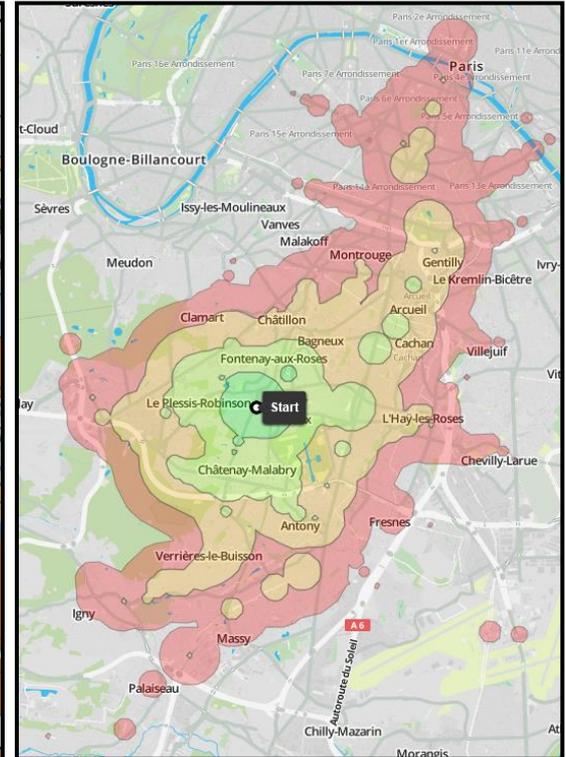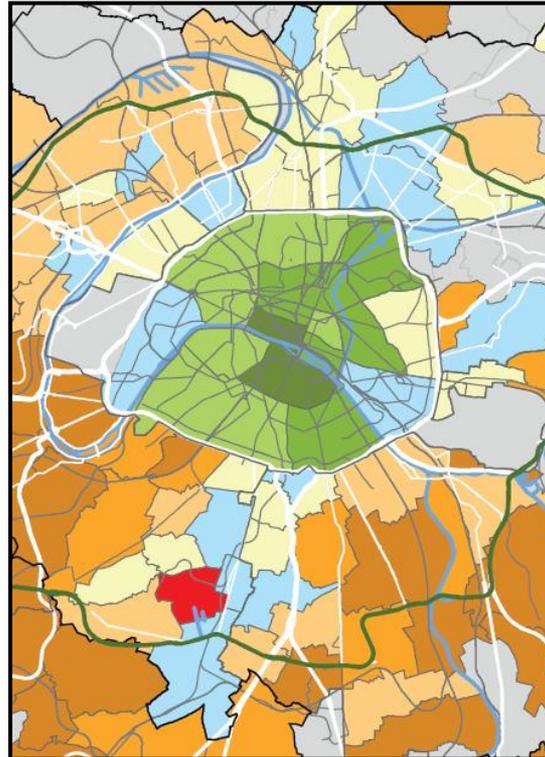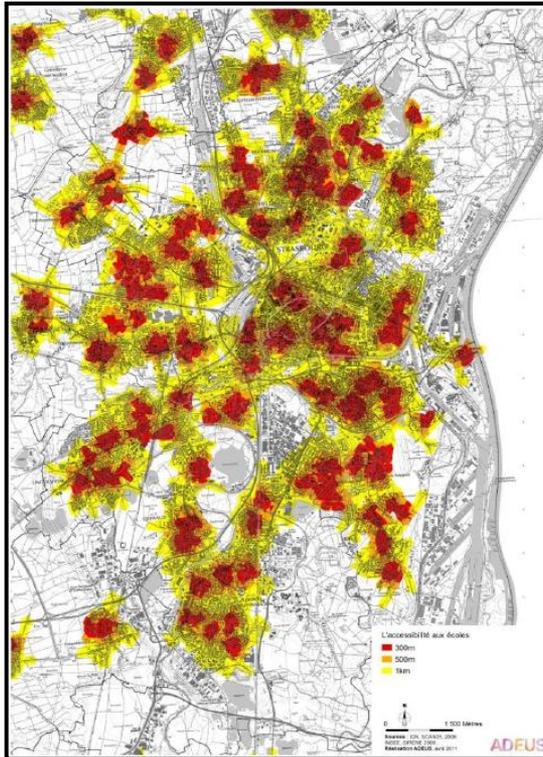# **Measuring and improving urban accessibility in French Cities**: Methods, policies and lessons learned
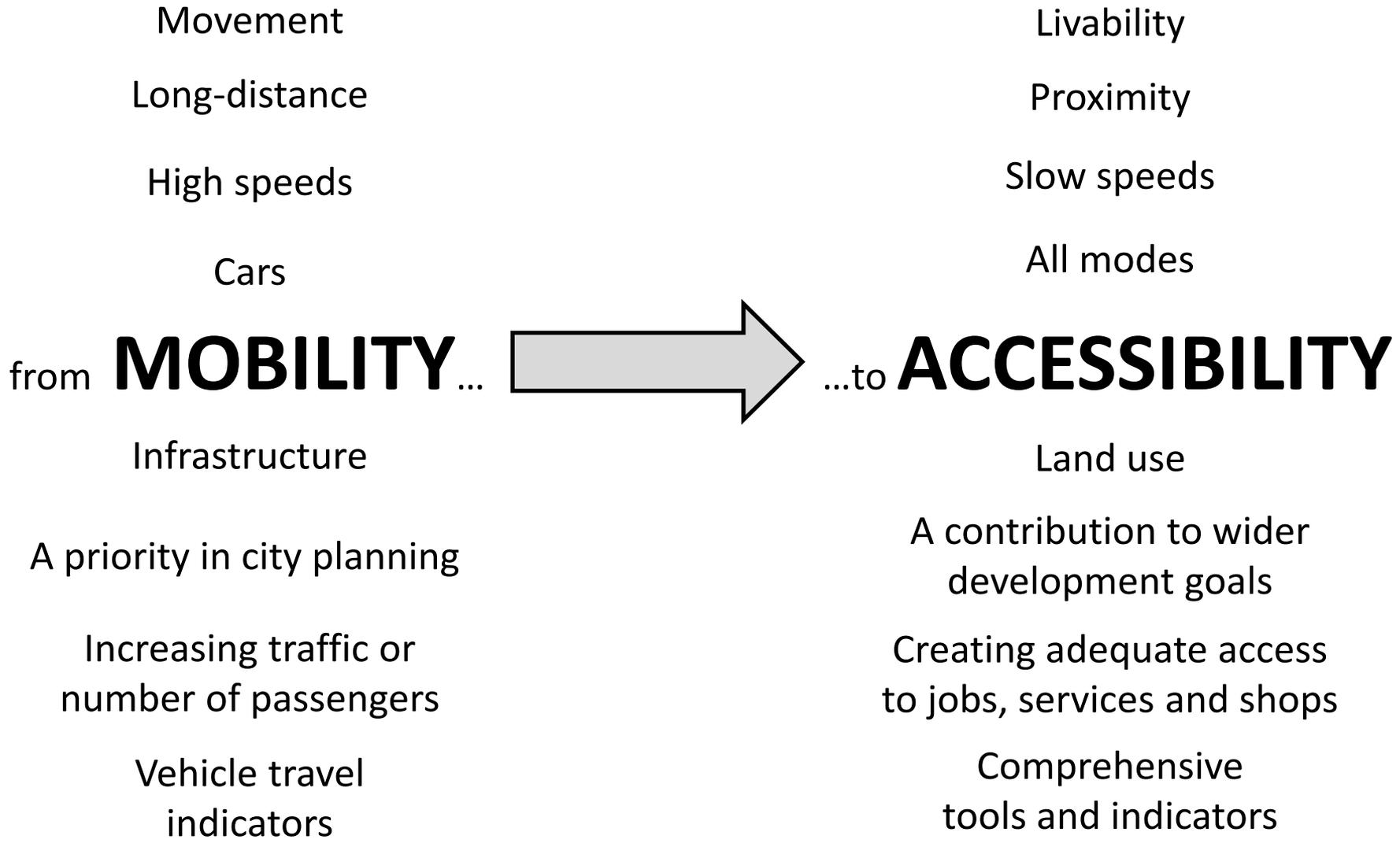
Polis Conference 2019
Brussels, Belgium
November 27th 2019

