

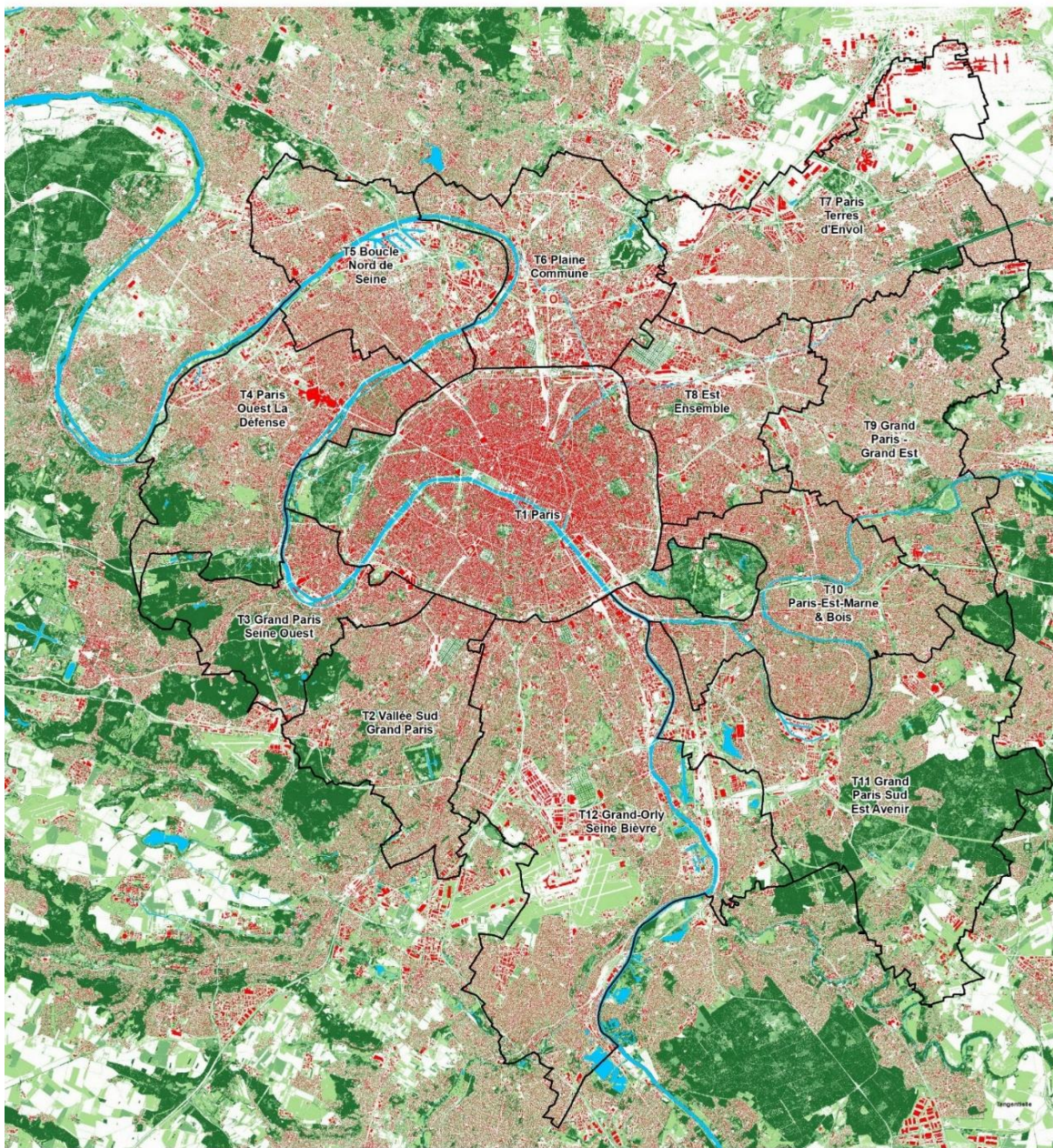
A master plan for planting trees in Paris

Ways to climate-friendly city / Wege zur klimagerechten Stadt

Wien

May, 16th 2022

Yann-Fanch Vauléon, Landscape Architect, Atelier Parisien d'Urbanisme (APUR)



The urban planning agency of Paris and Greater Paris

Since 1967

Association loi 1901 (= Non-Profit Organization)

80 people (studies, general services, documentation and databases)

Missions :

- to **amplify the territorial knowledge**
- to **contribute** to drawing up the direction of the City of Paris and greater Paris development objectives, particularly through its **urban planning documents and projects** within Paris and its Metropolitan area.
- to **study and analyze** the anticipation of **urban and societal evolution**, which plays a role in defining **public planning and development policies**,
- to **develop synergies** between our partners and all the actors of the Grand Paris implementation

29 stakeholders on Apur board, all public bodies



Paris is « small »



France

551,500 km²
(213,000 sqm)
68,014,000 inhabitants
(2020)

City of Paris

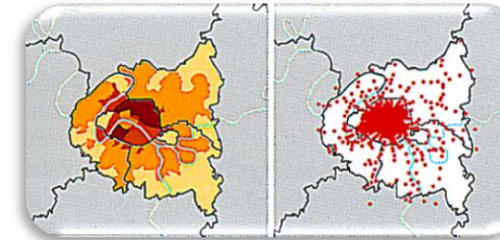
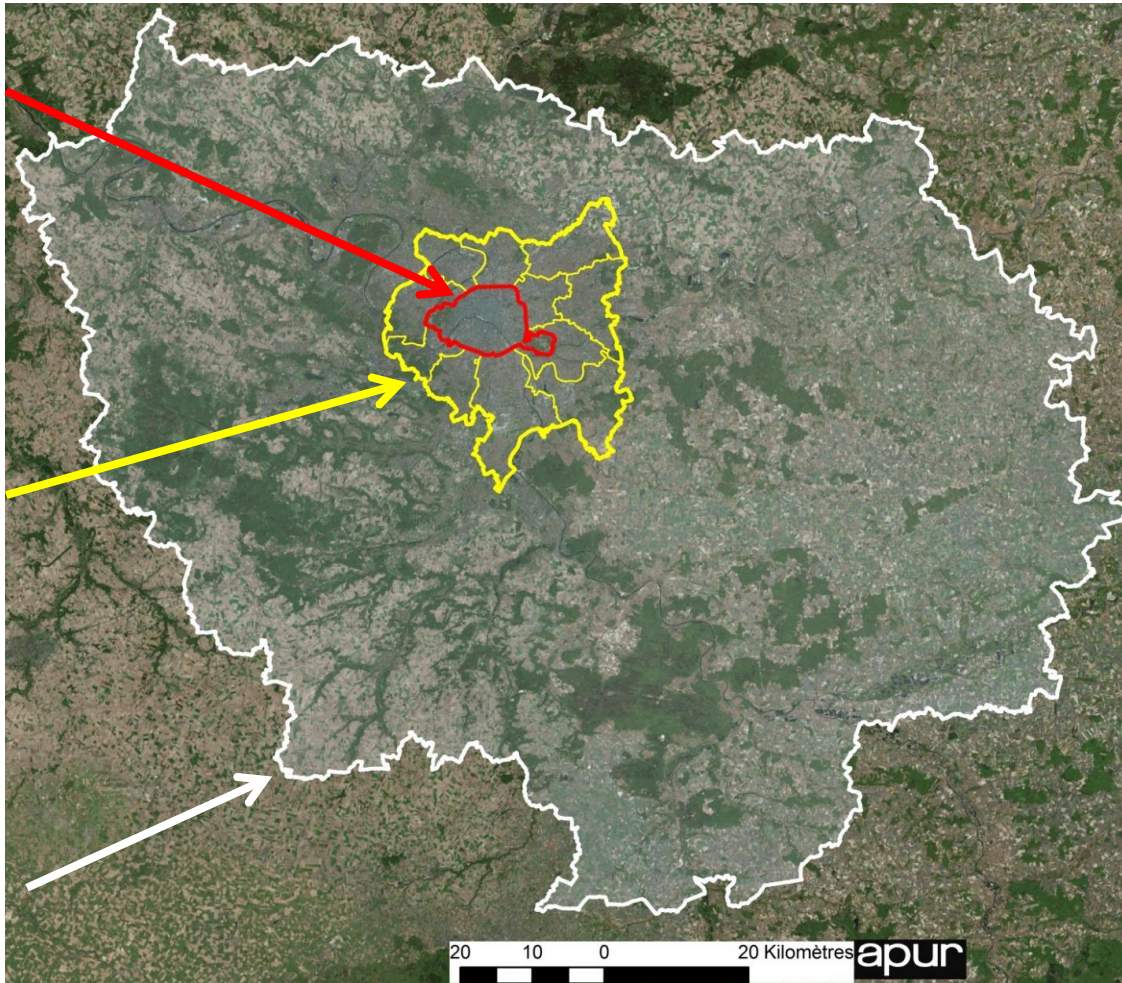
105 km² (40,5 sqm)
2,175,601 inhabitants (2018)

Greater-Paris Metropolis

814 km² (314,3 sqm)
7,075,028 inhabitants (2018)
12 territories
131 municipalities

