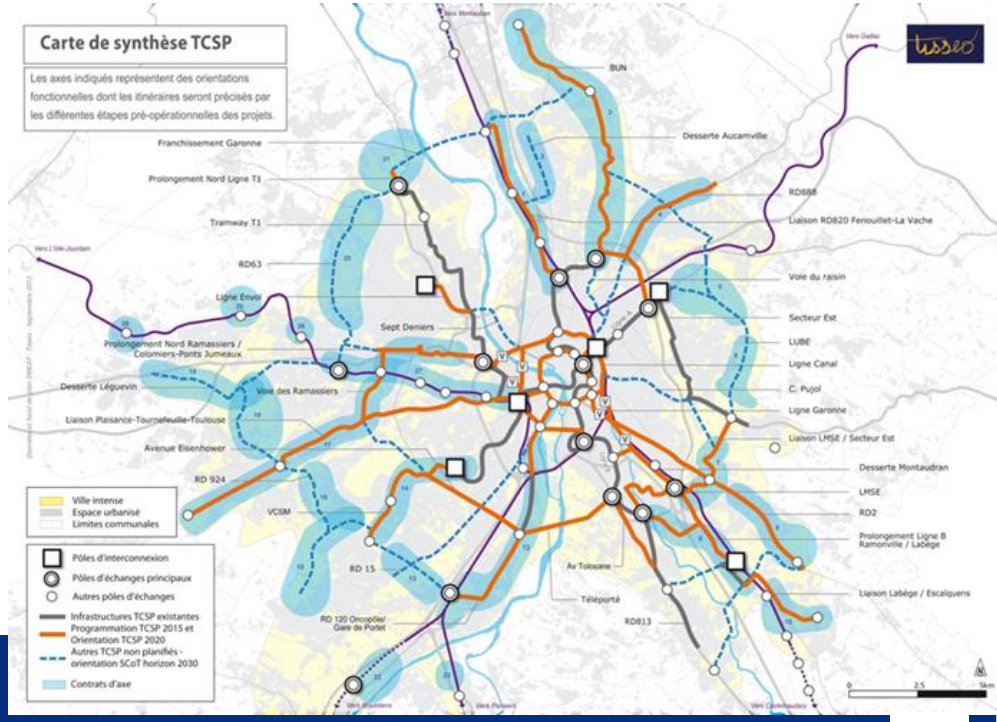
Taking into account means of mobility within interchanges

Commitments of the others factors of mobility

163 millions of trips / 2020

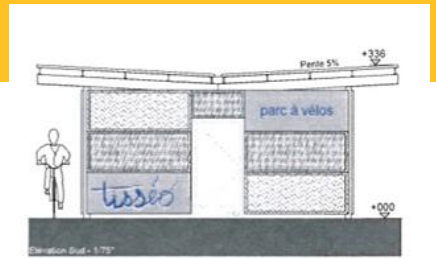
2020 : +62 kms of PT in dedicated lanes

A coherence urbanism / Transport

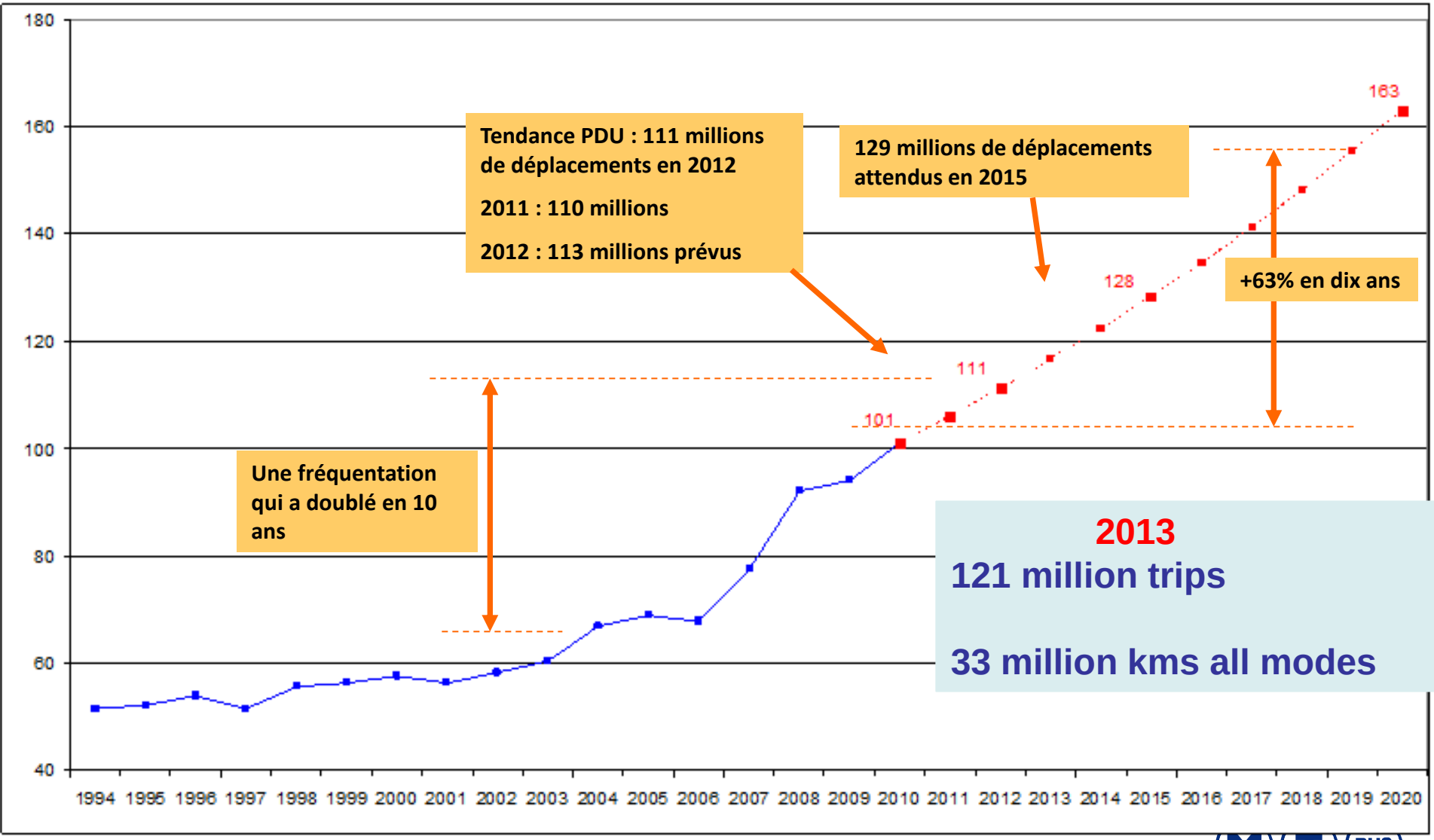


Towards a mobility mix

Public T + …



The use of the urban transport network is on line with the SUMP objectives



A challenge to take up…..