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CODRA

A new paradigm in urban planning

Movement

Long-distance

High speeds

Cars

from **MOBILITY**... ...to **ACCESSIBILITY**

Infrastructure

A priority in city planning

Increasing traffic or
number of passengers

Vehicle travel
indicators

Livability

Proximity

Slow speeds

All modes

Land use

A contribution to wider
development goals

Creating adequate access
to jobs, services and shops

Comprehensive
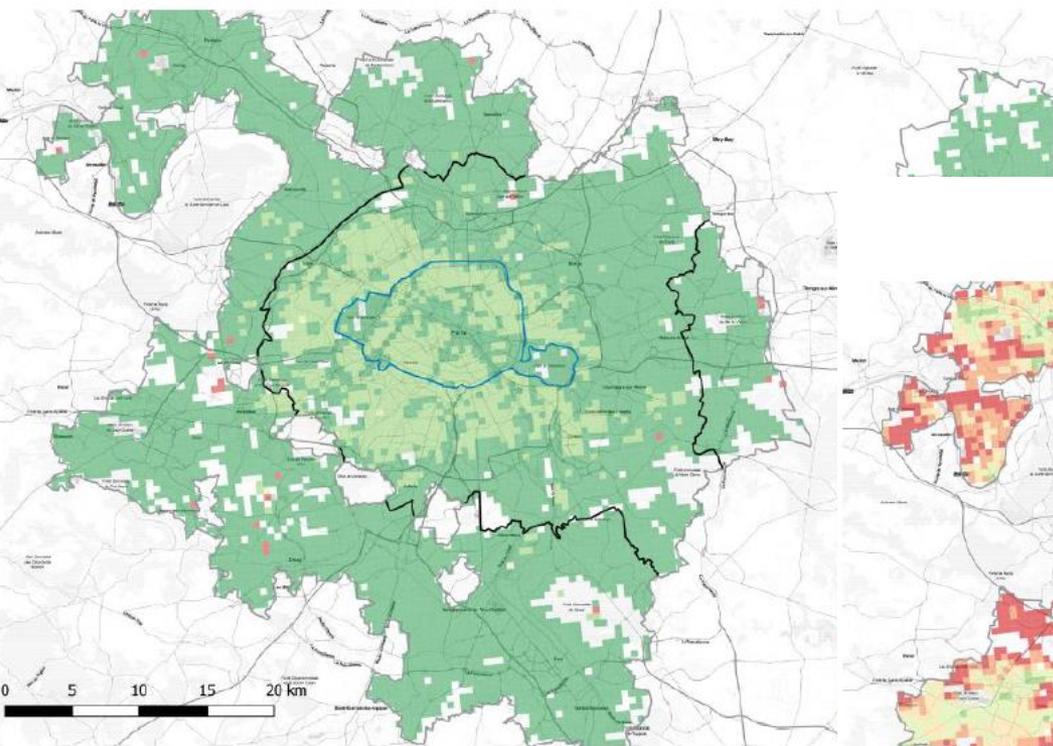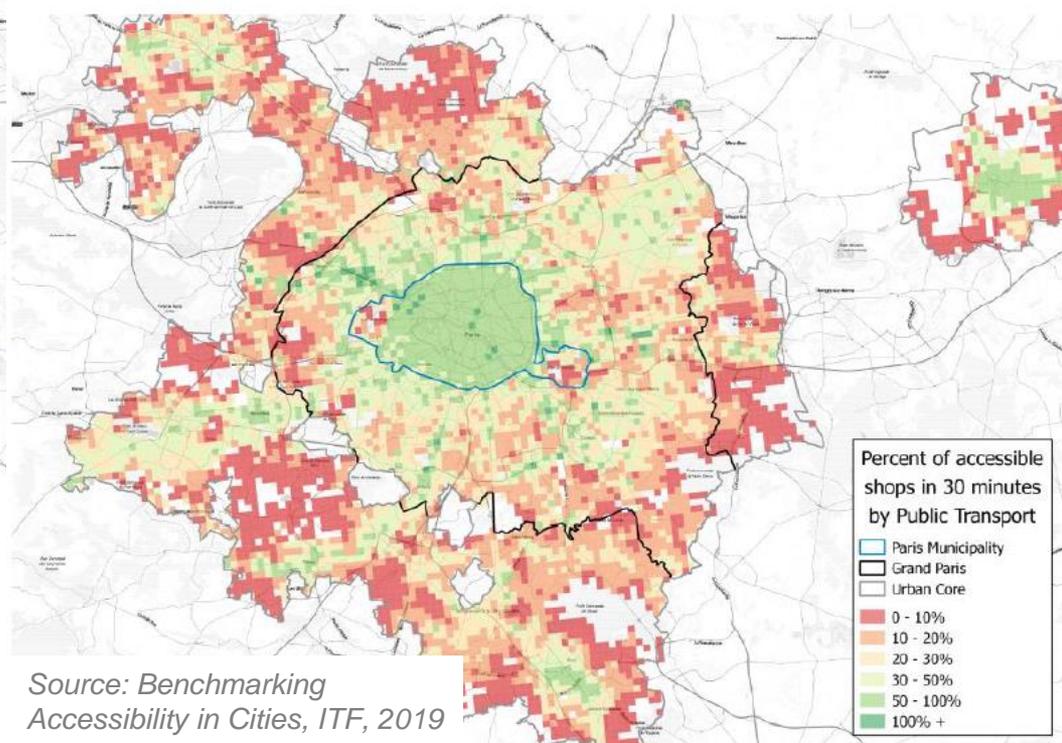tools and indicators

Ile-de-France : accessibility by car vs public transport

Figure 21. Car performance in Paris

Accessibility by car is high in the whole metropolitan area, thanks to the density of destinations and the quality of the road network.

Figure 22. Public transport performance in Paris

0   5   10   15   20 km

Accessibility by public transport is very good in the center, thanks to high density and efficient services, **but lower in the other areas.**

Source: Benchmarking Accessibility in Cities, ITF, 2019

Percent of accessible shops in 30 minutes by Public Transport

- Paris Municipality
- Grand Paris
- Urban Core
- 0 - 10%
- 10 - 20%
- 20 - 30%
- 30 - 50%
- 50 - 100%
- 100% +