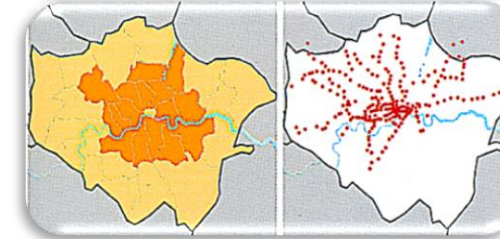
Région Ile-de-France

12,012 km² (4,638 sqm)
12,213,447 inhabitants (2018)
1 276 municipalities



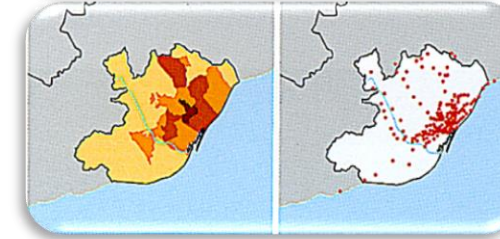
Paris : 105 km²

Greater Paris : 814 km²



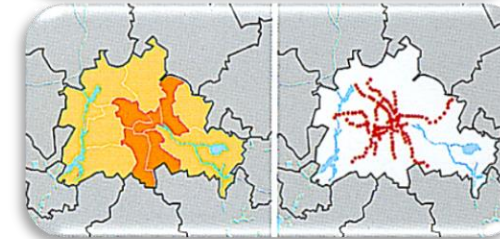
Inner London : 318 km²

Greater London : 1 569 km²

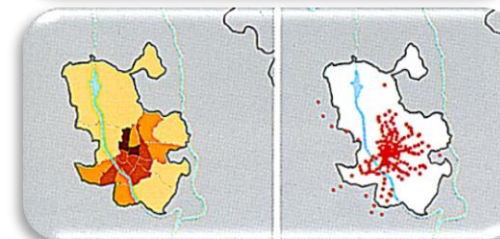


Barcelona : 102 km²

BCN Metropolitan area : 600 km²



Berlin : 891 km²

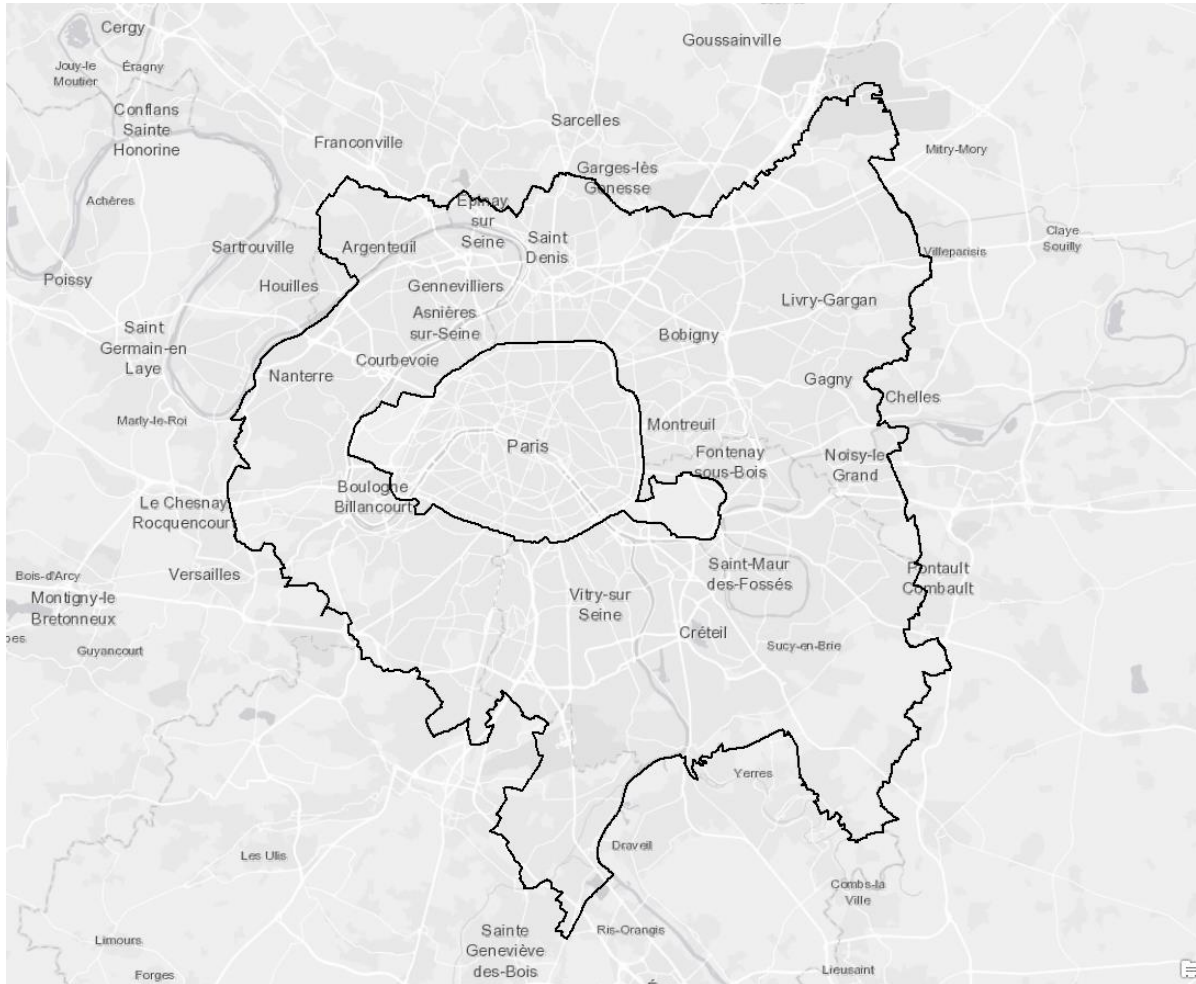


Madrid : 604 km²

Paris : 105 km²

2,2 million inhabitants / density : 20 641 p/km²

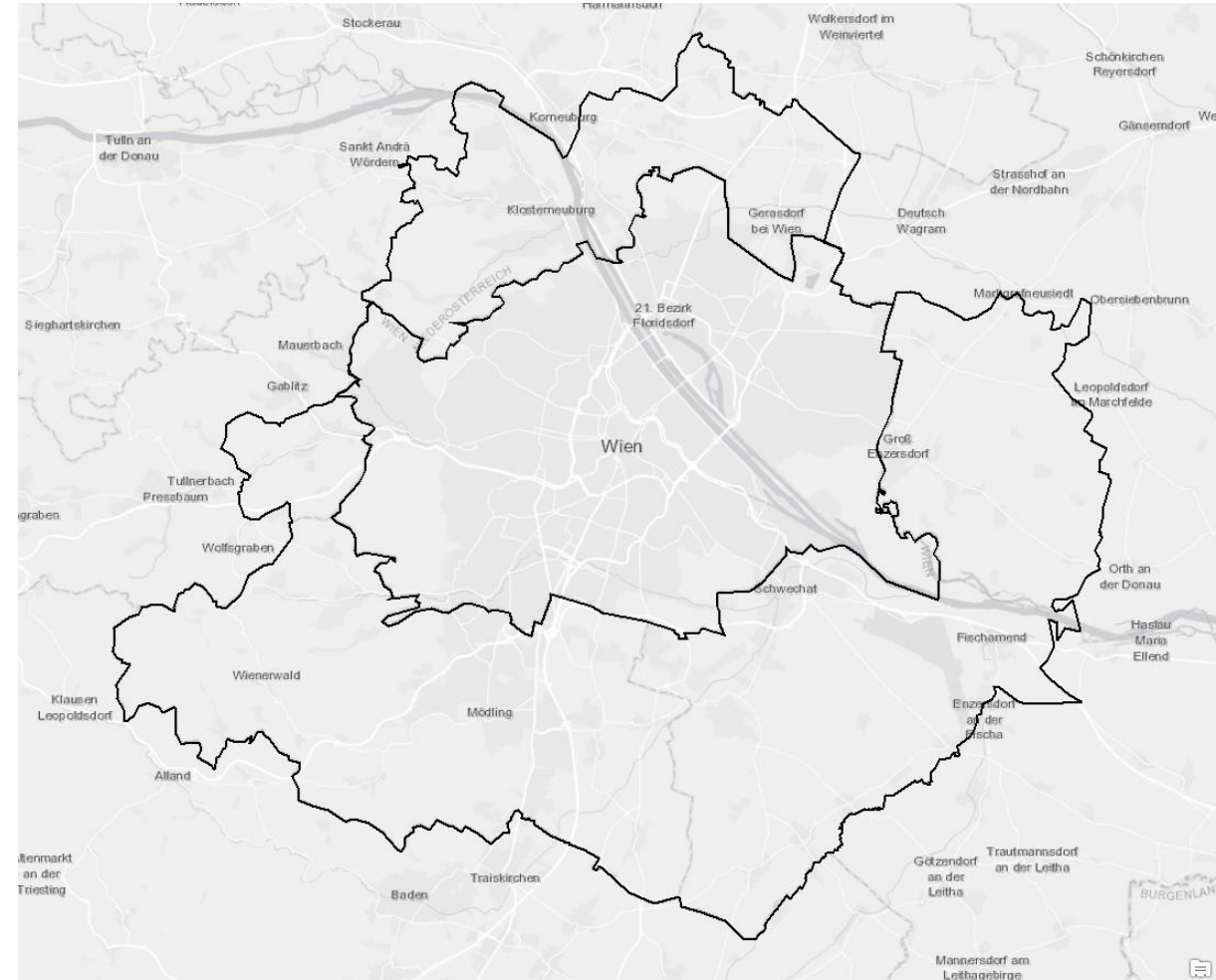
Greater Paris : 814 km²



Vienna : 414 km²

1,8 million inhabitants / density : 4 260 p/km²

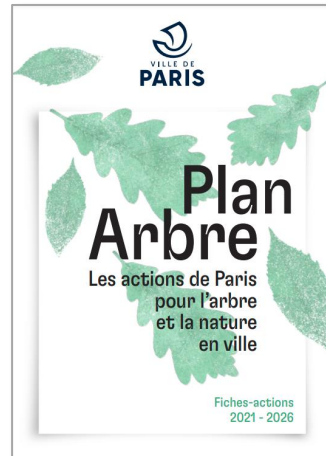
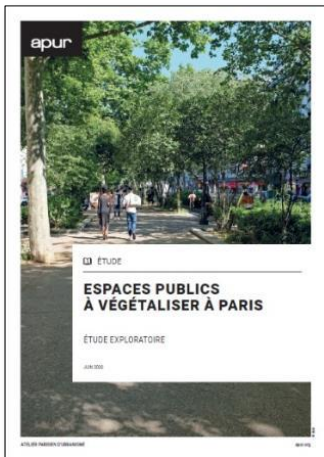
Greater Vienna : 1 216 km²



A master plan for planting trees in Paris



The parisian public space :
an inheritance and the evolutions of its uses



From the study of potential for planting the streets
to a public plan for Trees

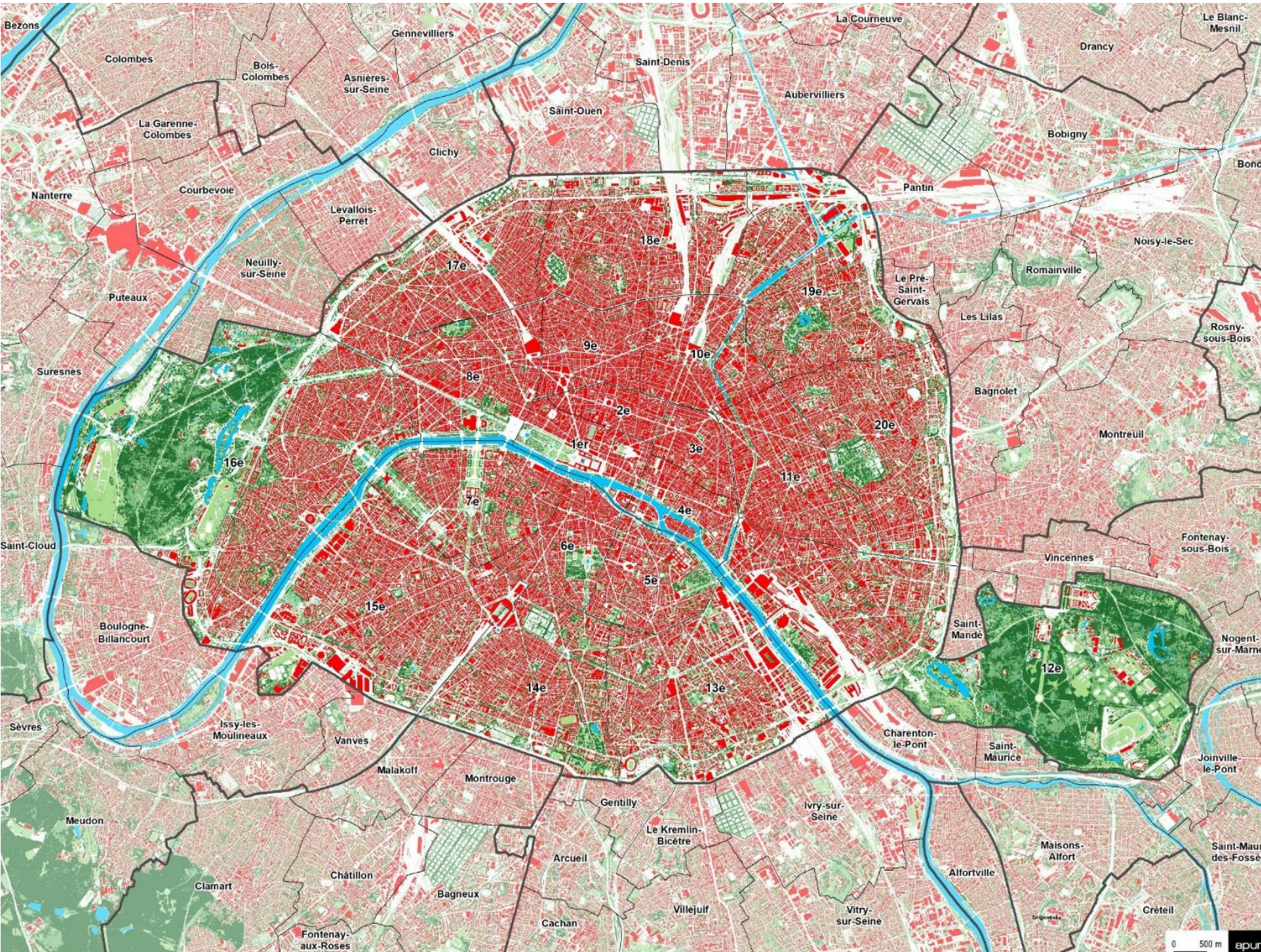
<https://www.apur.org/fr/nos-travaux/espaces-publics-vegetaliser-paris>