The SUMP's Economic equation : high sensibility vs parameters

Ambitious objectives for 2020

- PT market share = 23% (at present 16%)
- 163 millions movements
- Val/km must progress positively : 2010 = 2,4 val/km 2020 = 4 val/km

Drastic hypothesis to reach these objectives

- limits in the evolution of the volume of kilometers
- control of the cost of production and its trend
- stability of the cost of the trip
- stability of the revenue per movement

The challenge to take up….

How to encourage the modal transfer towards PT?

How to develop both projects and network within a drastic financial frame?

To improve performance
To improve efficiency
To improve network legibility

To rationalize
To look for the greater social utility

More attractivity

Shared political orientations

Sustainable Network Construction Plan

- To share a long term projection of the bus -tramway and metro network by all the political and technical actors
- To set up a clear working frame allowing decision making and coordonated planification of services and substructure
- To improve marketing attractivity of the bus -tramway and metro network

A long term and balanced projection of the network

Sustainable Network Construction Plan : A project

A method based on scoring which should put everybody on the same way of seeing the long term strategy

To divide the area into sectors and classes

For all sectors

- **To score the potential of trips to capture**
- **To score the quality of the present level of services**
- **To compare with the trips recorded**

To point out the « gap » to work on

Sustainable Network Construction Plan : A project

1 DIAGNOSTIC

- INDICATORS
- POCA
- IQUAD

CROSS CHECKING WITH TRIPS

SOCIAL AND ECONOMIC PERFORMANCE OF BUS LINES

2 STRATEGY

HOW TO ALLOCATE RESSOURCES?

POLITICAL CHOICE and PRINCIPLES

3 Target Bus Network

CONSTRUCTION CHARTER

BUS NETWORK DEFINITION ACCORDING TO PRINCIPLES

4 Towards the new network

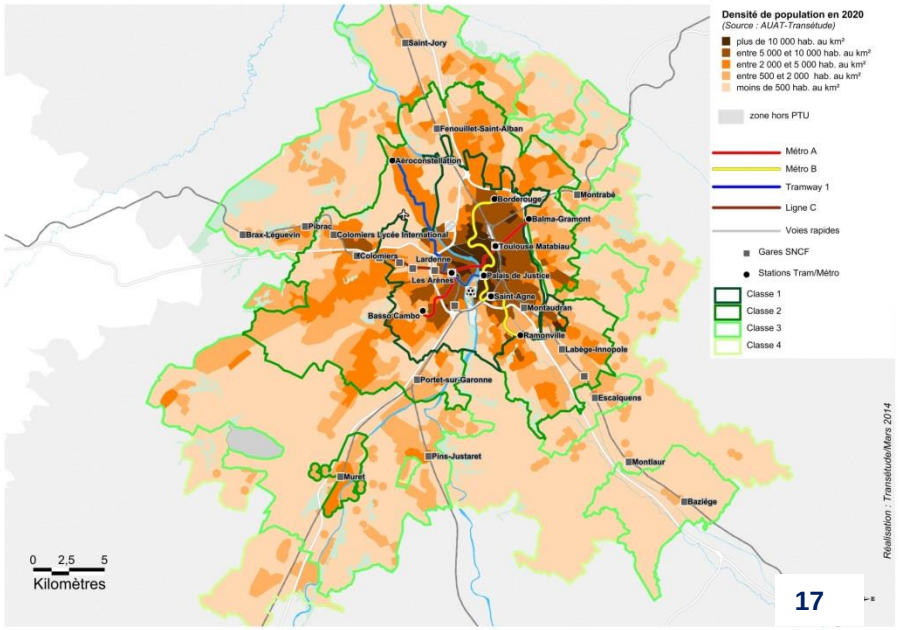
IMPLEMENTATION

INDICATOR POCA

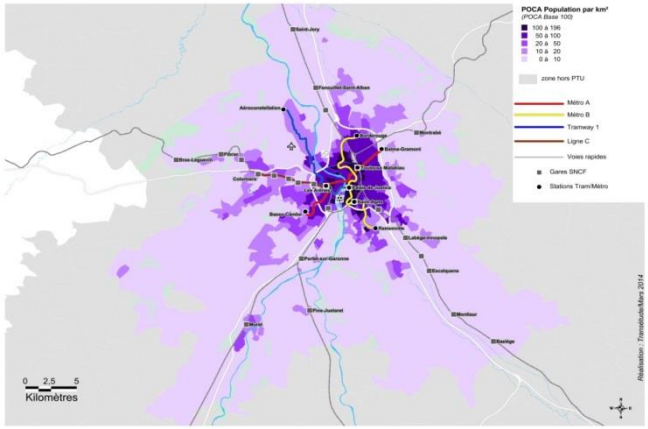
POCA = Potential to CApture

POCA is a tool allowing to determinate a volume of trips potentially to pick up on a day for each sector with an ideal level of service on 2025

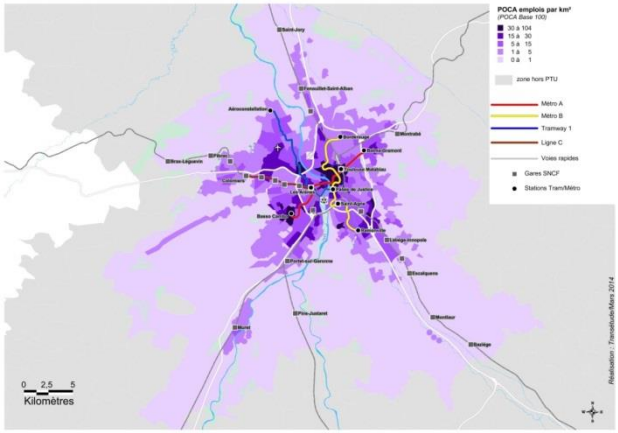
- Cutting along the sectors
- Assessment POCA inhabitants
- Assessment POCA employment
- Assessment POCA generating hubs
- Sum up POCAs = Global POCA per sector