Ile-de-France: the revolution of the Grand Paris Express

Source: Société du Grand Paris, 2019

Transit Sheds and Population Density in the **Paris Region**

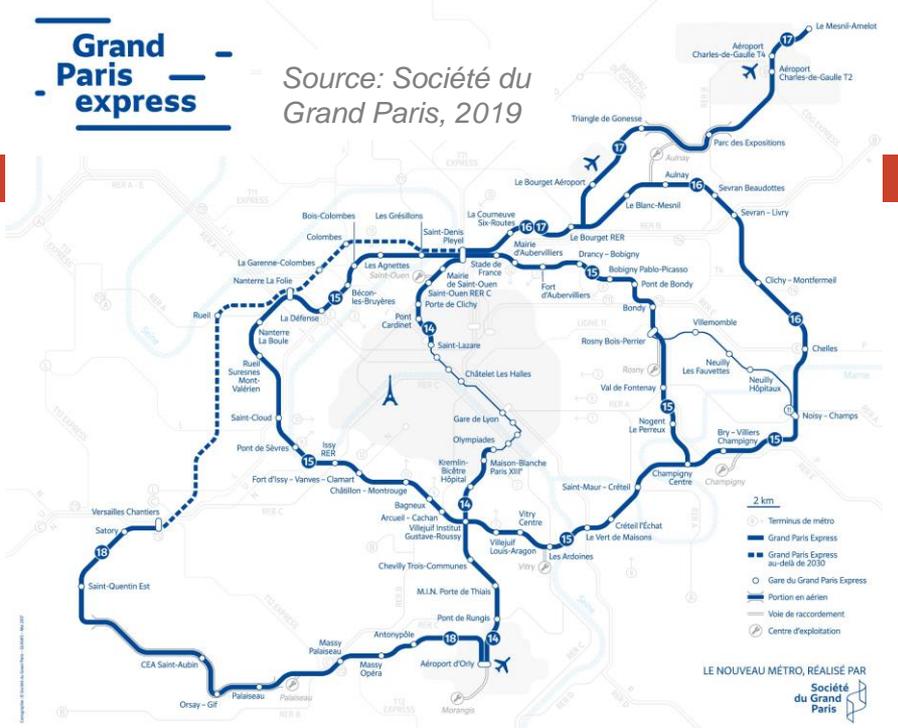*Source: People Near Transit, ITDP, 2016*
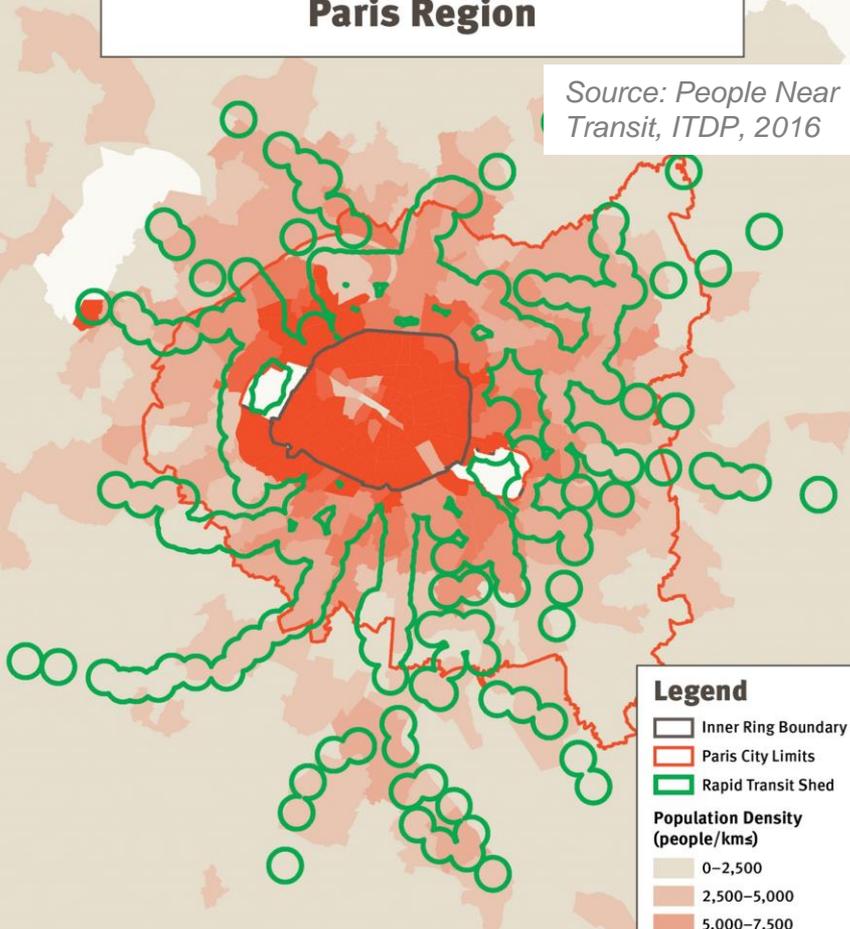
Legend

- Inner Ring Boundary
- Paris City Limits
- Rapid Transit Shed

Population Density (people/kms)
- 0–2,500
- 2,500–5,000
- 5,000–7,500
- 7,500–10,000
- 10,000–12,500
- 12,500–15,000
- >15,000

100% of people near transit in Paris
50% in the metropolitan area

Aires d'accessibilité de la métropole par les principaux transports en commun

- —— RGPE
- —— autre réseau de transport (train, RER, métro, tramway)
- ● gare de départ

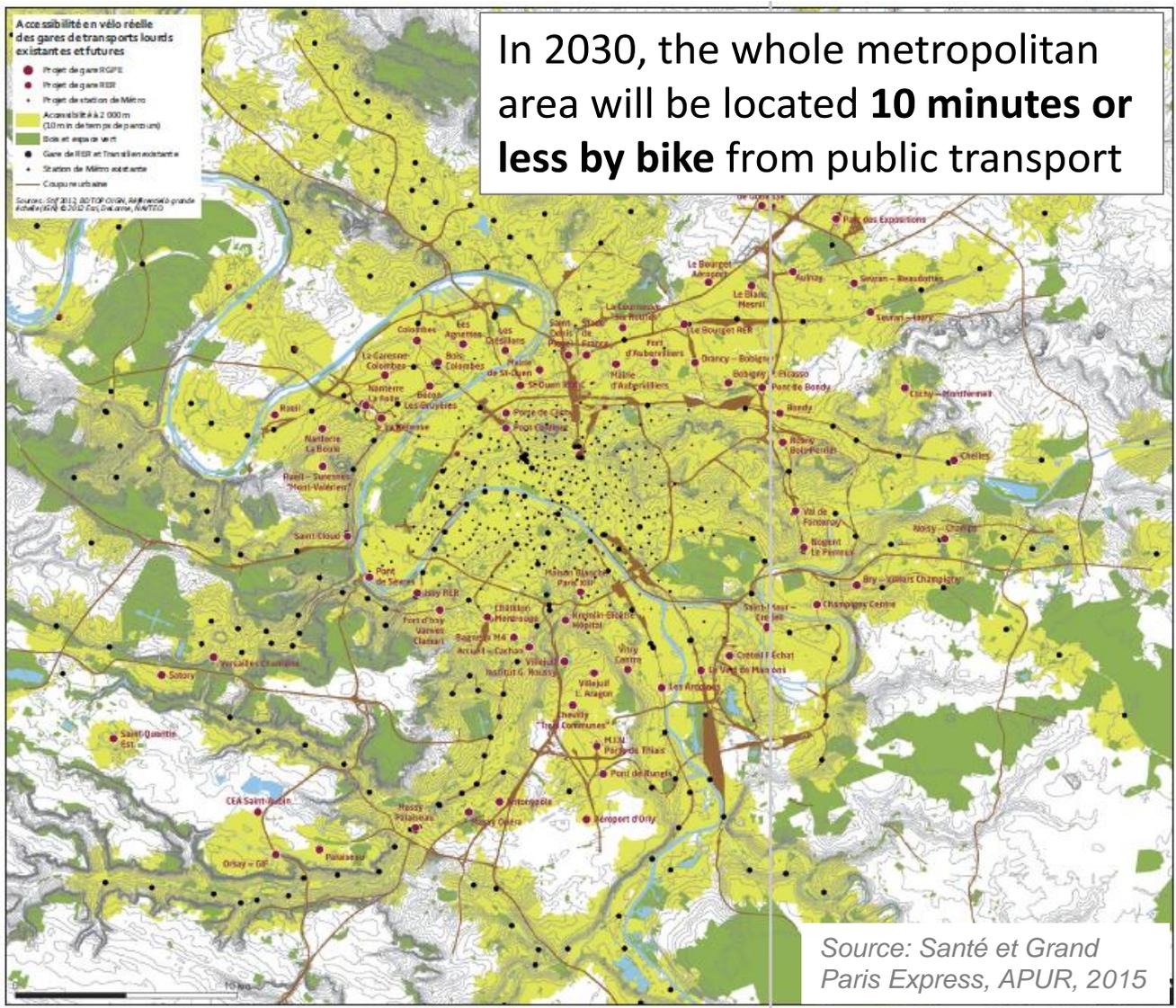**Aire atteignable en moins de 45 min. depuis la gare de départ**
- 2013
- horizon 2030