<https://www.apur.org/fr/nos-travaux/orientations-espaces-publics-vegetalises-paris>



**LEGACY IS BOTH THE PAST
AND THE FUTURE OF PARIS**

Public spaces, highly coveted, very « demanding »



44 % of Paris is made of public space :

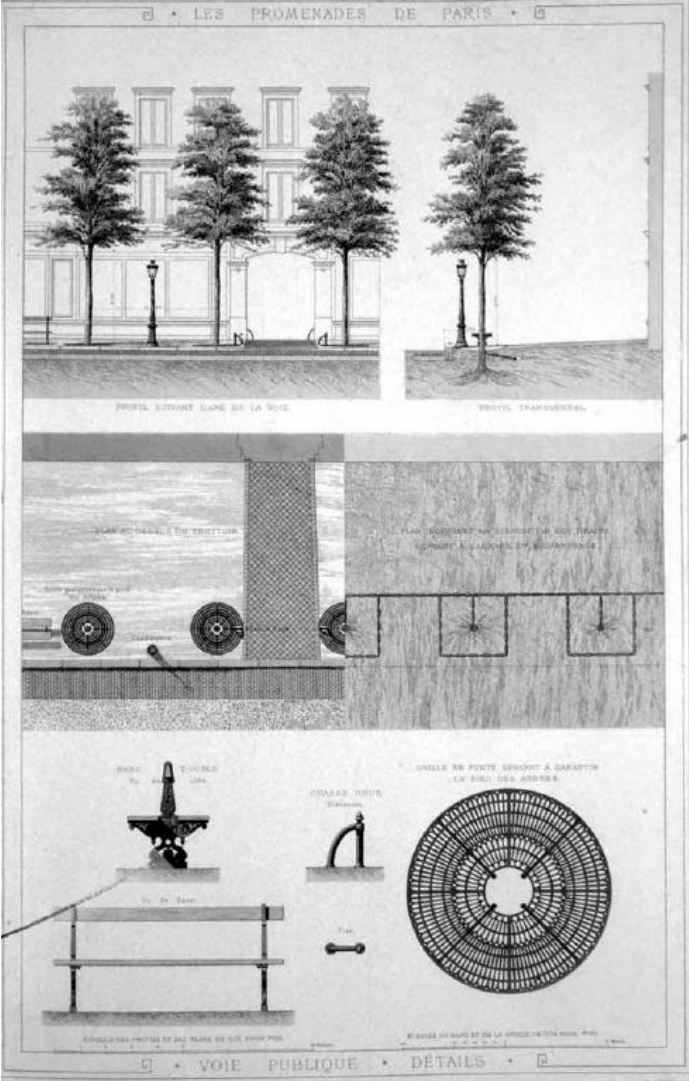
**27 % of streets
17 % of gardens, parks and woods (Boulogne and Vincennes)**

110 000 trees are planted along the streets

600 000 trees in gardens, parks and woods

100 000 trees in private lots

The inheritance of Haussmann and Alphand





1900

1960/70



Place du Palais Royal (1960/70)



Paris is reclaiming it's public space since the 80's

The Champs-Élysées avenue in the 80's



and today



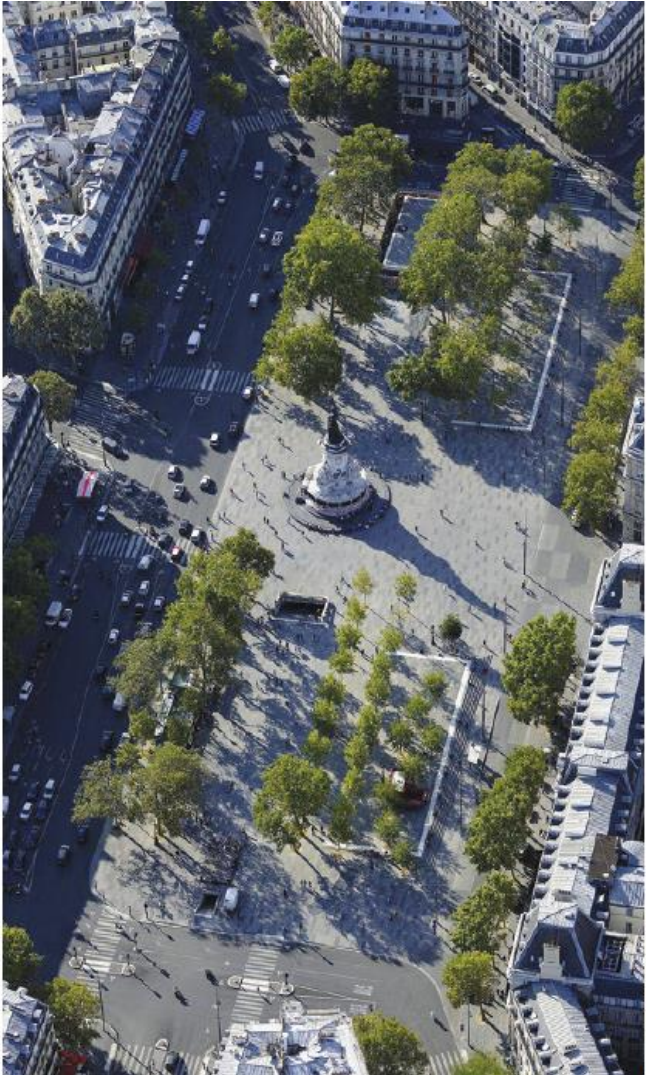
Paris is reclaiming it's public space since the 80's

Tramway T3 – 2006 – 2012 – 2018



Place de la République – 2010-2013

Avant / après : la place de la République en 2011, réaménagée en 2013 //
Avant / après : l'avenue des Champs-Élysées en 1991, réaménagée entre 1992
et 1994, vue des contre-allées



The 2000 decade considers public spaces as « swiss knife », with multifunctionnal uses, appraisal of the public

Amplifying life along the river

During the week
(till summer 2016)



On Sunday (Paris Respire)
(1995-2016)



In August (Paris Plage)
(since 2002)



And now, forever dedicated to pedestrians (since september 2016)

And now we have the attractive Left Bank of the Seine since 2014

© Apur – Philippe Mathieu



Paris City Hall square



40 years ago



Today



In 2050

The revolution of public transport and mobility

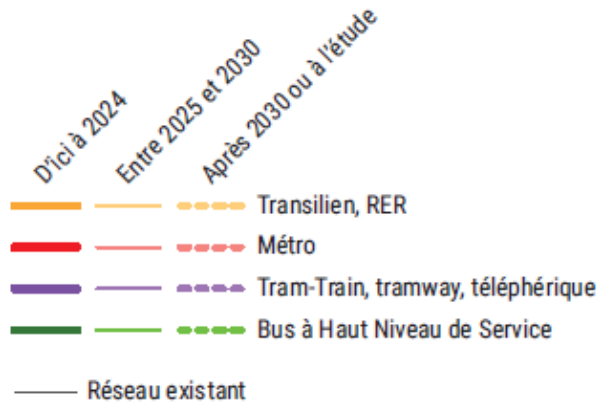
new metro and bus lines, new tramways,
new bicycle lanes, new services

More than **95%** of the inhabitants of the Greater Paris
will live within 2 km of a railway station

169 new stations for 2030

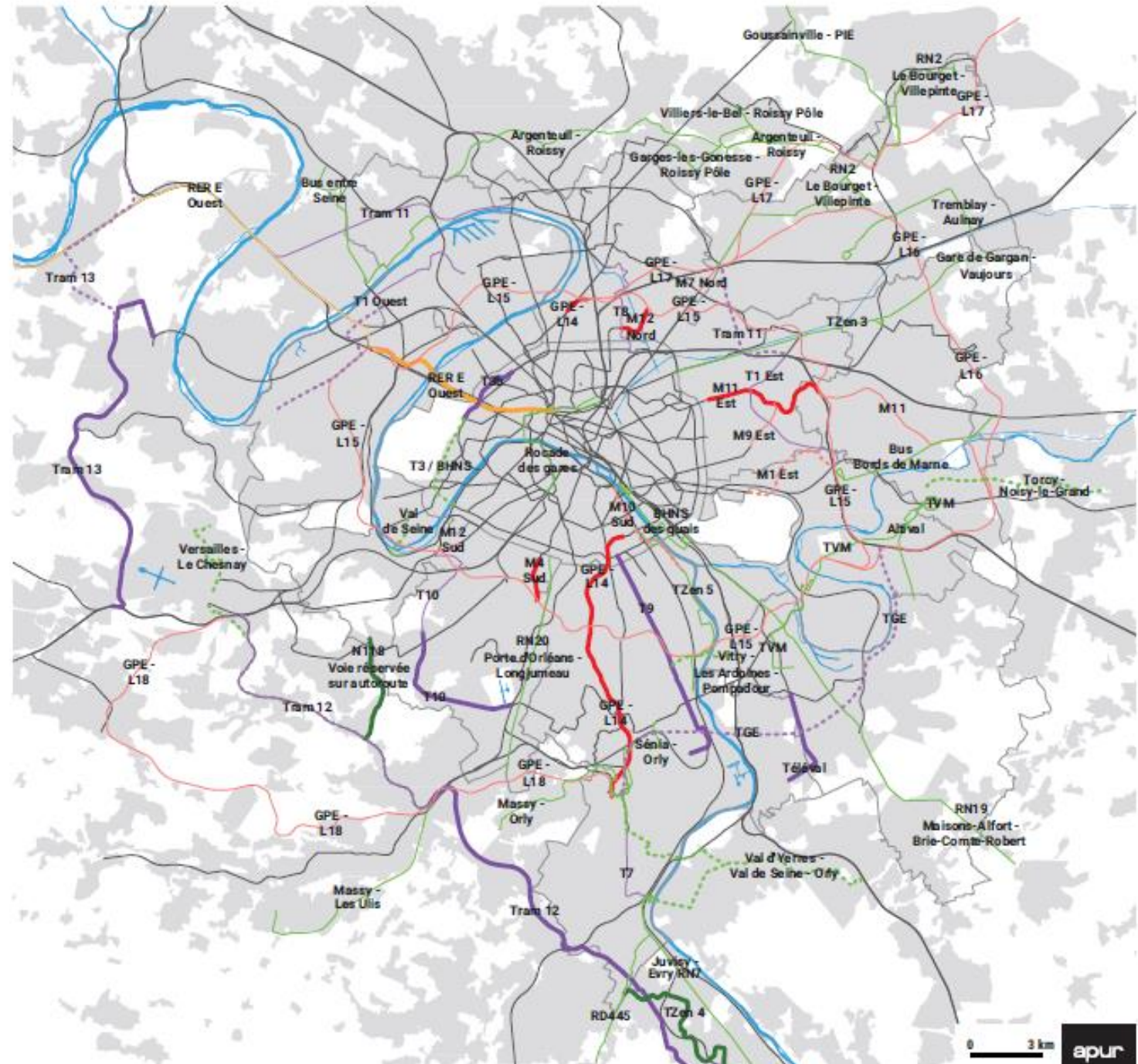
- 70 metro stations
- 90 tramway stations
- 5 cable car stations
- 4 RER/Transilien stations (express train)