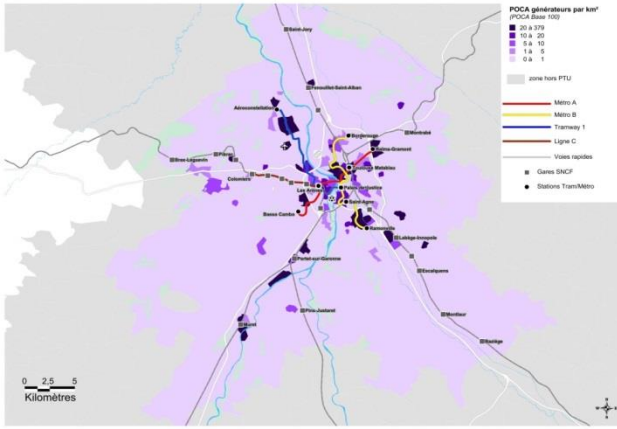
INDICATOR POCA



Inhabitants

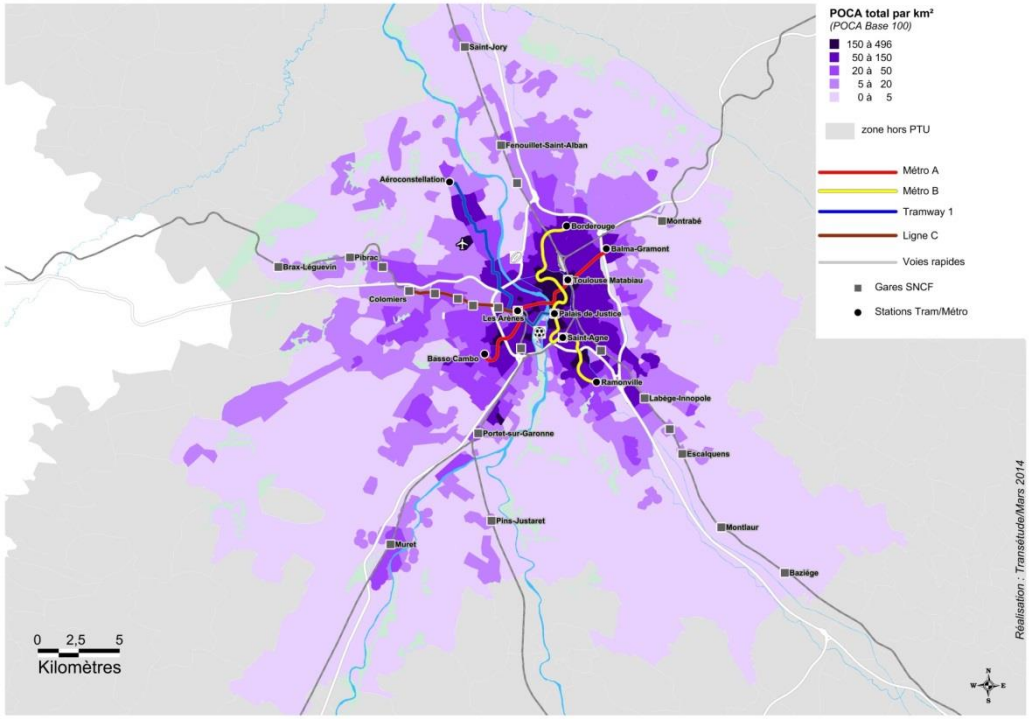


Employment



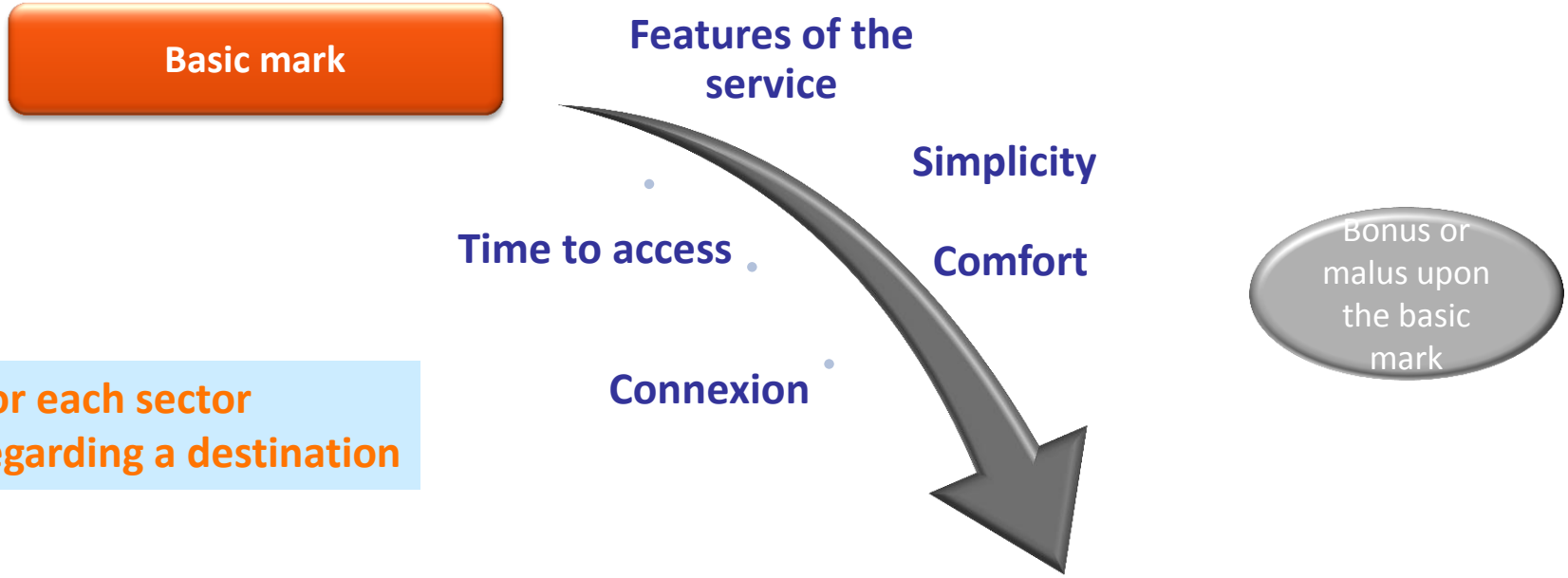
Generating hubs

GLOBAL POCA

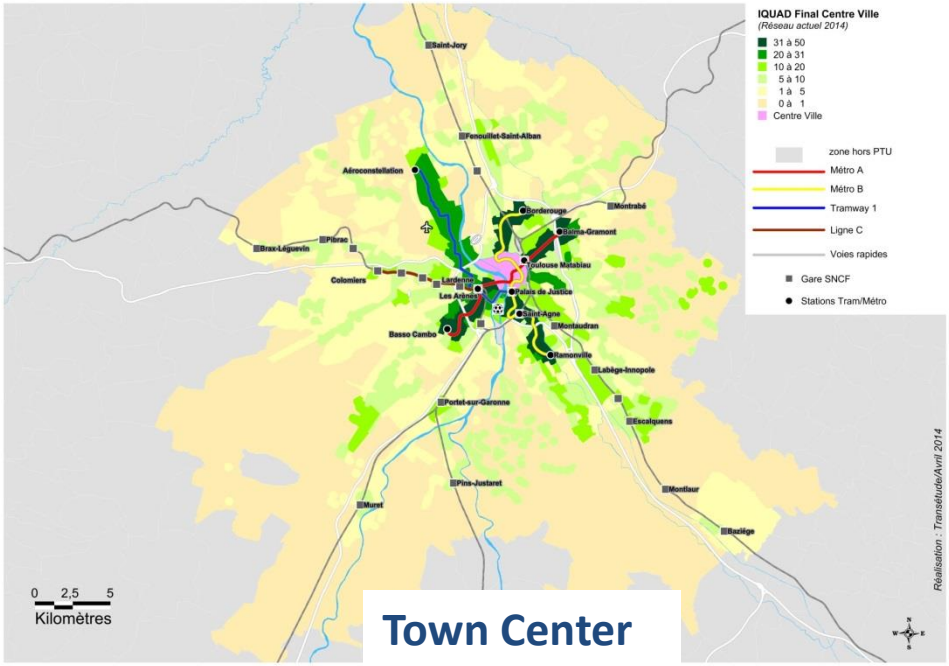


IQUAD = Indicator of QUAlity Level of Service

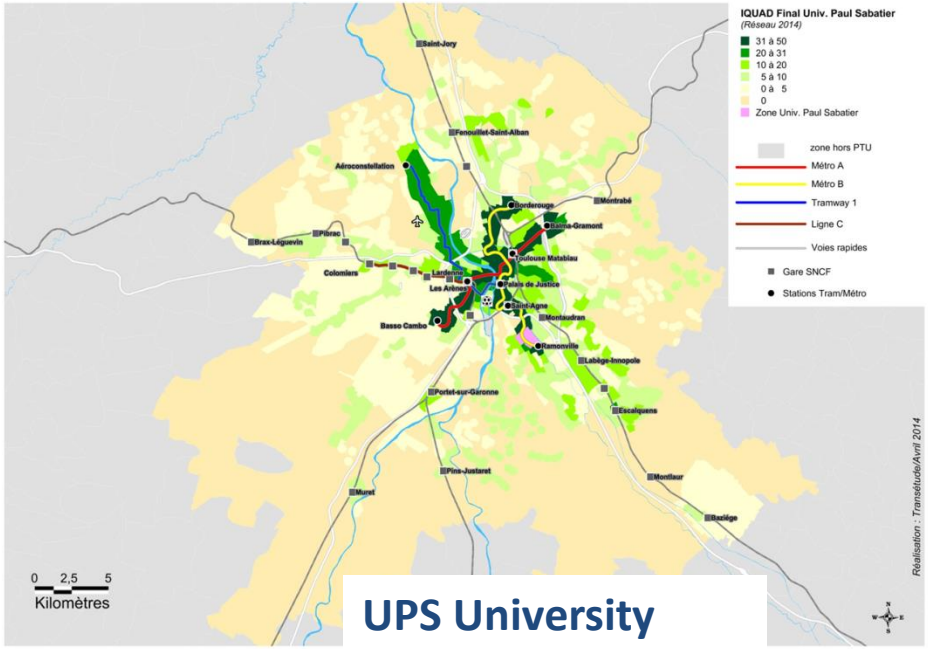
IQUAD is a tool allowing to score the quality of the level of service of the network. It is based on the volume of services corrected by qualitative criterion.