Clichy Montfermeil Station

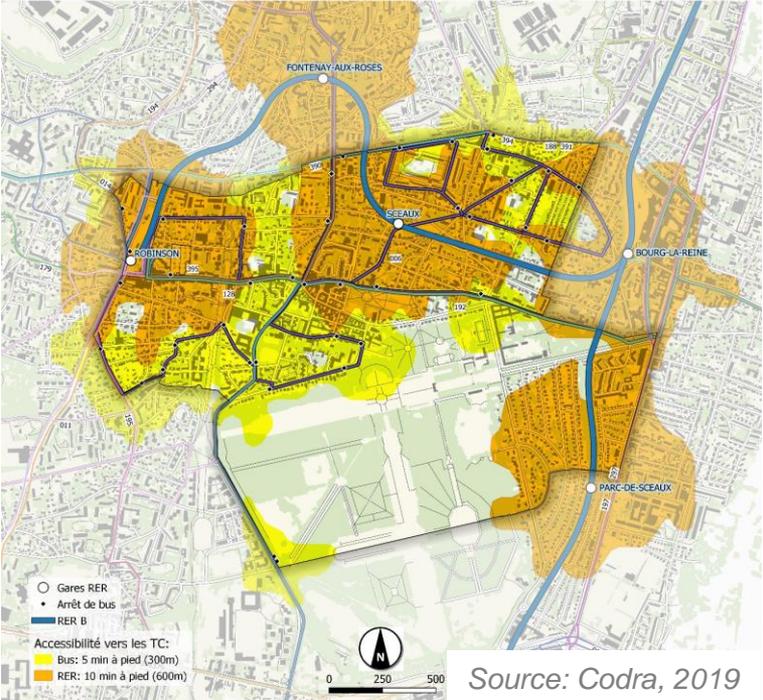Progression of accessibility (45 min trip) :
Geographical area: + 328%
Employment: + 996%
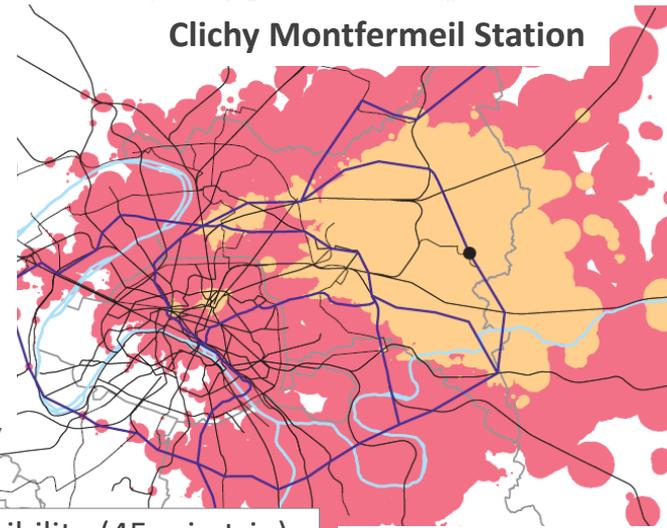
Source: Monographie de Clichy Montfermeil, APUR, 2014

Ile-de-France: cycling as a complement to public transport

In 2030, the whole metropolitan area will be located **10 minutes or less by bike** from public transport

Source: Santé et Grand Paris Express, APUR, 2015

Accessibilité à pied vers les transports collectifs
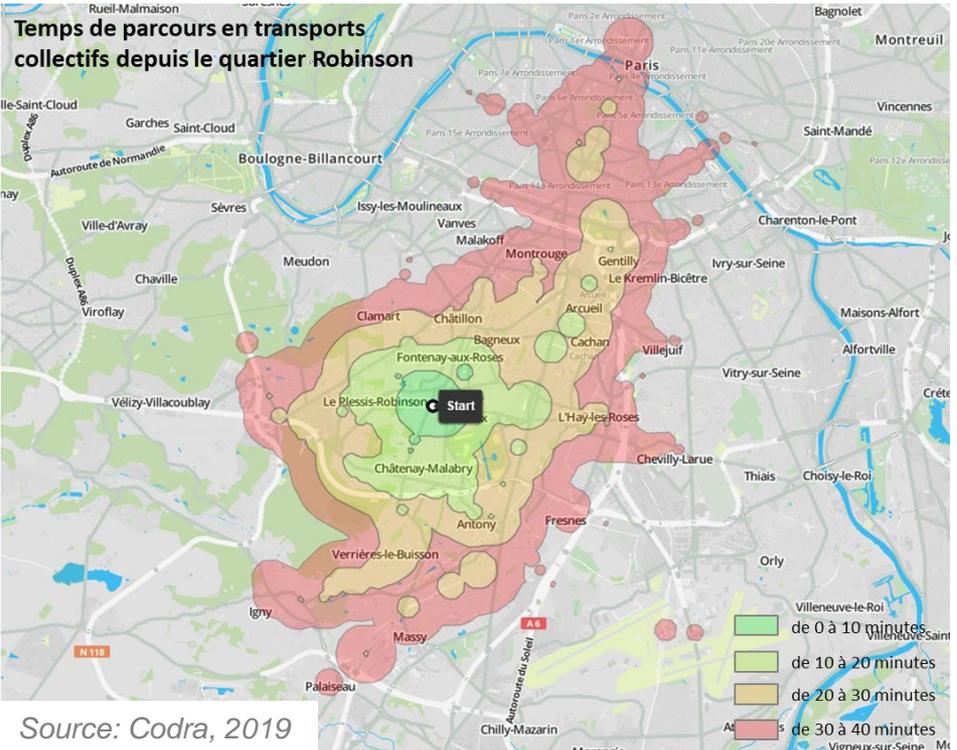
Source: Codra, 2019

Walking accessibility to public transport stations

The integration of service level adds an important information to study accessibility to P.T.
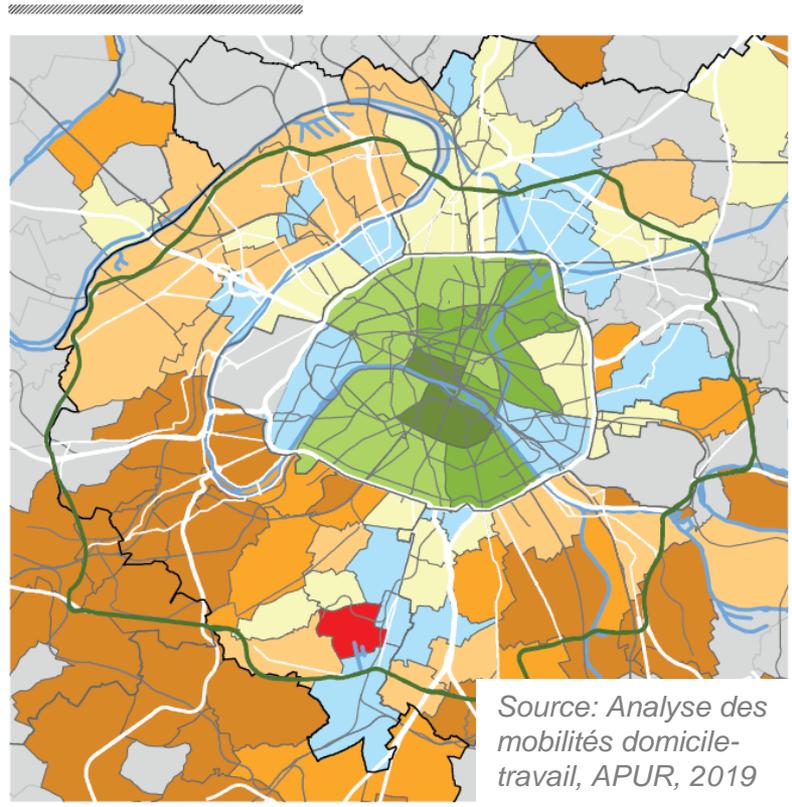