Horizon de mise en service



Sources : SGP, Ile-de-France Mobilités, IPR, Apur

ATELIER PARISIEN D'URBANISME



To consider cities without « private cars », we prepare space for all alternatives

- In 2018, Velib' métropolitain: 39 municipalities in the metropolis, 30% of VAE
- New services
- Networks of charging stations (CNG, electric, hydrogen)
- Car sharing, Cityscoot... clean vehicles for sharing or free access



Cityscoot



Freefloating



Airparif launched Itinér'air



Care sharing



Vélib'

5 km bicycles lanes in 1995, 1 000 km in 2020



1855

Photographie : Adolphe Braun / © CC0



2013

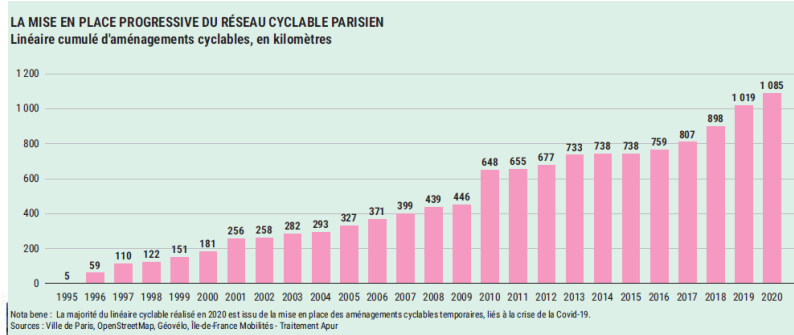
CC by : Captainm - SA - 3.0



2021

Rue de Rivoli

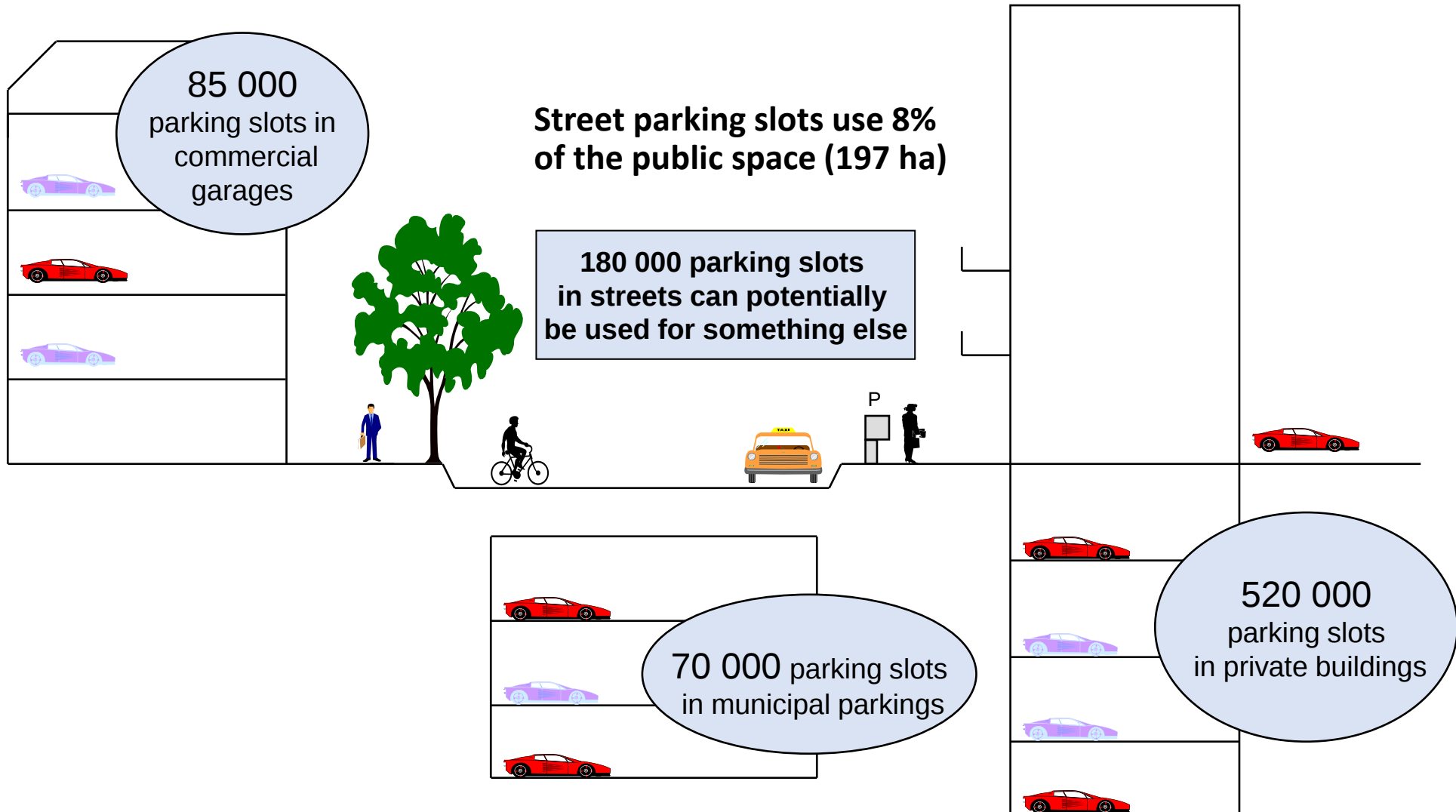
ATELIER PARISIEN D'URBANISME



© Apur - Vincent Nouailhat

Optimizing car park in Paris

For less parking slots in streets in the future and more use of the parking lots





GREENING : A PRIORITY FOR PUBLIC SPACES

A héritage of 110 000 trees in the public space



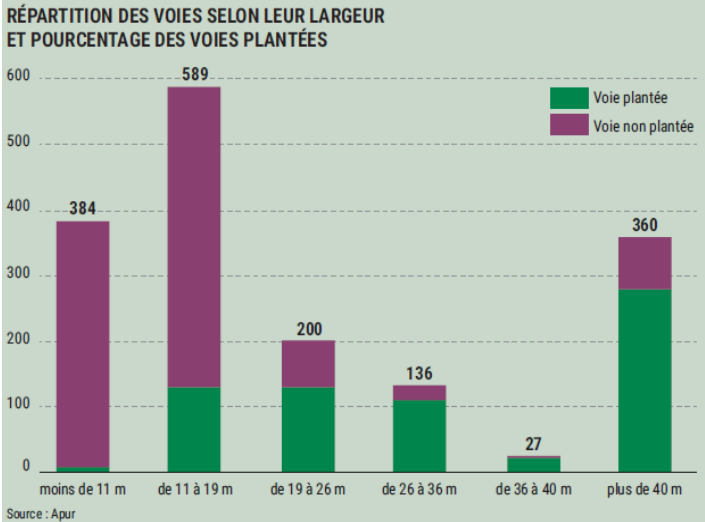
Alignement bilatéral de platanes sur le boulevard Voltaire (Paris 11^e), largeur 30 m

89% of trees are planted on streets over 19 m wide



Rue Boutebrie (Paris 5^e) largeur moyenne 12,5 m, en 2019

9.5% of trees are planted on streets between 11 and 19 m wide



Nearly 2,000 trees are planted on streets under 11 m wide



Paris végétation cover a high level of deprivation



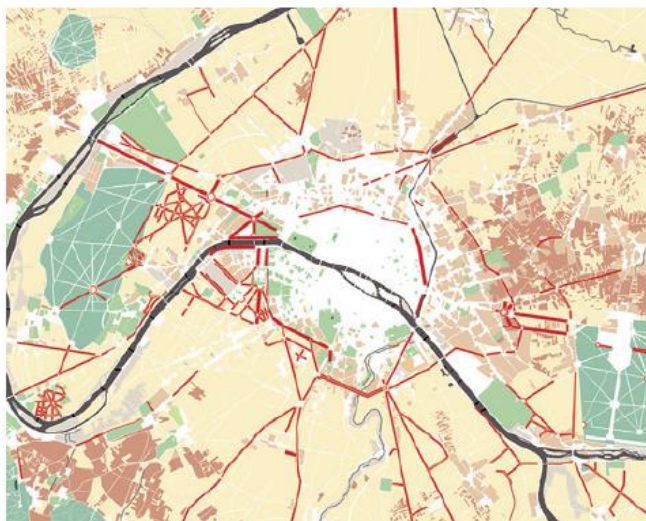
A heritage issue, linked to the legacy of the Paris promenades



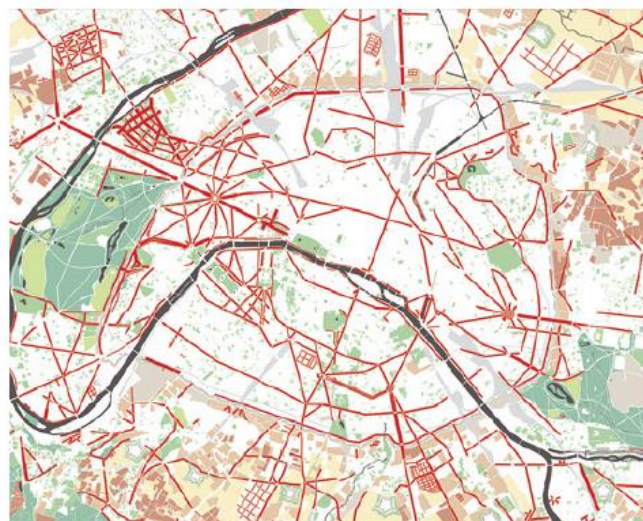
Avenue d'Italie vers 1900



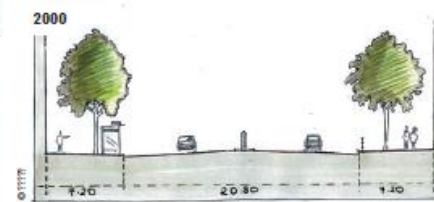
Boulevard Arago vers 1900



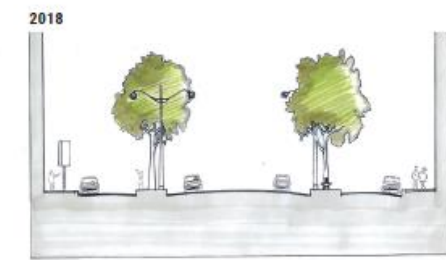
Voies plantées vers 1830 (extrait de la recherche Naturpradi)