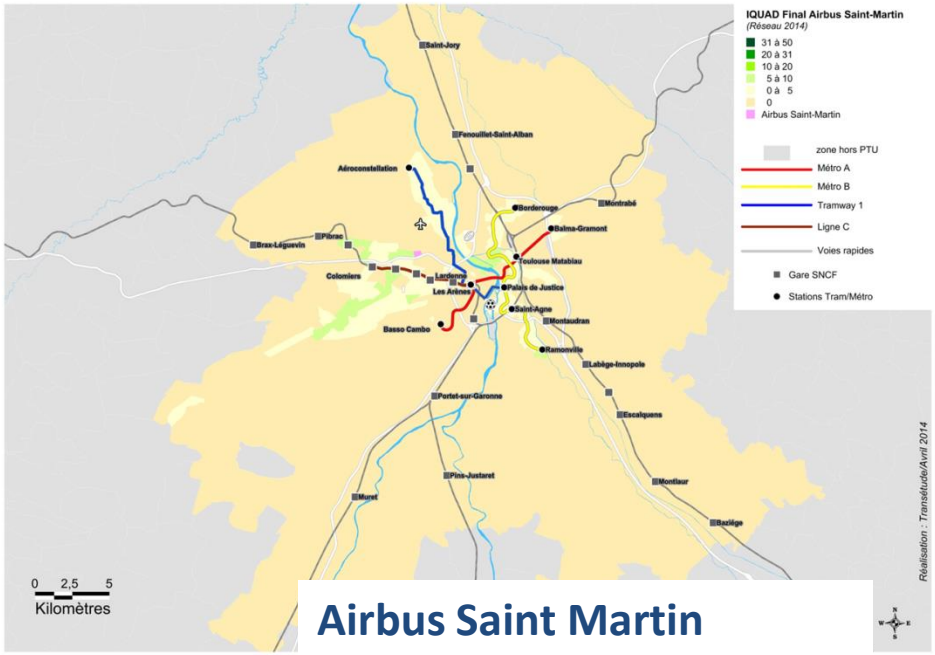
For each sector regarding a destination



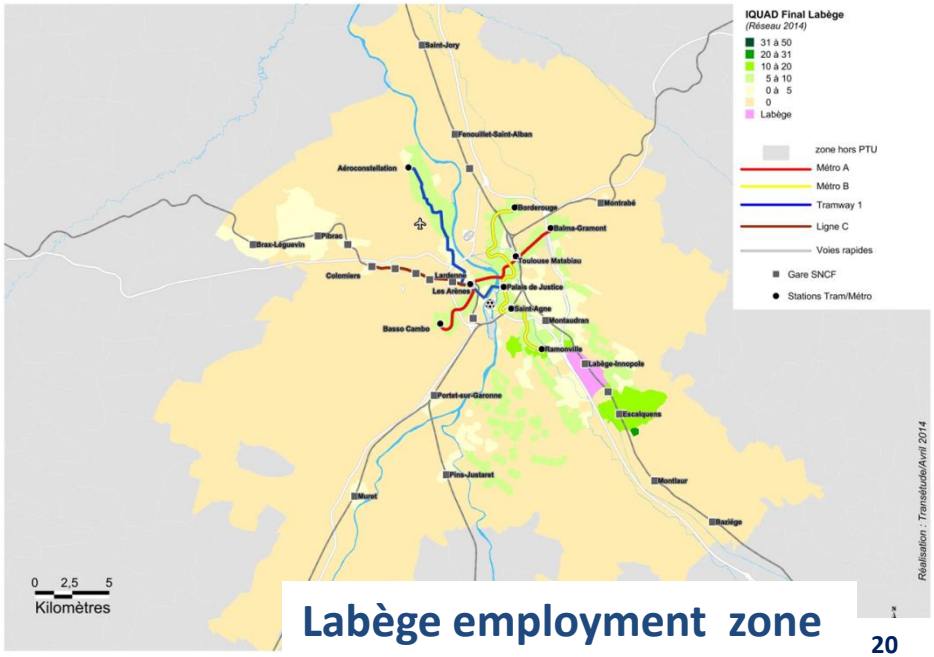
Town Center



UPS University

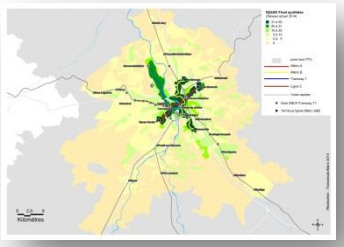


Airbus Saint Martin

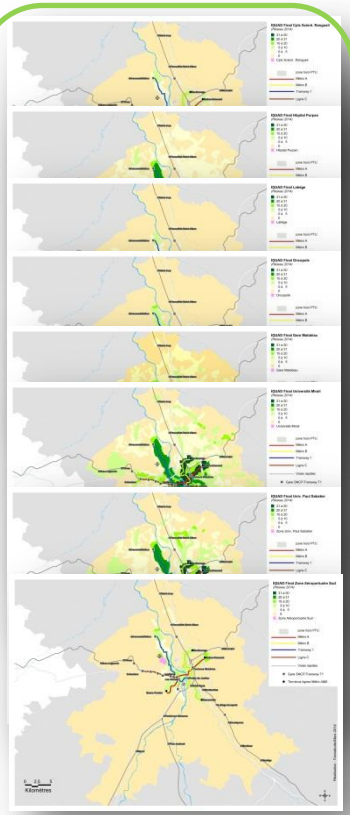


Labège employment zone

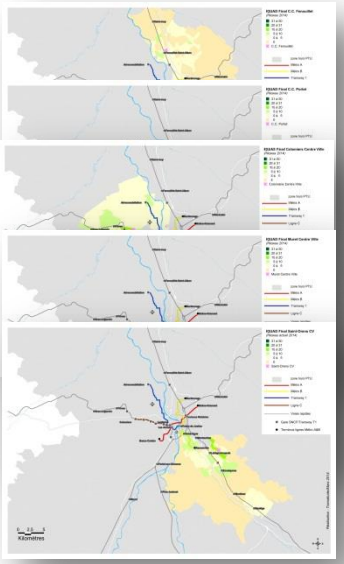
INDICATOR IQUAD in Synthesis



IQUAD Town center



Average IQUAD for generating hubs



Average IQUAD for autonomus sectors

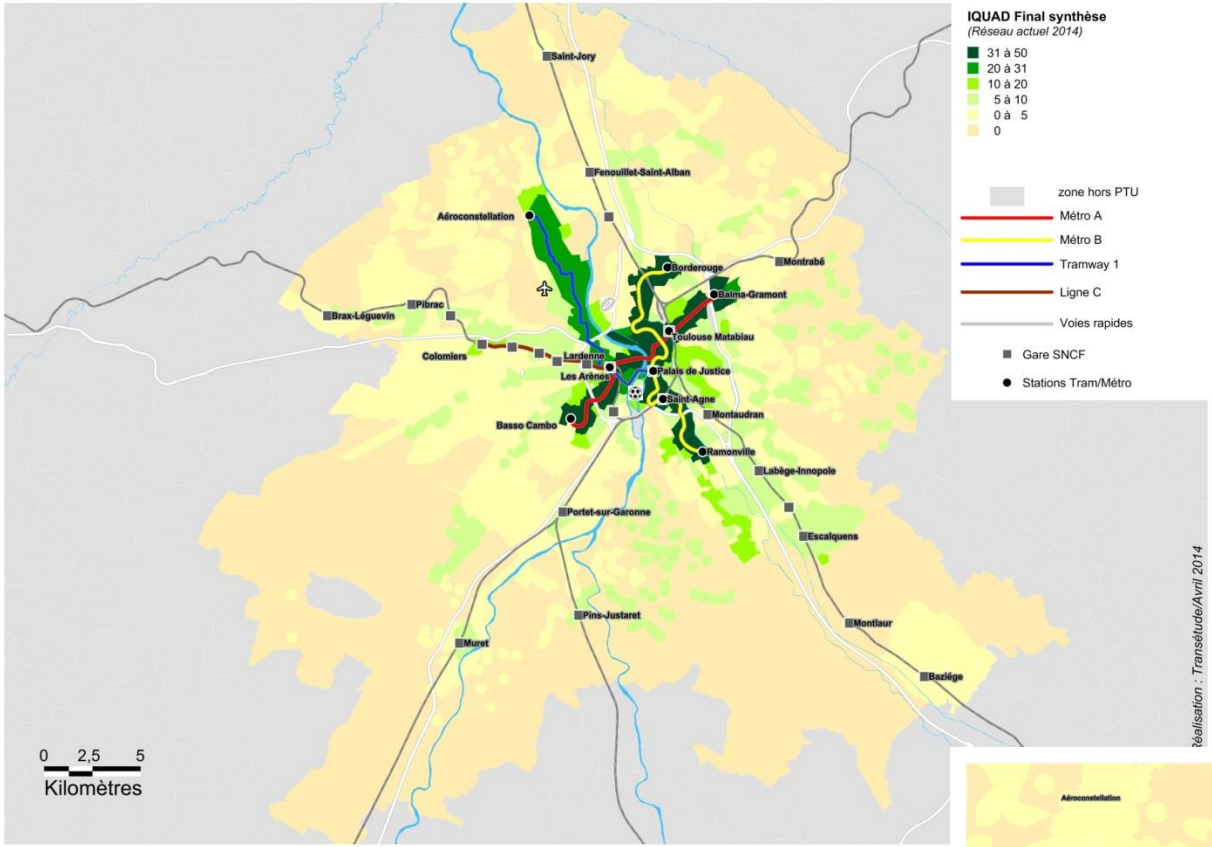
IQUAD in Synthesis =

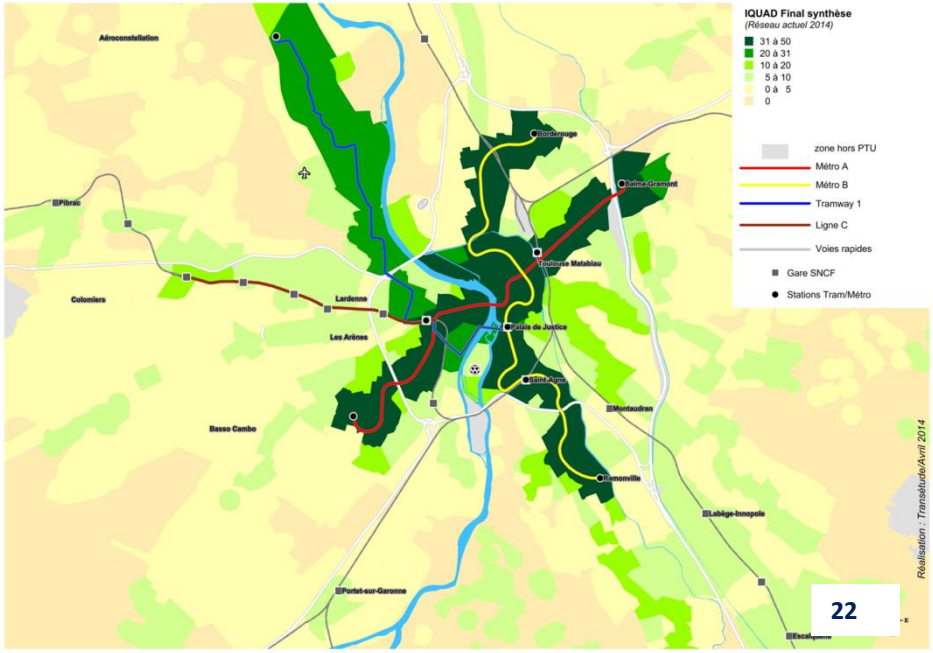
50% of Town center IQUAD

+ 40 % of generating hubs IQUAD