Niveau de desserte des secteurs de Sceaux

Source: Codra, 2019
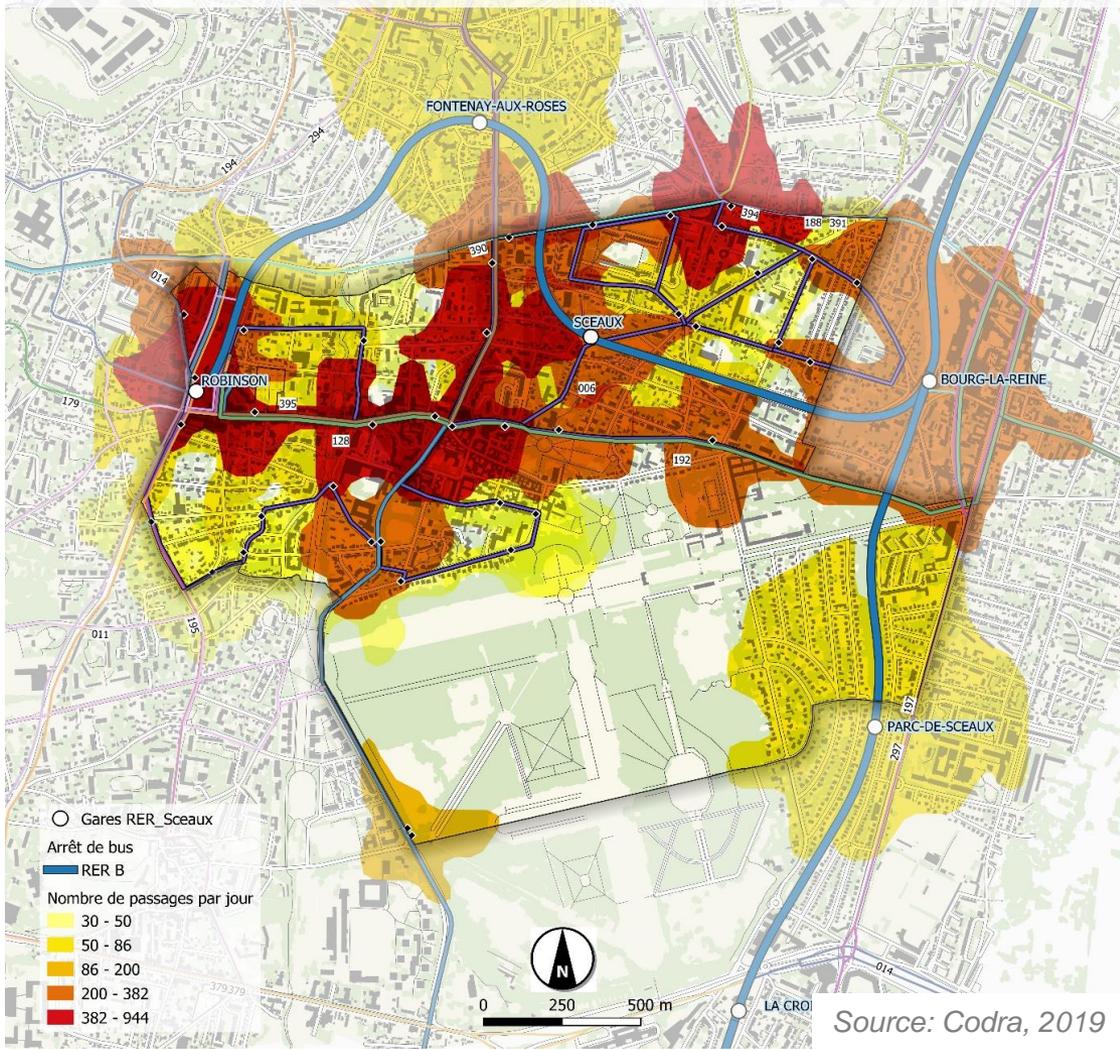
Sceaux (Ile-de-France) : accessibility by public transport to the metropolitan area

Temps de parcours en transports collectifs depuis le quartier Robinson

de 0 à 10 minutes
de 10 à 20 minutes
de 20 à 30 minutes
de 30 à 40 minutes

Source: Codra, 2019

COMPARAISON DES TEMPS DE TRAJET EN TRANSPORT COLLECTIF ET EN VOITURE POUR LES ACTIFS QUI TRAVAILLENT EN DEHORS DE LA COMMUNE

Commune de résidence
Temps équivalent à 5 minutes près

Temps de trajet domicile/travail plus court avec la voiture
De 5 à 10 minutes
De 10 à 15 mn
De 15 à 20 mn
Supérieur à 20 mn

Temps de trajet domicile/travail plus court avec les transports en commun
De 5 à 10 minutes
De 10 à 15 mn
De 15 à 20 mn
Supérieur à 20 mn

Bois et commune non concernée
A86, périmètre de la ZFE métropolitaine
Voie structurante
Transilien, RER, métro et tramway
Périmètre de la MGP

Source : Exploitation Apur de l'Application Citymapper© (mars 2019) - Insee, RP 2015

*Source: Analyse des mobilités domicile-travail, APUR, 2019*

Accessibility to the metropolitan area by public transport is strongly shaped by **train, metro and tram lines,** which are oriented towards Paris
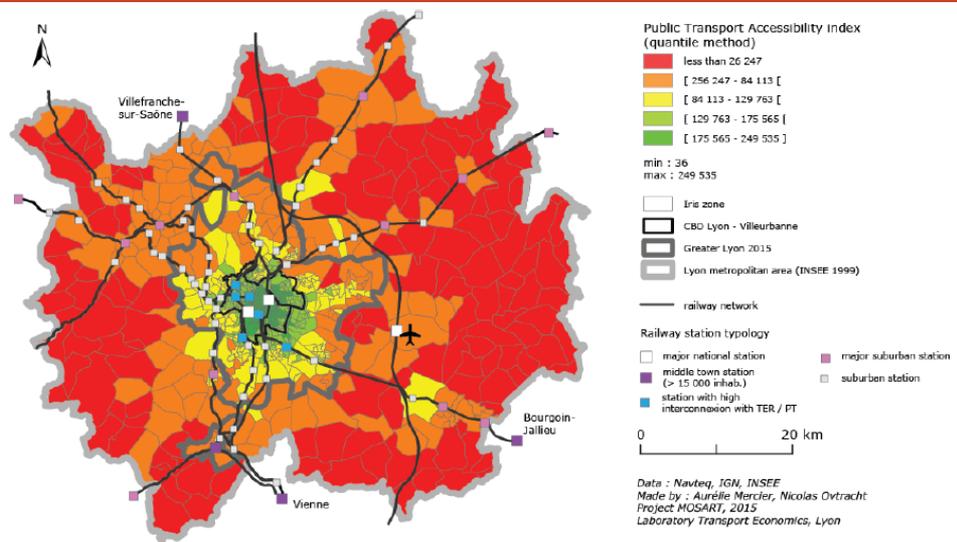
For most destinations, **travel time by car is much lower than by public transport,** with the exception of the City of Paris
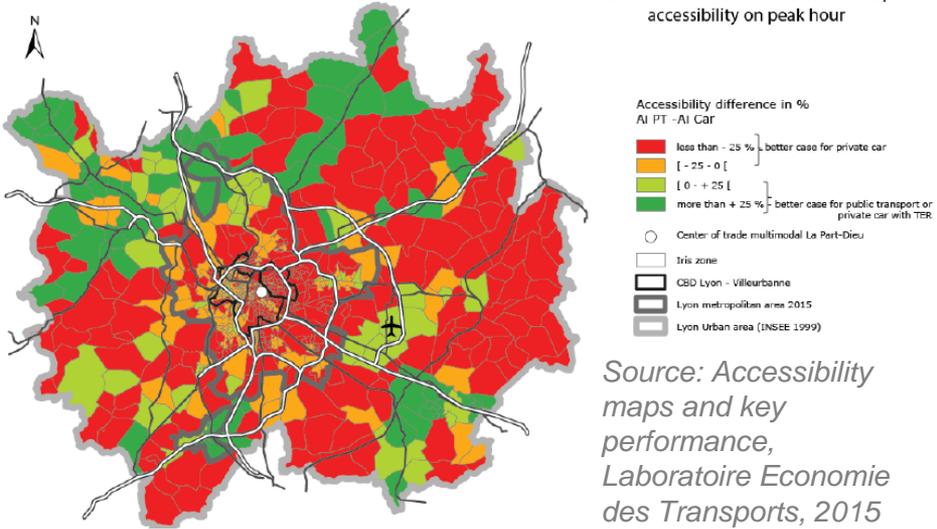
Métropole de Lyon: car and public transport performance
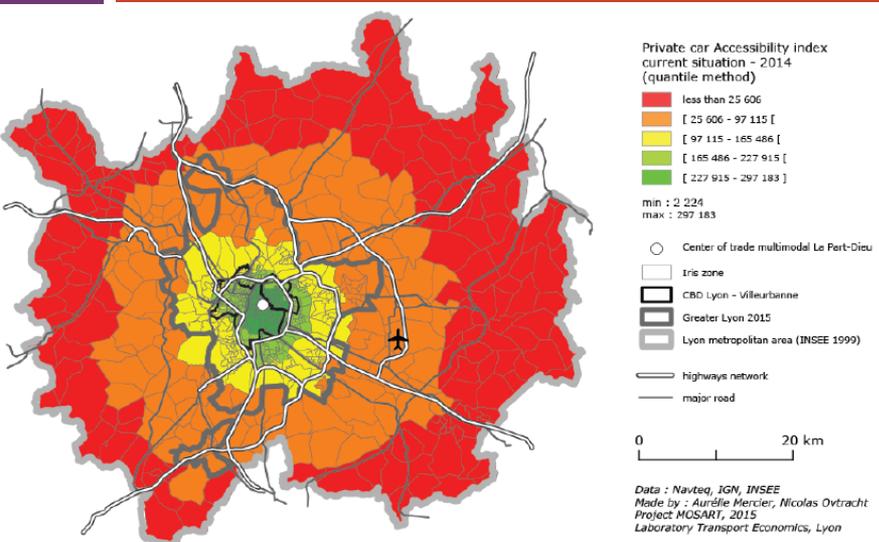
Map 11 : Gravity-based accessibility to jobs by car (current situation)