Voies plantées vers 1900 (extrait de la recherche Naturpradi)



Exemple de l'évolution du profil de l'avenue de Wagram (Paris 17^e), largeur moyenne de 35 m

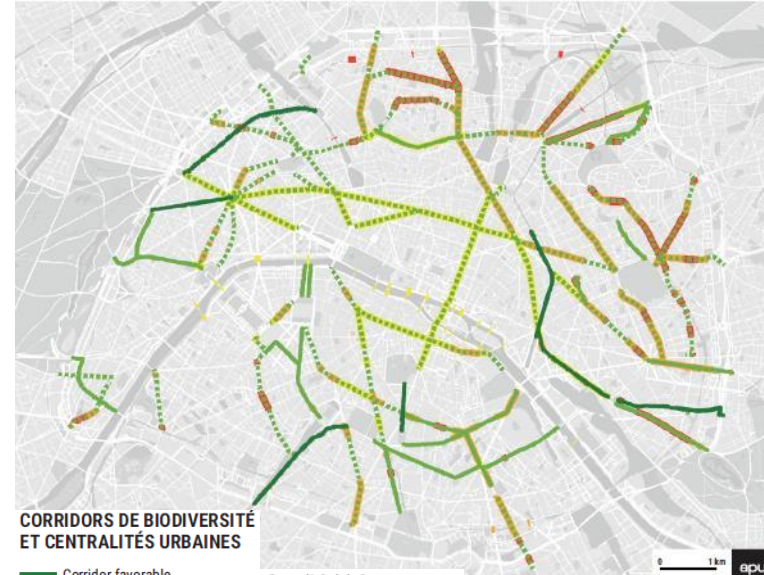


Exemple de l'évolution du profil de l'avenue Hoche (Paris 17^e), largeur moyenne de 36 m

The challenge of strengthening the functionality of biodiversity corridors



Extrait des Chemins de la Nature, carte annexée au Plan Biodiversité validé en mars 2019



Corridor favorable
Corridor intermédiaire
Corridor à renforcer
Centralité globale
Centralité mixte
Centralité locale



Boulevard de Belleville (Paris 19^e), corridor qualifié de « potentiel » dans une centralité, dont la qualité écologique est renforcée par des aménagements récents

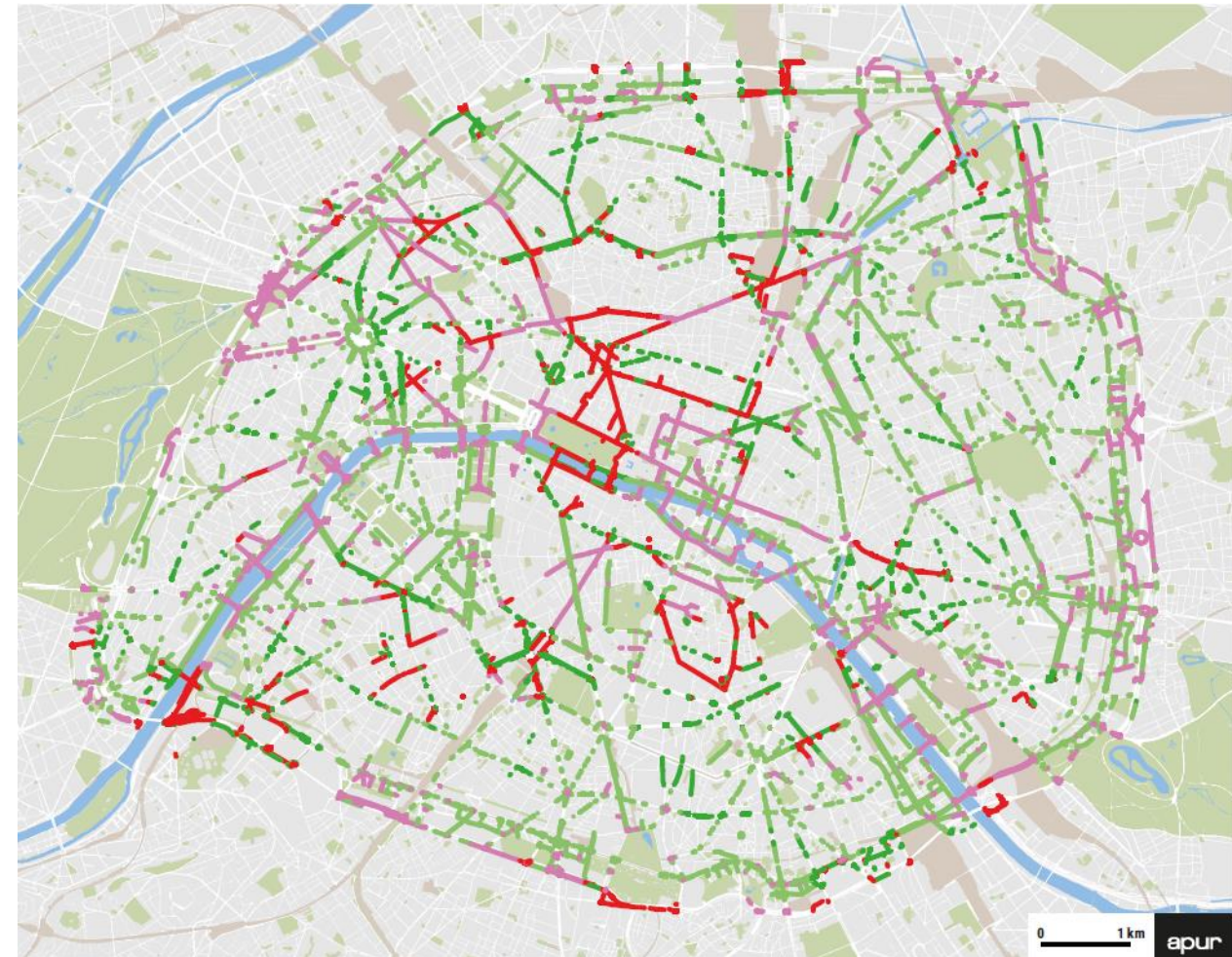
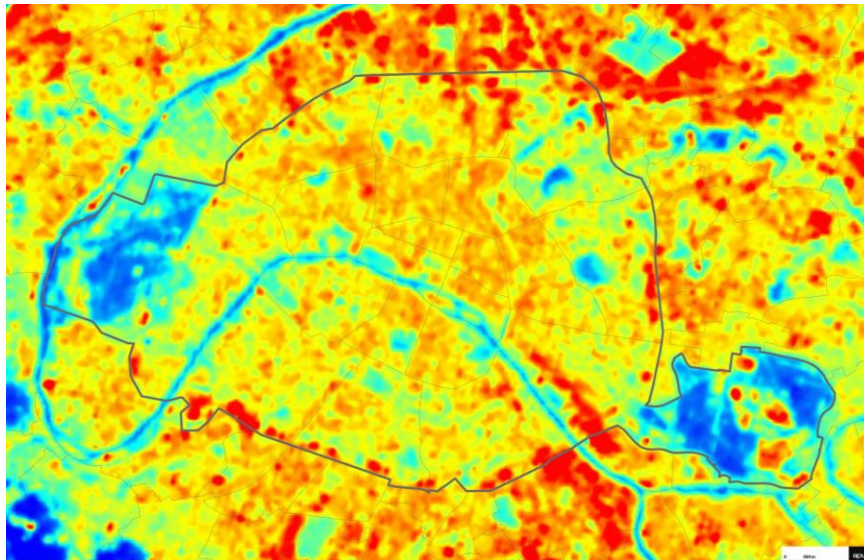
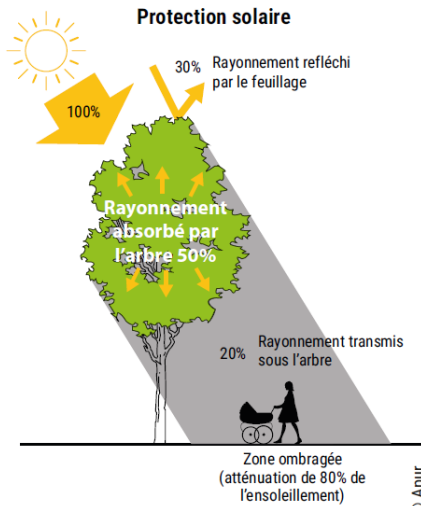
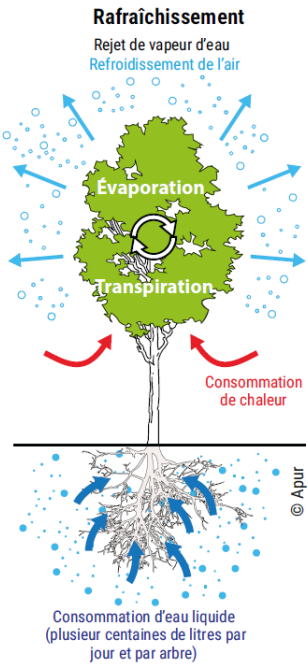


Boulevard de Ménilmontant (Paris 19^e), corridor qualifié de « potentiel » dans une centralité, dont la qualité écologique est à renforcer



115 km
de corridors urbains
de biodiversité
sur voirie

The challenge of strengthening the functionality of cooling the public space



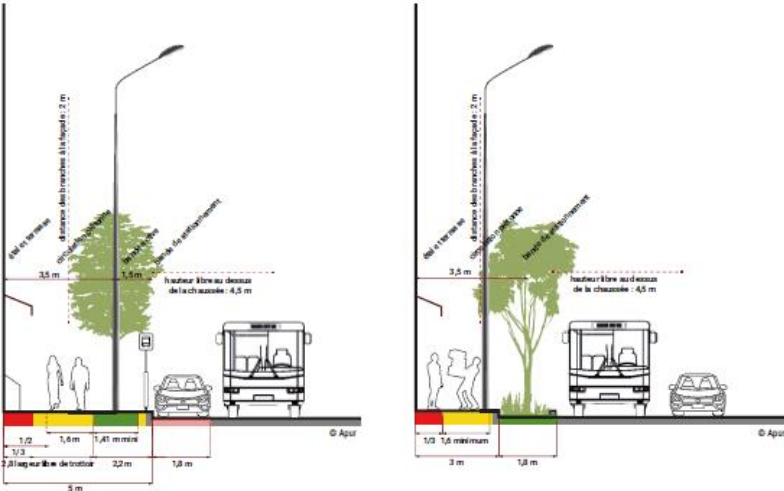
53 % DES VOIES DE PLUS DE 19 M DE LARGE ONT UN TROTTOIR CHAUD

- Non plantée, dans une zone de carence en îlot frais nocturne
- Plantée, dans une zone de carence en îlot frais nocturne
- Non plantée, à moins de 7 mn d'un îlot frais nocturne
- Plantée, à moins de 7 mn d'un îlot frais nocturne