+ 10 % of autonomous sectors IQUAD

IQUAD in Synthesis





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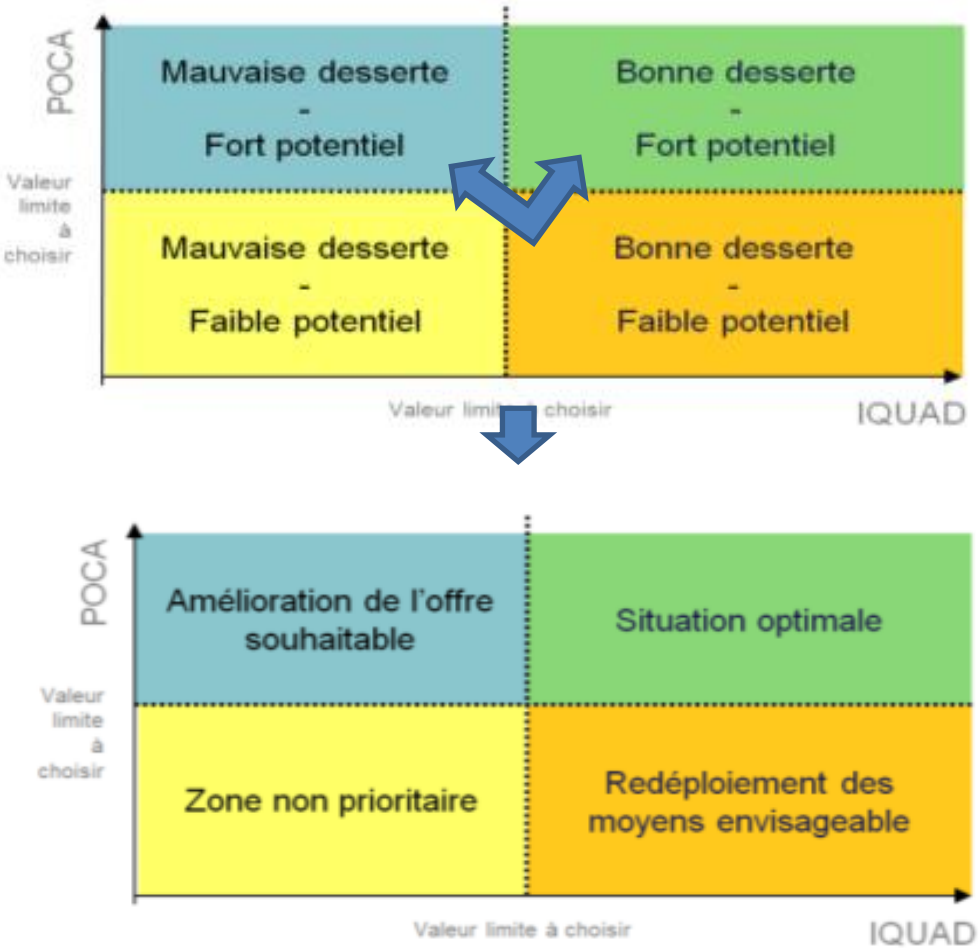
How to design the bus network for more attractivity and results

2 working axes



- **Dispatch differently the means according to the potential.**

➔Transfer the means from sectors with low potential towards those with potential

➔Look for a balanced equation between public service and sustainable network

- **Set up a hierarchy among bus lines both on level of service as well as on results and missions to improve legebility and performance**