Map 12 : Gravity-based accessibility to jobs by public transport (current situation)

Map 13 : Difference between car and public transport accessibility to jobs

Source: Accessibility maps and key performance, Laboratoire Economie des Transports, 2015

Some areas are excluded from the region in terms of accessibility to jobs, especially by public transport.

The Métropole is developing **public transport** (extension of the metro, bus lanes…), but **this solution is too costly in most suburbs.**

New solutions should be implemented : urban planning, car-pooling, car-sharing…

Sud Oise : social vulnerabilities in terms of accessibility
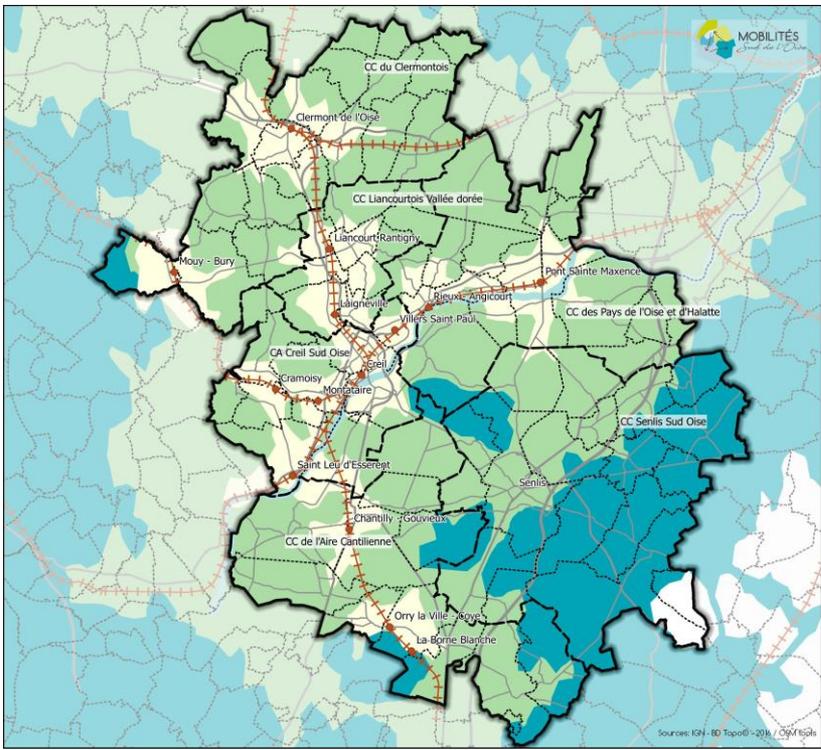
Most areas are located near train stations, but **others are too far** from them, highlighting **potential measures** adapted to these different contexts.
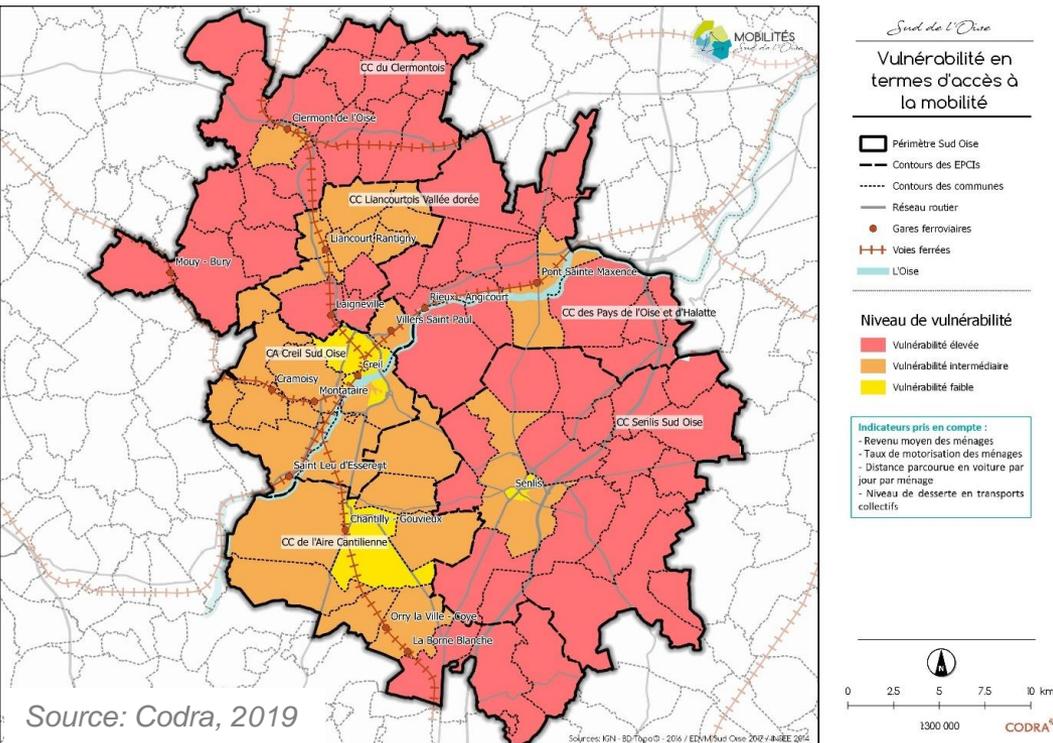

Vulnerabilities take into account social and transport factors. They are higher in **rural areas**. **Distance traveled by car** is the main indicator of vulnerabilities.

Source: Codra, 2019

Grand Douaisis : accessibility to health practitioners

APL (Local Potential Accessibility), a tool to study accessibility to general practitioners.

It integrates **health offer** (physicians' activity) and **health demand** (number of consultations by age).