Source : Apur, DEVE

Parisian planting rules in regard to buildings and uses of public space

Coupe de principe pour un arbre de petit développement de 5 à 10 m de hauteur

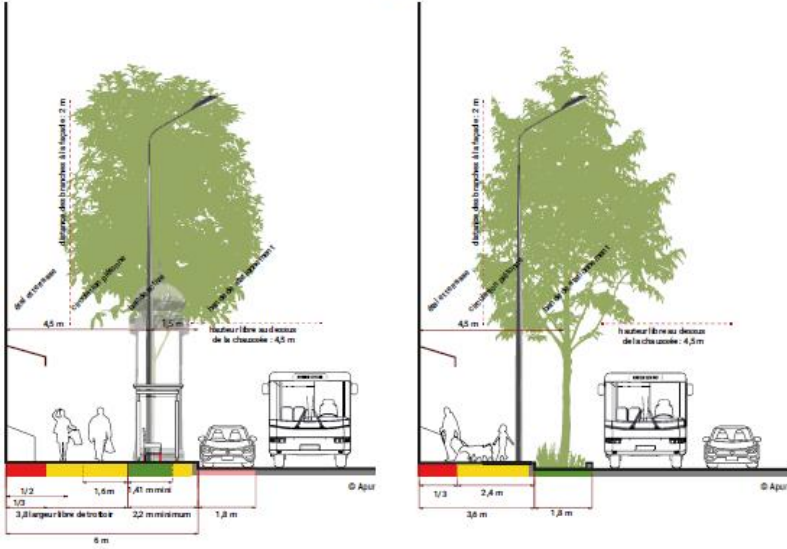


Rue de la Butte-sur-Cailles (Paris 13^e)



Rue du Chemin Vert (Paris 11^e)

Coupe de principe pour un arbre de moyen développement, de 10 à 15 m de hauteur

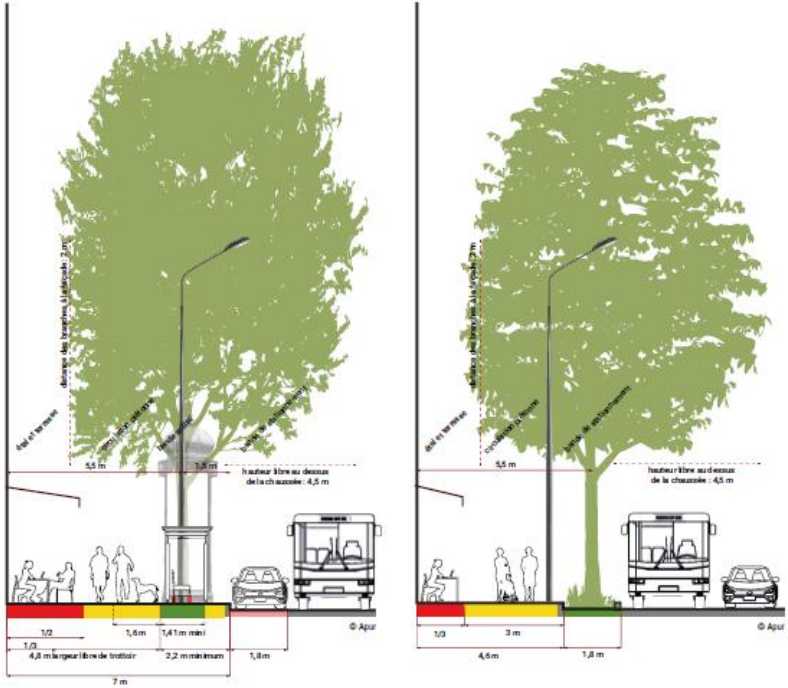


Rue Debille (Paris 11^e) largeur de la voie 12 m, largeur du trottoir 5 m



Rue Ernest Roch (Paris 17^e)

Coupe de principe pour un arbre de grand développement, de plus de 15 m de hauteur

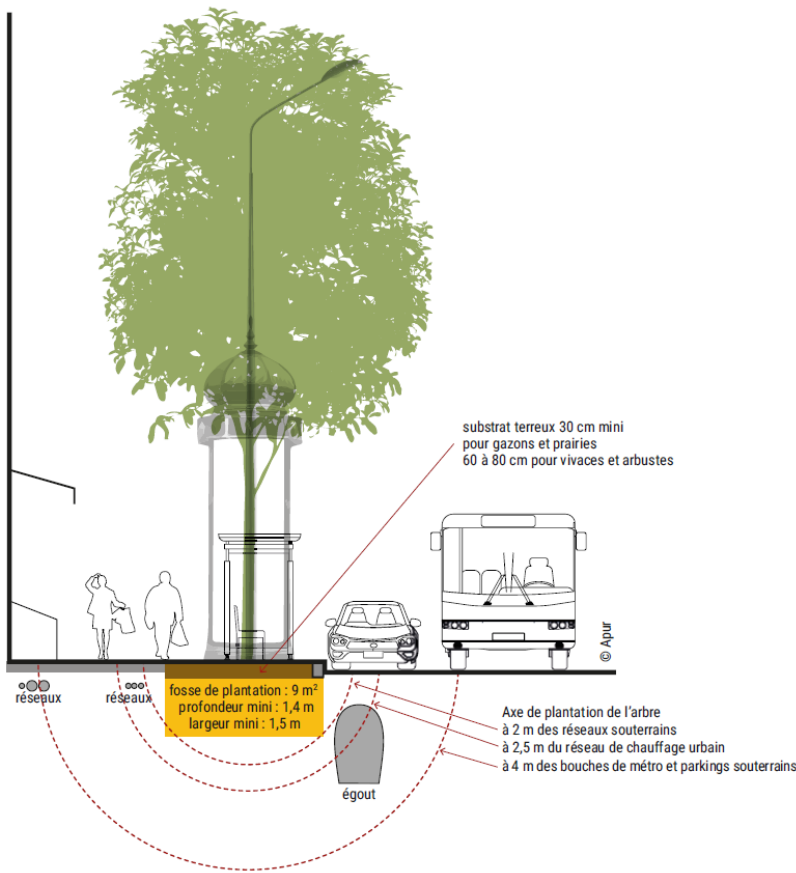


Avenue de la République (Paris 11^e)



Rue Gervex (Paris 17^e)

Parisian planting rules in regard to underground networks (subway, water, gaz, electricity...)



ESPACE PUBLIC POTENTIELLEMENT LIBRE DE RÉSEAUX STRUCTURANT

■ Trottoir à plus de 3,5 m	■ Stationnement à plus de 3,5 m	■ Chaussée à plus de 3,5 m
■ Trottoir à plus de 5,5 m	■ Stationnement à plus de 5,5 m	■ Chaussée à plus de 5,5 m

Sources : Apur, DEVE, DVD

Axis 1: Strengthening the network of tree-lined streets in Paris

- 1 / Recover the promenade quality under the existing double lines of trees.
- 2 / Reconstitute the disappeared historic double lines of trees
- 3 / Improve the landscape quality of planted sidewalks over 6 m wide
- 4 / Plant streets over 19 m wide that are not planted
- 5 / Plant unplanted "faubourg" streets

On these axes, the planting potential has been estimated at :

- 12,300 trees
- 107.5 ha of plantable area

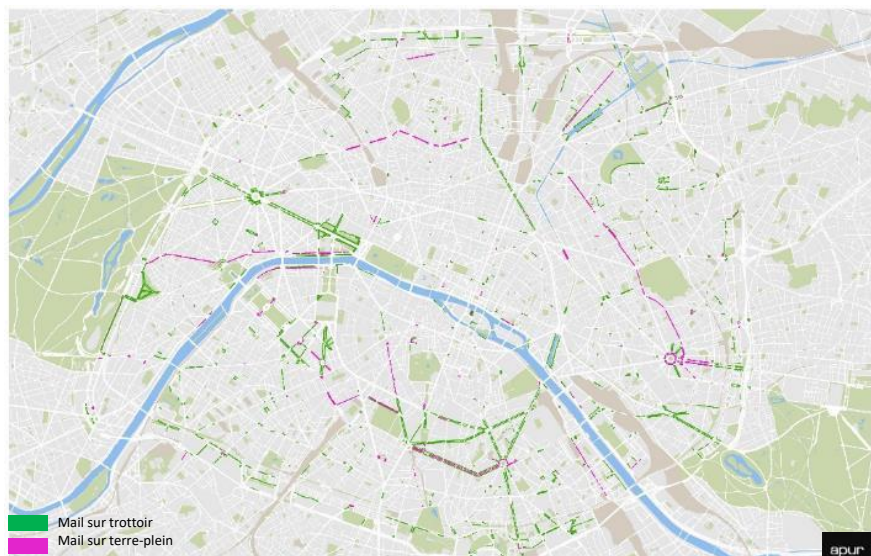


Double line of trees (existing or to be reconstituted)
Planted sidewalks over 6 m wide and other trees

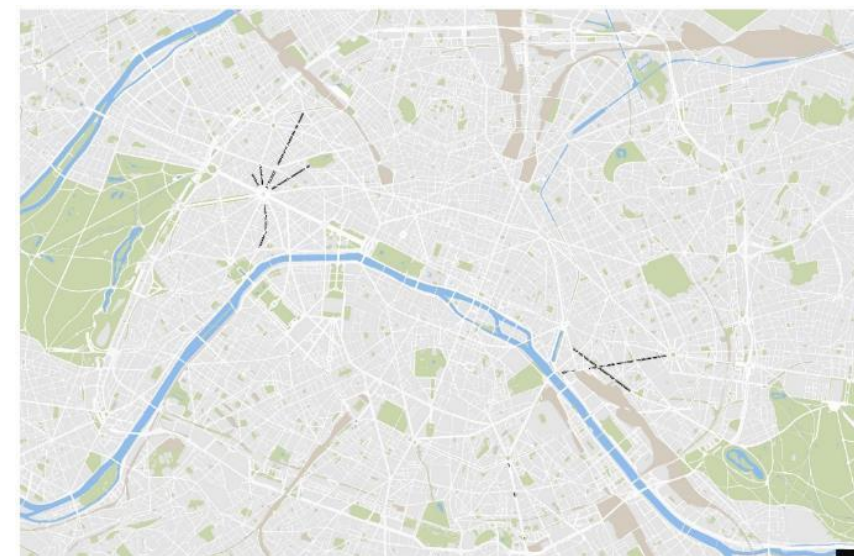
Streets over 19 m wide with potential
Streets over 19 m without potential

« faubourg » streets with potential
« faubourg » streets without potential

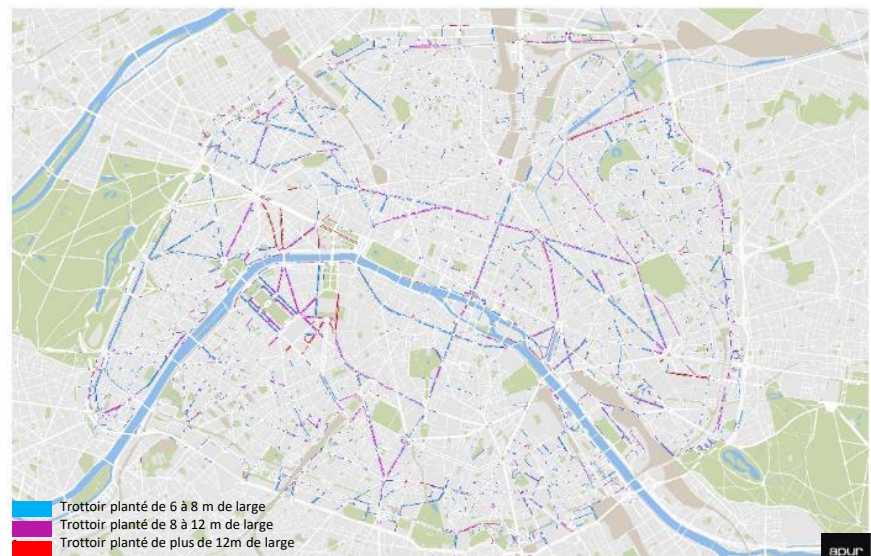
Actions 1, 2 and 3 / Reinforce the green character of Paris' promenades