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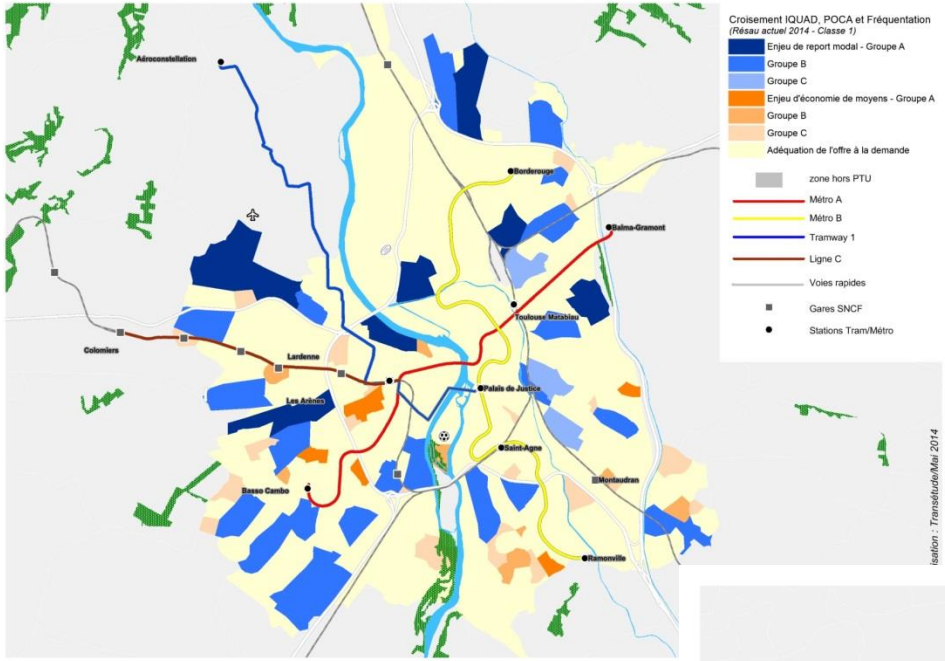
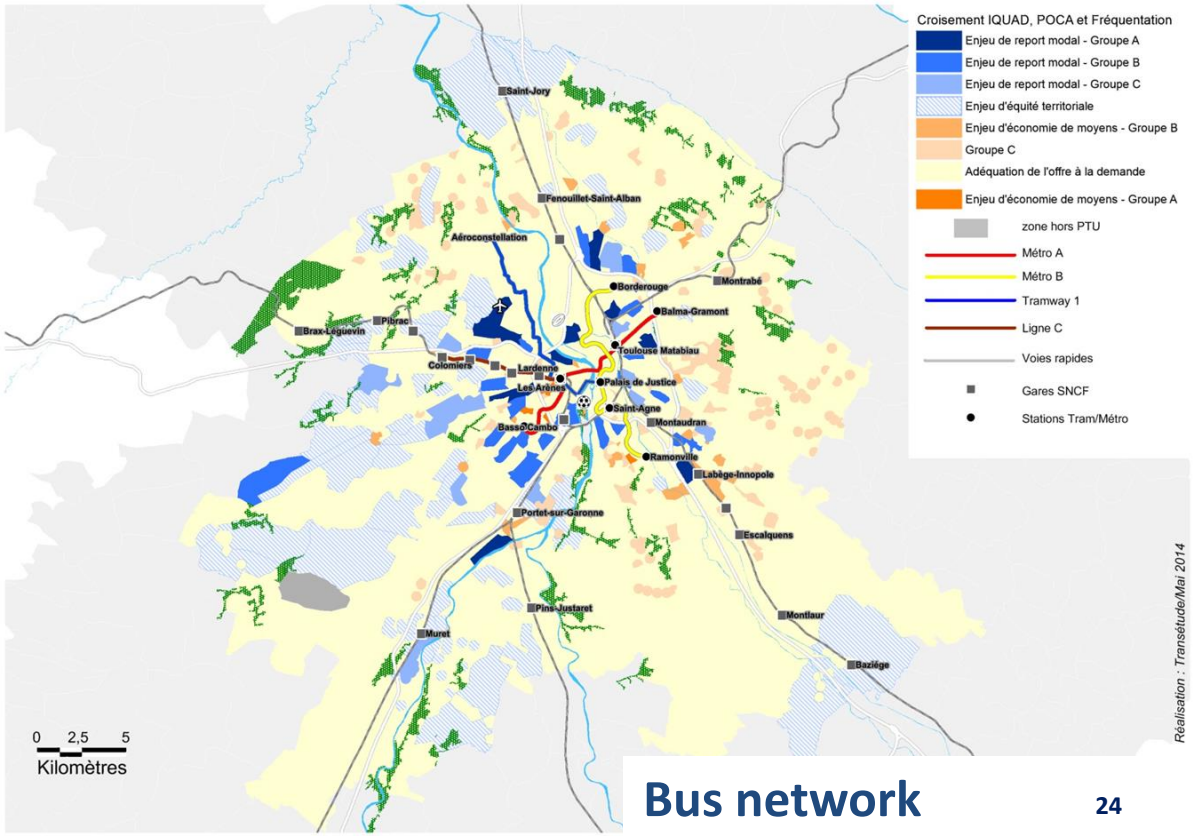
Bus Network Progress Margin