It's a **local indicator** (estimated at the city level), but it considers supply and demand in the surrounding cities.
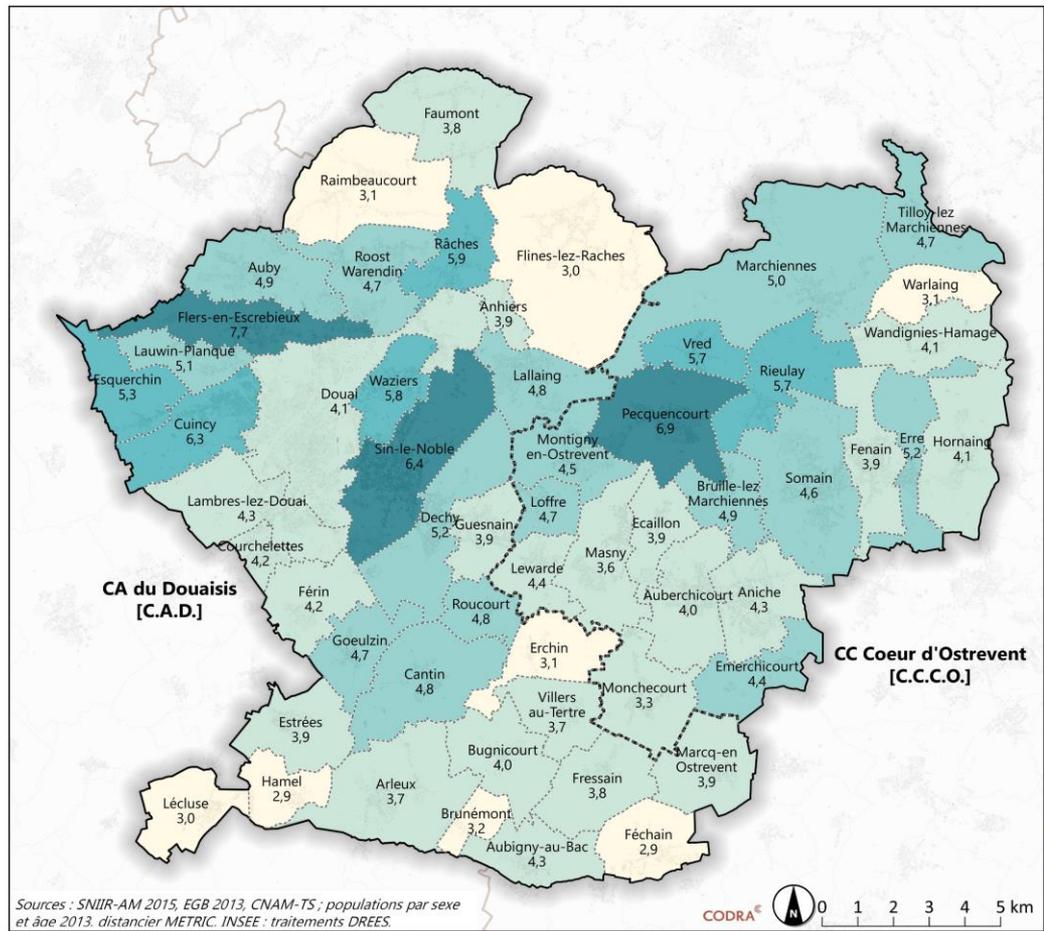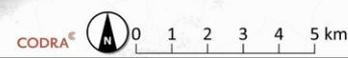

Source: Codra, 2019

Métropole de Strasbourg : analyzing accessibility to opportunities, in order to promote the city of proximity

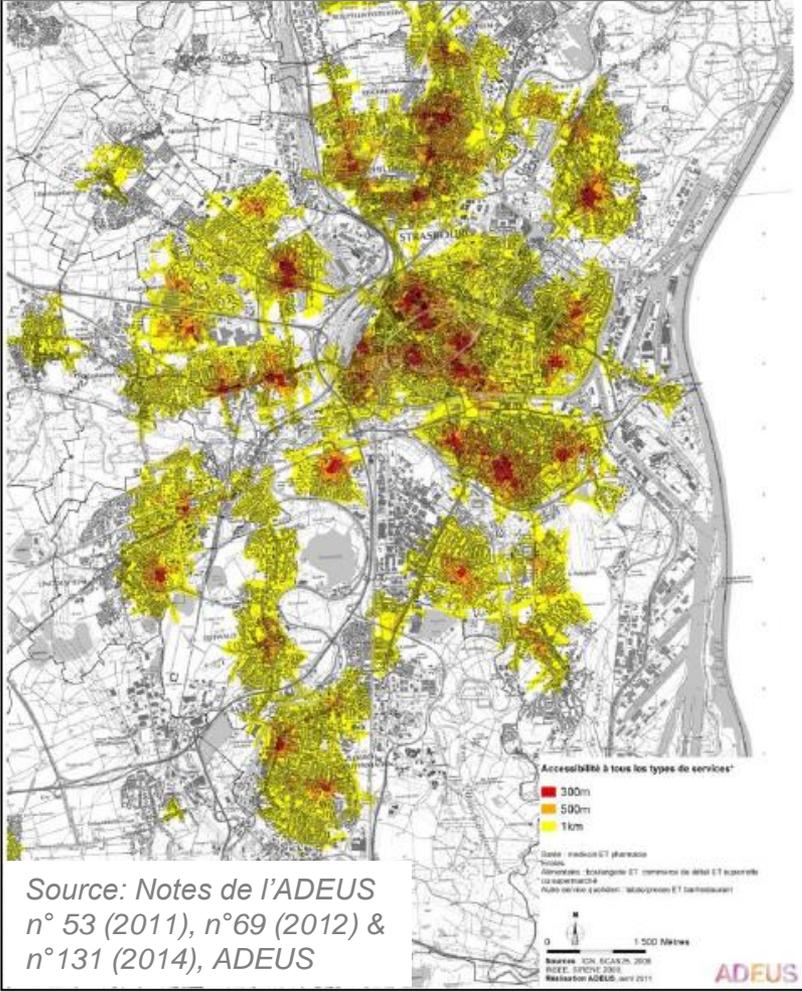**Accessibility to schools :**
60% of people within 500 m. of a school

L'accessibilité aux écoles
- 300m
- 500m
- 1km
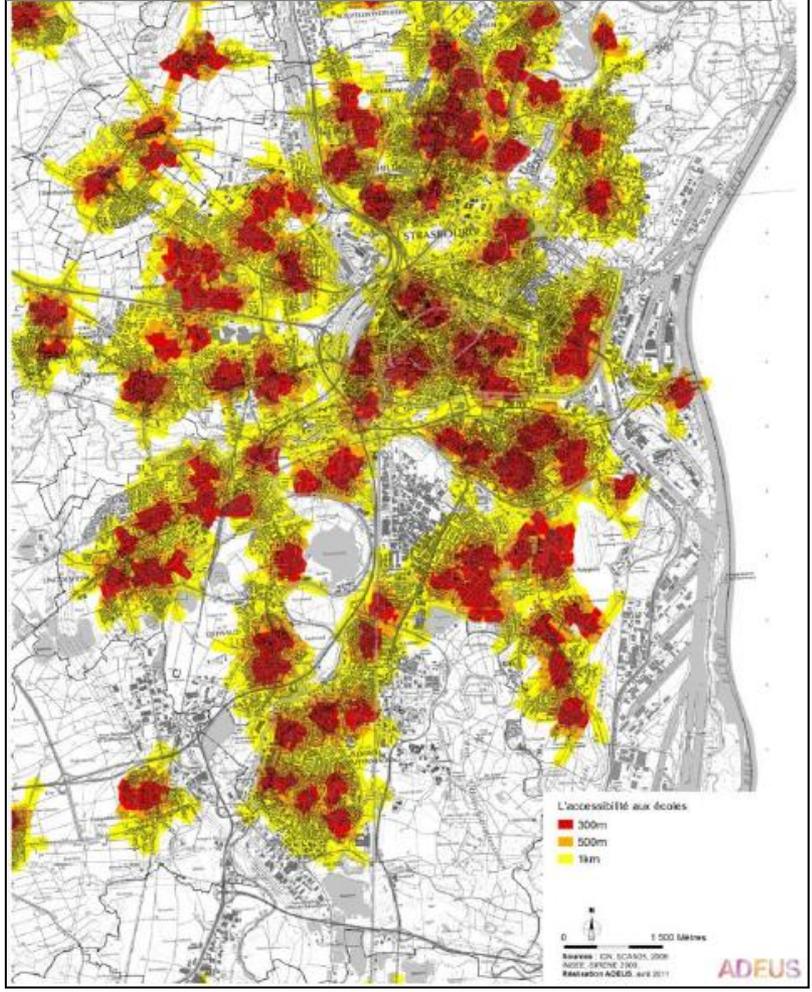
Accessibility to elementary services :
23% of people within 500 m. of these services