Action 1 / Restore the promenade character under the 176 km of existing double tree alignments



Action 2 / Reconstruct the 14 km of lost historical double tree alignments



Action 3 / Improve the landscape quality of the 640 km of planted sidewalks over 6 m wide



Action 1 / Restore the promenade character under the 176 km of existing double tree alignments

Boulevard Saint-Jacques, Paris 14e



Esquisse de principe



Le boulevard Saint-Jacques aujourd'hui

Action 2 / Reconstruct the 14 km of lost historical double tree alignments

Avenue d'Iéna, Paris 16e



Esquisse de principe



L'avenue d'Iéna aujourd'hui

Action 3 / Improve the landscape quality of the 640 km of planted sidewalks over 6 m wide

Boulevard Beaumarchais, Paris 3e



Esquisse de principe



Le boulevard Beaumarchais aujourd'hui

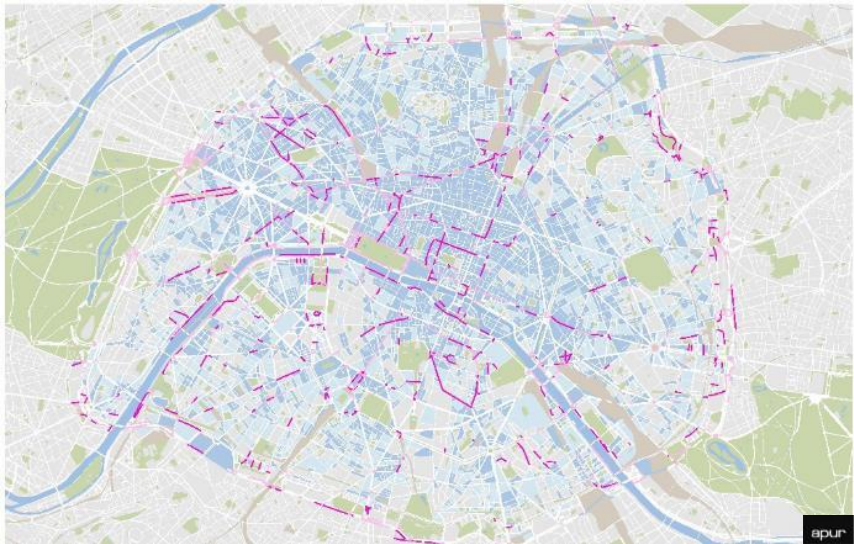


Boulevard Pasteur (14th district) BEFORE



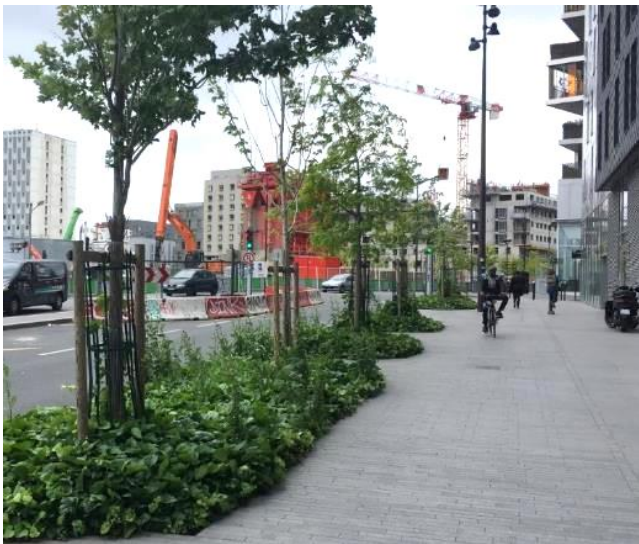
Boulevard Pasteur (14th district) AFTER

Action 4 / Plant the 69 km of unplanted streets over 19 m wide, with tree planting potential



Voie de plus de 19 m avec potentiel de plantation d'arbre
Voie de plus de 19 m sans potentiel de plantation d'arbre

Taux de végétation inférieur à 10%
Taux de végétation compris entre 10% et 20 %



Avenue de France, 13^e



Rue Etienne Marcel, 2^e



Rue Nationale, 13^e



Action 5 / Plant the 46 km of unplanted “faubourg” streets, between 11 and 19 m wide, with tree planting potential



■ Voie de faubourg avec potentiel de plantation d'arbre
 ■ Voie de faubourg sans potentiel de plantation d'arbre

■ Taux de végétation inférieur à 10%
 ■ Taux de végétation compris entre 10% et 20 %



Rue des Martyrs, 9^e



Rue Ménilmontant, 20^e



Rue de la Glacière, 14^e





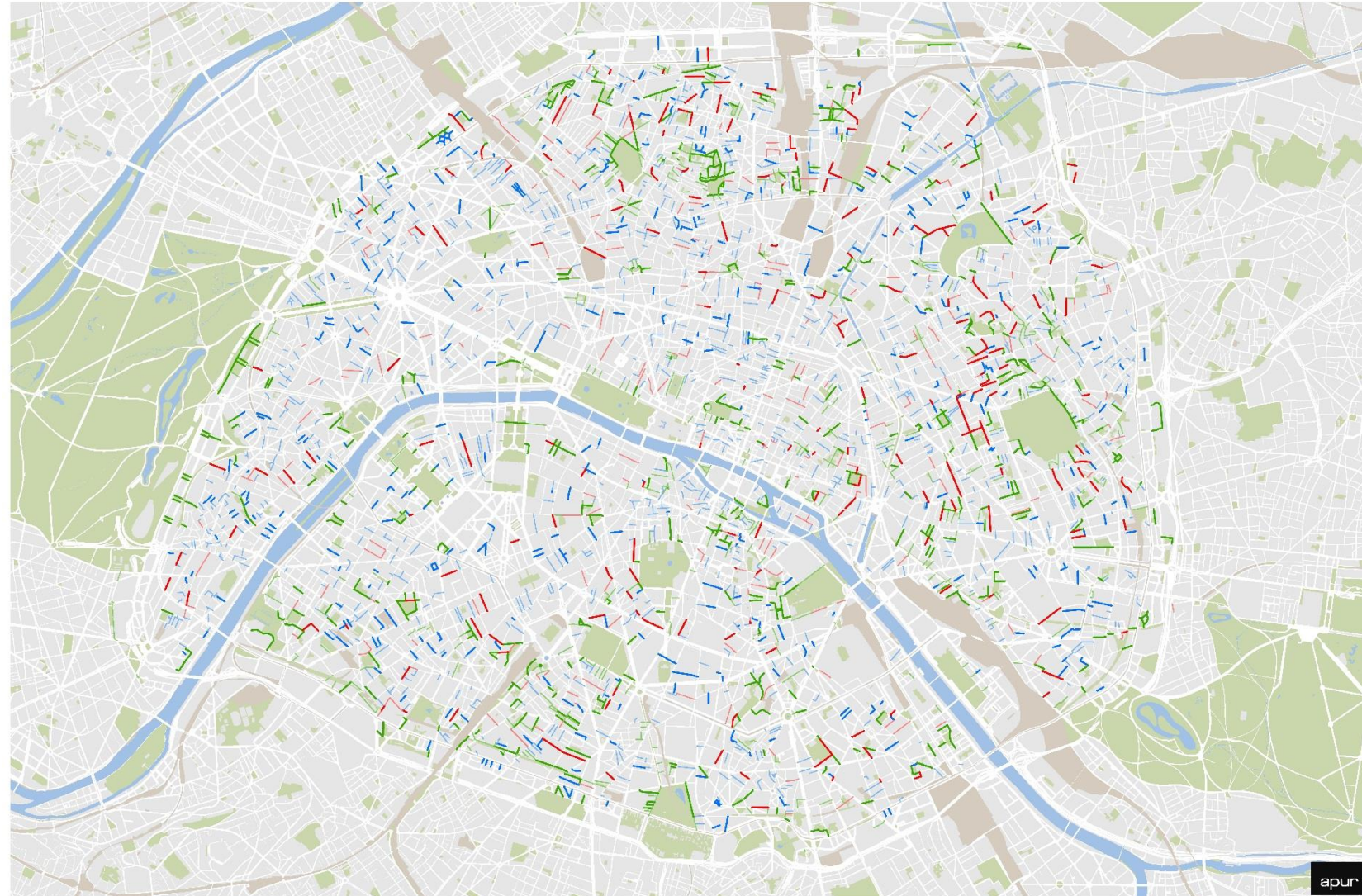
Rue des Martyrs (9th district)

Axis 2 : Creating local garden streets

- 6/ Planting near schools
- 7/ Greening streets bordering parks, gardens, cemeteries and outdoor sports fields
- 8/ Vegetating short and residential roads

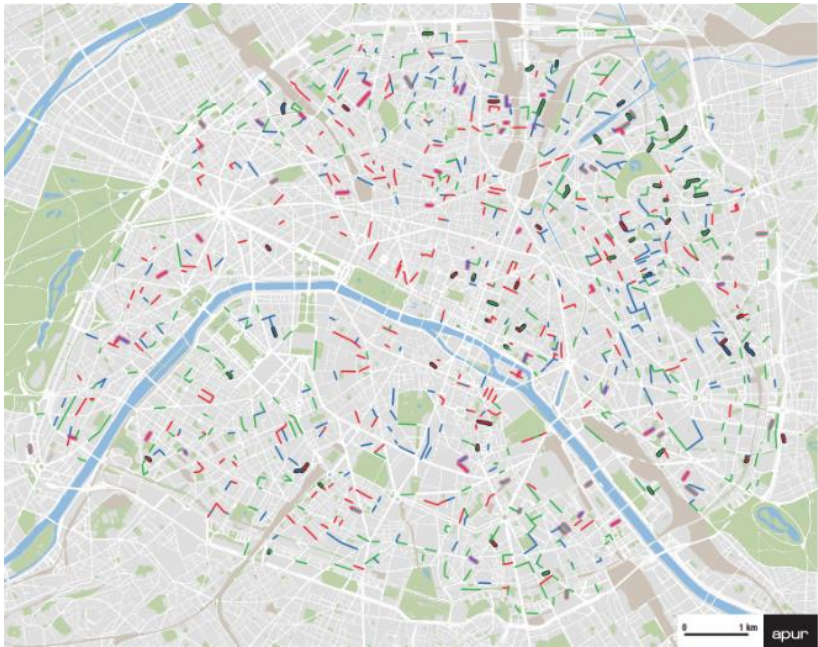
On these garden streets, the planting potential has been estimated at :

- 7,550 trees
- 38 ha of potential vegetation area



- | | | |
|------------------------------|-------------------------------|--|
| School street with potential | Park street with potential | Short residential street with potential |
| School street without pot. | Park street without potential | Short residential street without potential |