Class 1



Bus network

Social and Economic bus lines Performance : Hierarchy

Metro - Tramway

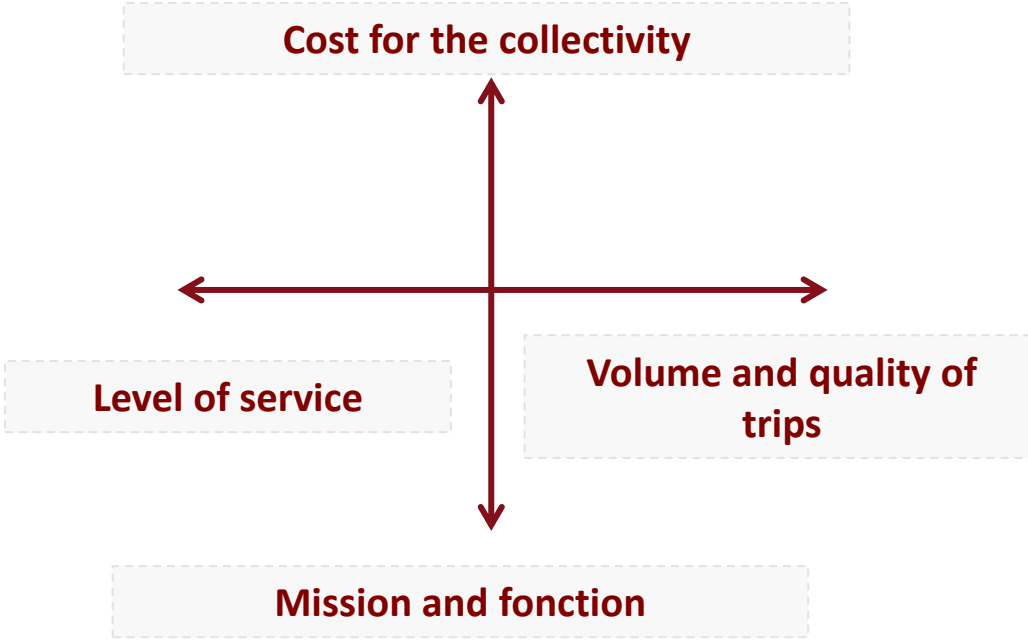
Bus first category = LINEO

Structural Metropolitan Network

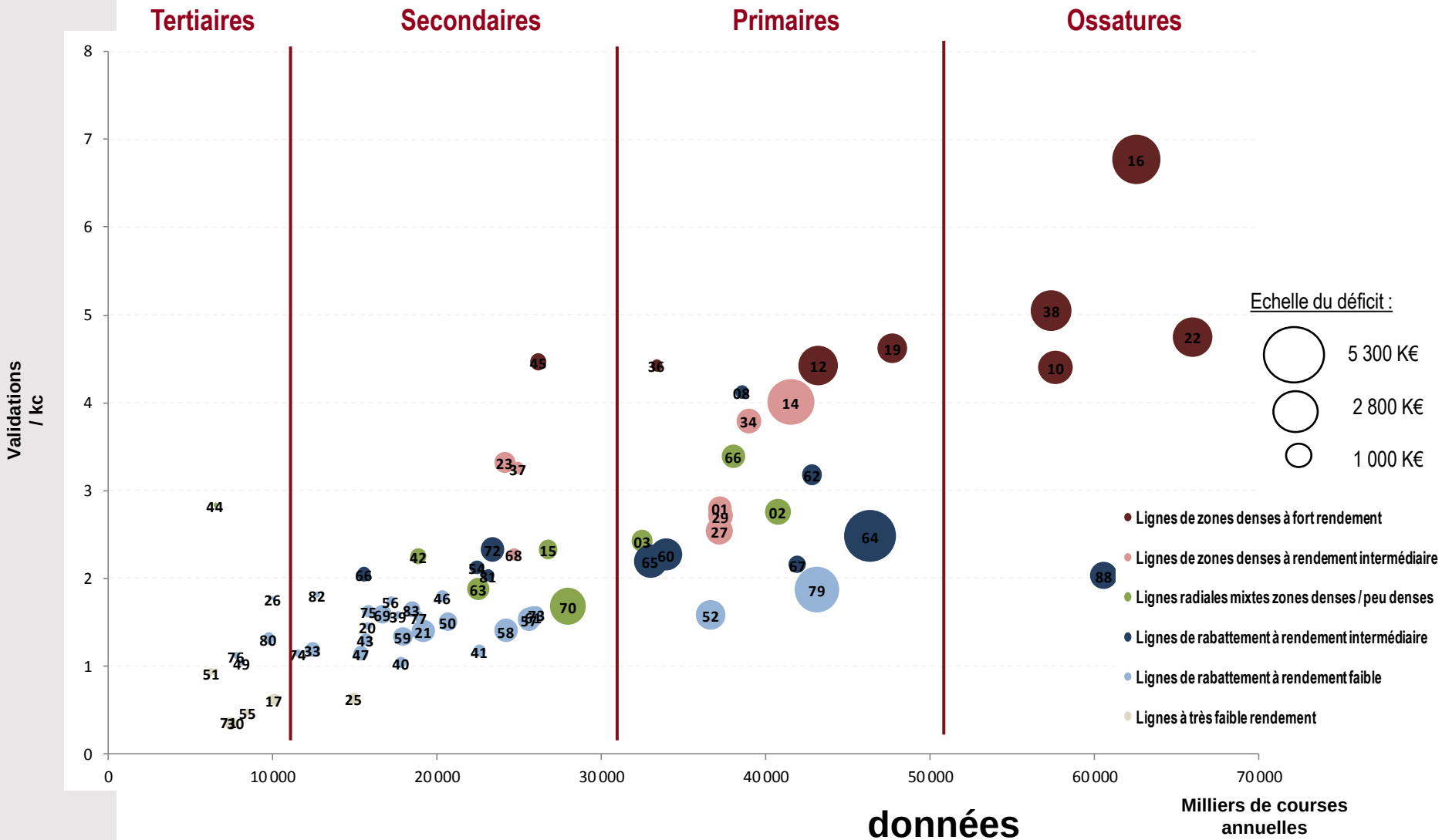
Bus second category

Bus third category

Bus forth category



Social and Economic bus lines Performance



données 2012

Sustainable Network Construction Plan : A project

1 DIAGNOSTIC

- INDICATORS
- POCA
- IQUAD

→ CROSS CHECKING WITH TRIPS

→ SOCIAL AND ECONOMIC PERFORMANCE OF BUS LINES

2 STRATEGY

- HOW TO ALLOCATE RESSOURCES?

→ POLITICAL CHOICE and PRINCIPLES

3 Target Bus Network

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4 Towards the new network