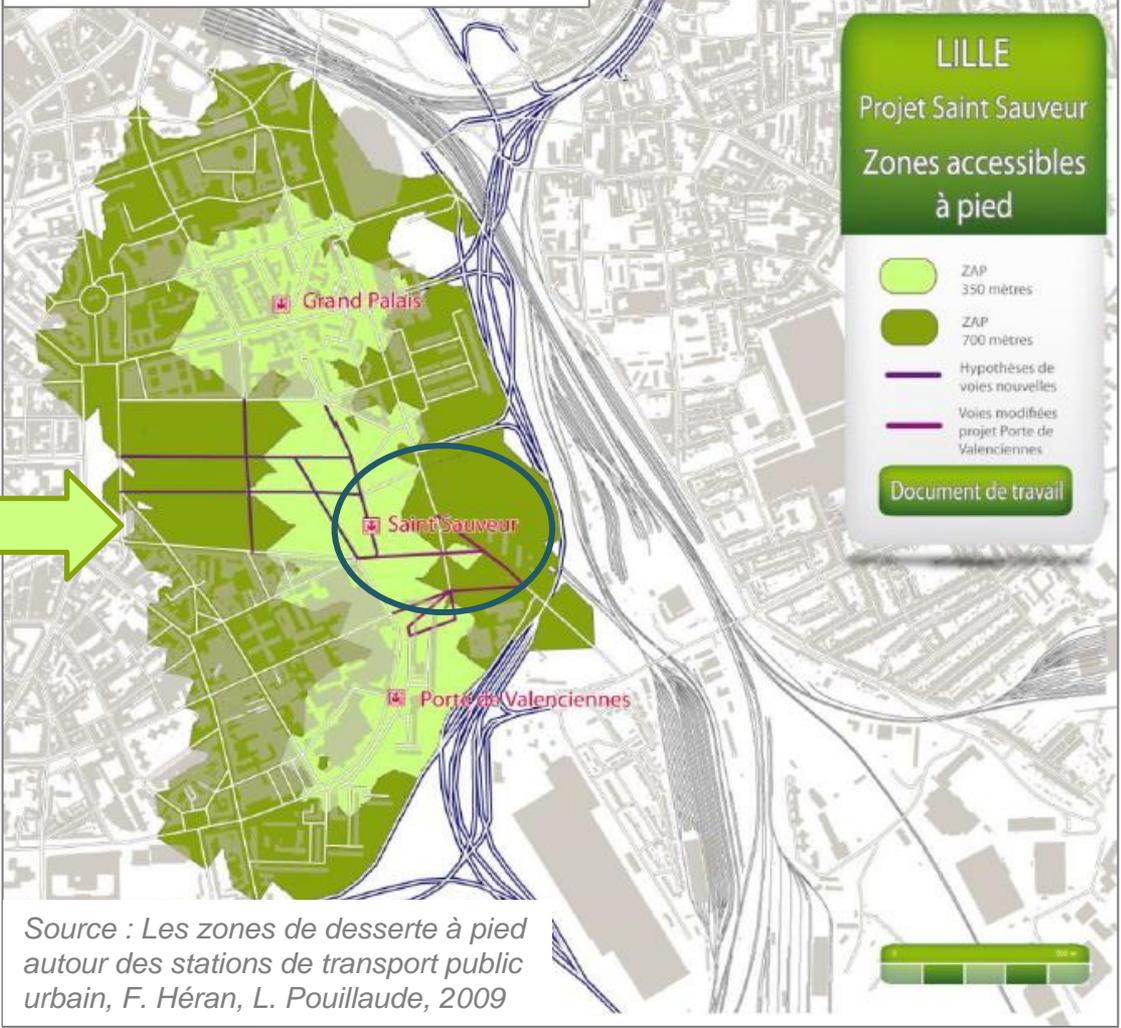Accessibilité à tous les types de services*
- 300m
- 500m
- 1km

Source: Notes de l'ADEUS n° 53 (2011), n°69 (2012) & n°131 (2014), ADEUS

Métropole de Lille : ZAP (pedestrian accessibility zones), a tool for evaluating transport and urban solutions

Option 1 : Two bus stops

Option 2 : Three bus stops

LILLE
Projet Saint Sauveur
Zones accessibles à pied

ZAP 350 mètres

ZAP 700 mètres

Hypothèses de voies nouvelles

Voies modifiées projet Porte de Valenciennes

Document de travail
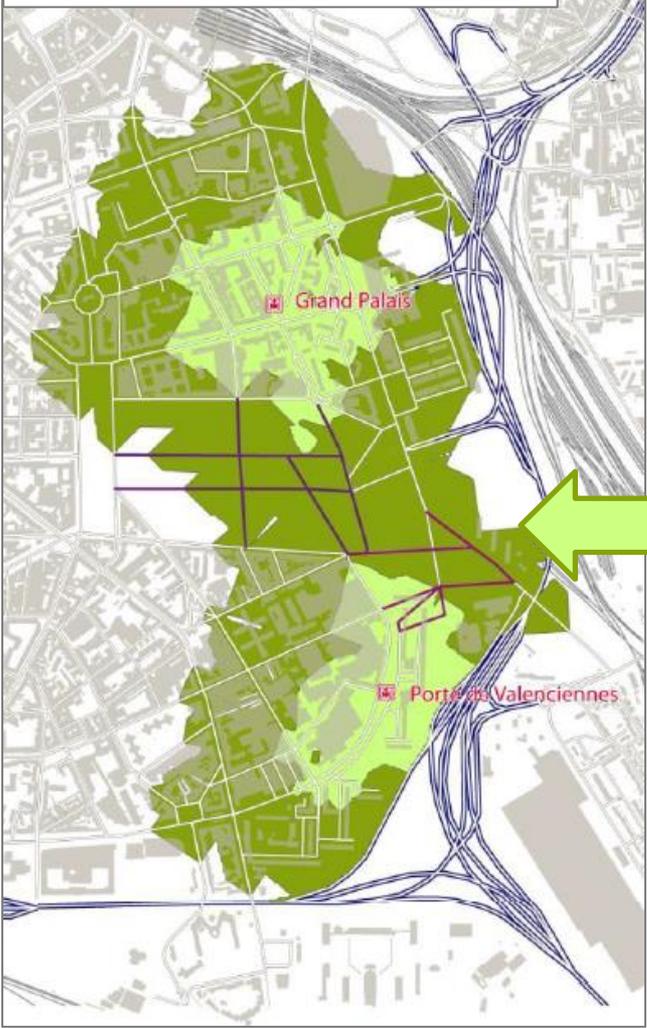
Source : Les zones de desserte à pied autour des stations de transport public urbain, F. Héran, L. Pouillaude, 2009

Conclusion : a new approach leading to better policies

➢ **Transport projects** can improve accessibility in the short term, but **the effects tend to decline in the long term**, due to the reorganization of activities and the increase in travel times.

➢ **Non-transport projects** (densification of an urban district, reintroduction of local services in the suburbs…), **can have a strong impact in terms of accessibility** to daily destinations.

➢ Urban policies should better take into account **the connection between land use and transportation**, which could lead to favor **smaller and local projects**, compared to large infrastructure projects, in order to improve **accessibility, social inclusion and well-being**.

➢ A need to develop **new methods, tools and indicators** to study urban accessibility and to understand the impacts of urban policies.

Thank you !

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