Action 6 / Greening of streets near nurseries, elementary and secondary schools,



- Rue école plantée
- Rue école non plantée avec potentiel de plantation d'arbres
- Rue école non plantée sans potentiel de plantation d'arbres
- Rue école piétonne
- Rue école fermées et aires piétonnes créées à la rentrée 2020

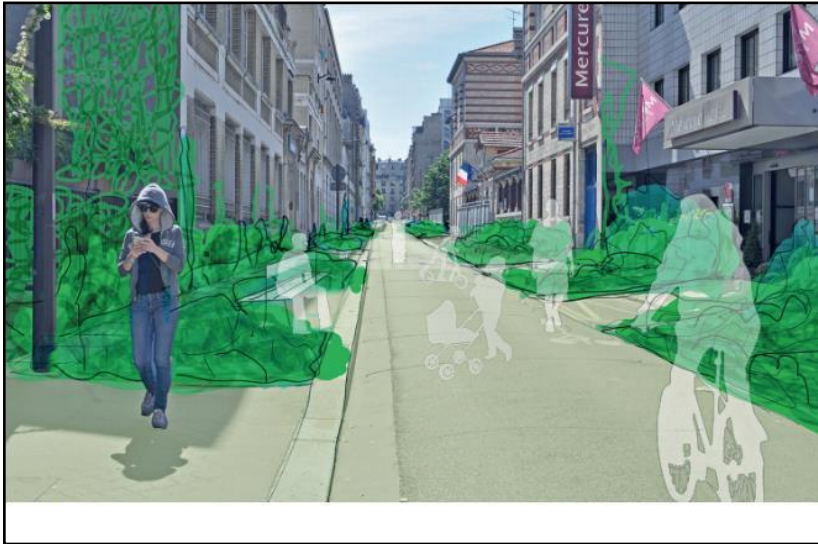
Source : Apur, DEVE



Rue de Bruxelles, 9^e



Passage des Récollets, 10^e



Rue Saint-Lambert, 15^e





Rue de la Providence (13TH district) BEFORE

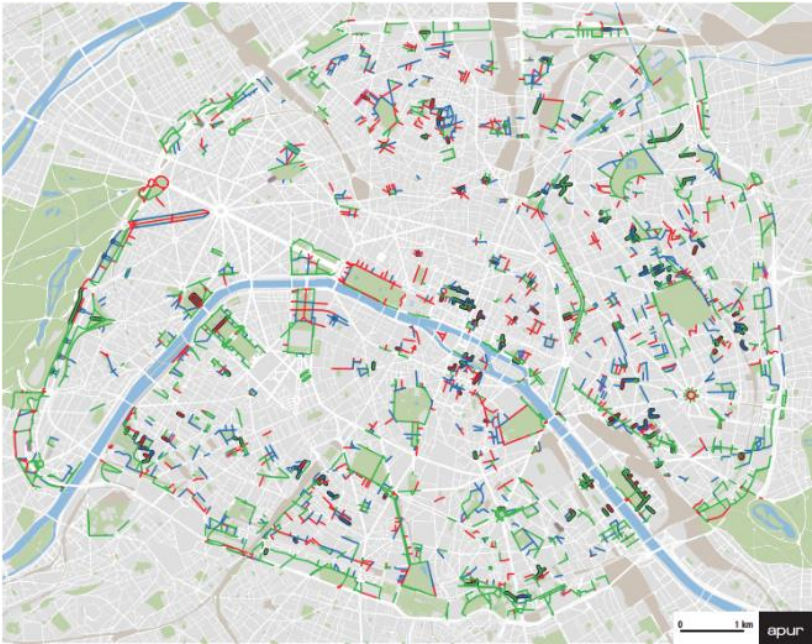


Rue de la Providence (13th district) AFTER

School streets – october 2021-waiting for trees and greenery



Action 7/ Greening of streets bordering parks, gardens, cemeteries and open-air sports grounds



- Rue plantée à proximité d'un parc
 - Rue non plantée sans potentiel à proximité d'un parc
 - Rue non plantée avec potentiel à proximité d'un parc
 - Rue piétonne à proximité d'un parc
 - Rue école fermées et aires piétonnes créées à la rentrée 2020
- Source : Apur, DEVE



Place Adolphe Max, 9e



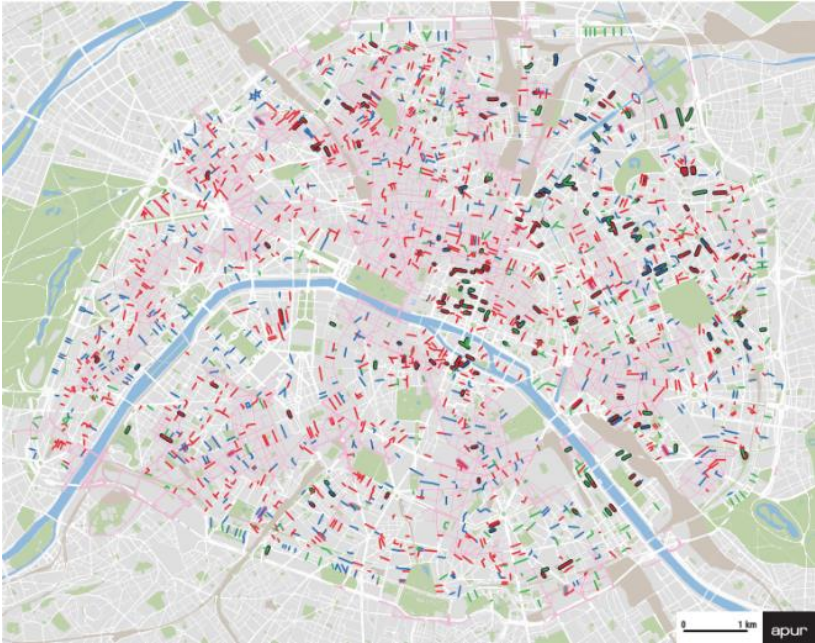
Rue du Général Blaise 11e (square Gardette)



Rue Charles Moureu 13e (Parc de Choisy)



Action 8 / Greening of short and residential streets



- Rue courte plantée
 - Rue courte non plantée sans potentiel de plantation d'arbres
 - Rue courte non plantée avec potentiel de plantation d'arbres
 - Rue courte piétonne
 - Rue courte fermées et aires piétonnes créées à la rentrée 2020
 - Secteurs à plus de 7 minutes d'un îlot de fraîcheur nocturne
- Source : Apur, DEVE



Rue Prévost Paradol 14^e

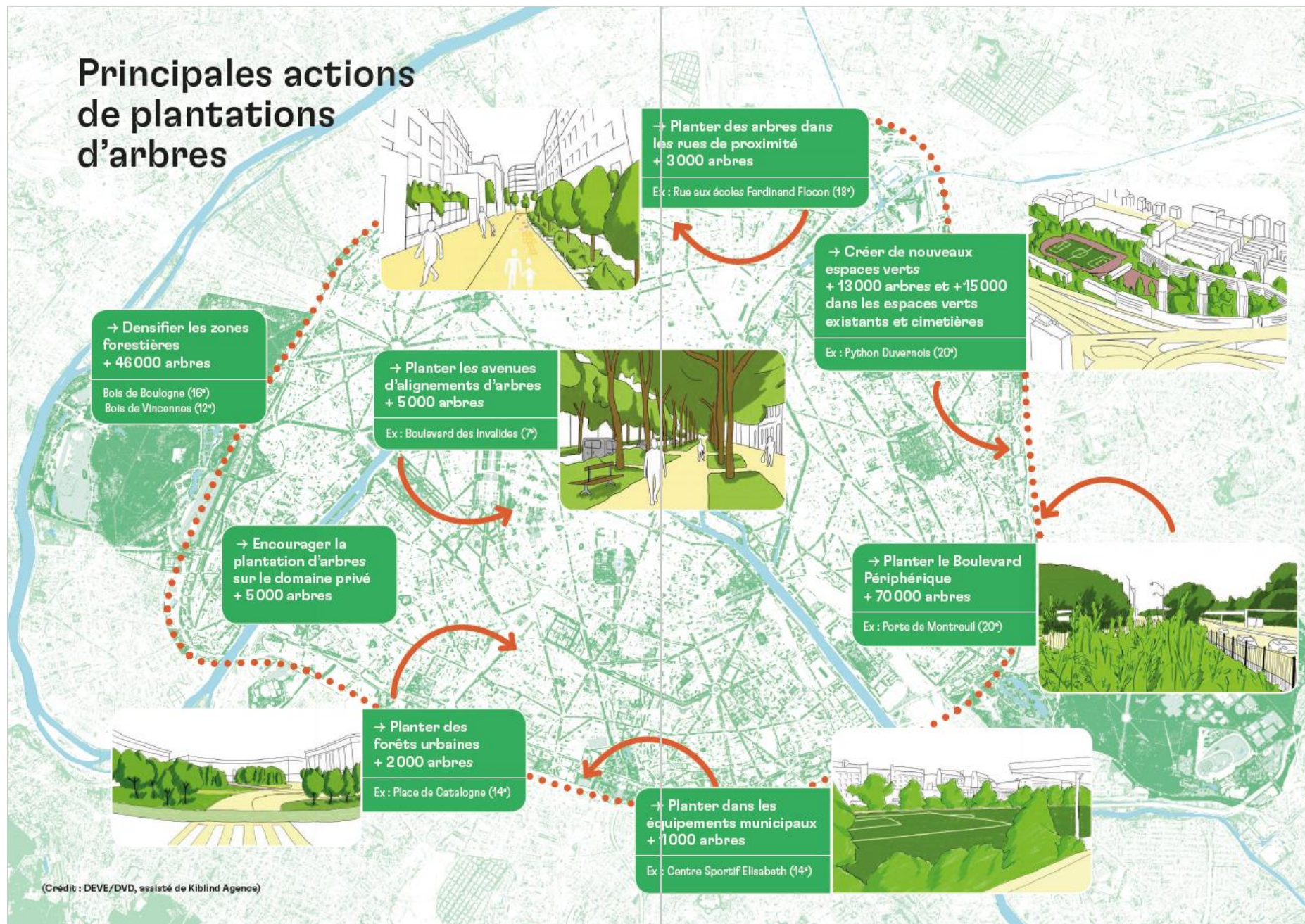
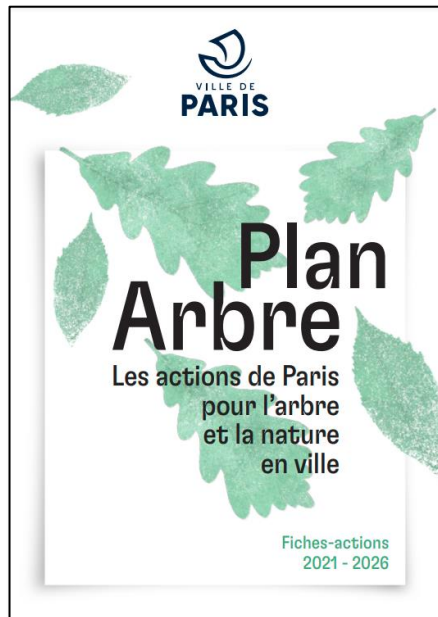


Passage de Melun, Paris 9^e



Rue Serret 15^e







THANK YOU



Ilot Bagnole