- IMPLEMENTATION

How to Allocate Ressources?

Modal shift

To maximize trips as an alternative to the use of the car with sharing public space differently

Territory Cohesion

Equity in proposing services for all sectors in the area

Financial frame

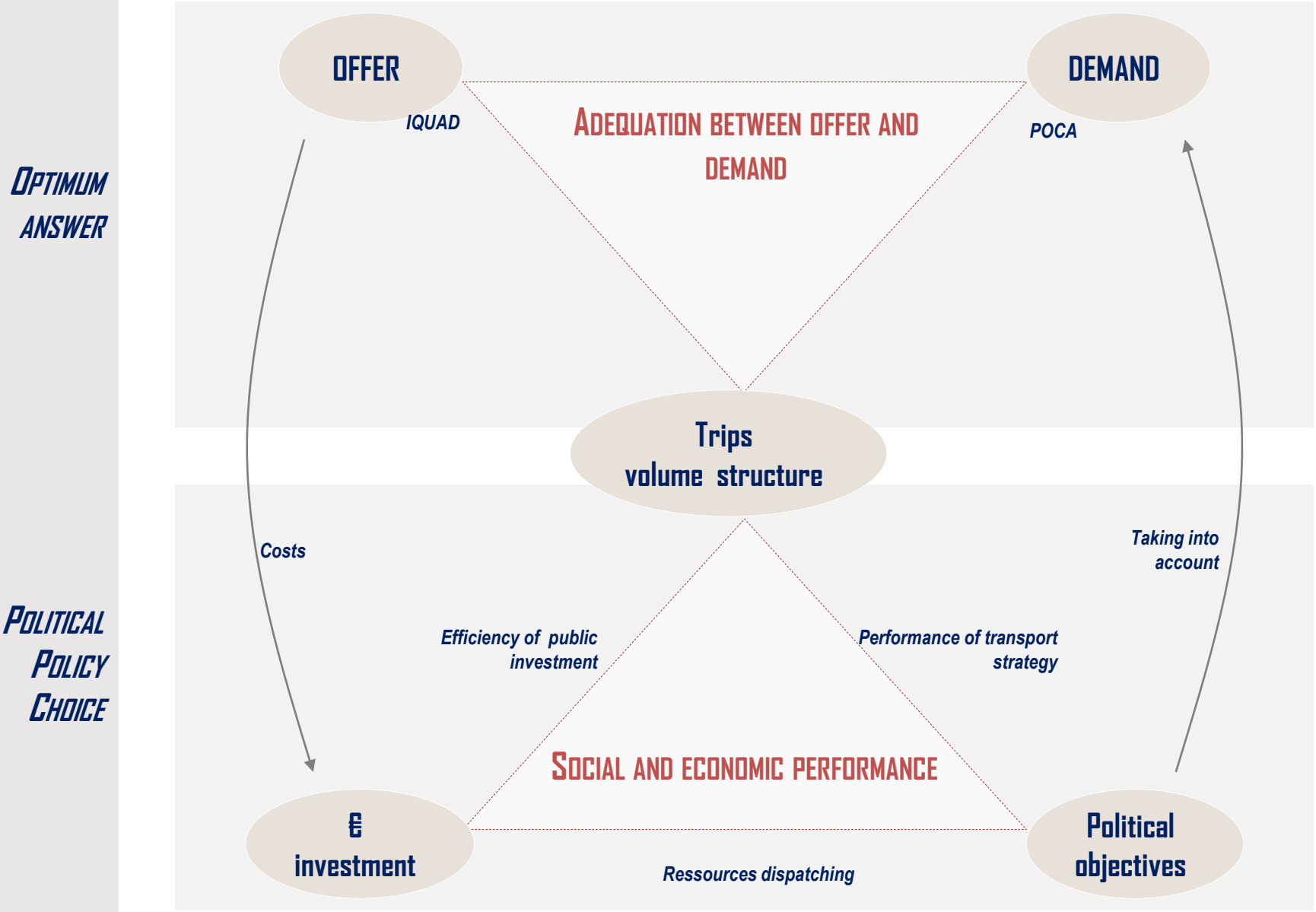
Solidarity

To offer access to public transport to people socialy in difficulties

Help in territory structuration & urban quality life promotion

To go with and help the controlled development of urbanisation and renovation

How to Allocate Ressources?



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IMPLEMENTATION

Thank you for your attention !

Tisséo-SMTC

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