

Tendencias internacionales en distribución urbana de mercancías

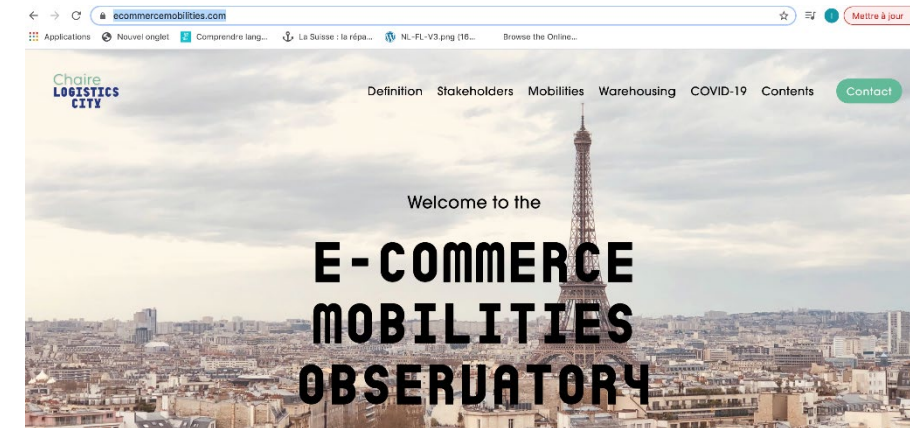
Dr. Laetitia Dablanc

- Warehouses, innovations, new trends in consumption and impacts on city logistics

Results available online:

- Observatory of ecommerce mobilities
- Surveys on gig workers for instant delivery platforms
- Logistics real estate and relationships with urban form

<https://www.lvmt.fr/en/chaieres/logistics-city/>



Since Covid, city logistics closely scrutinized

Le Monde

ÉCONOMIE

Covid-19 : la logistique, un secteur devenu incontournable

La pandémie a mis en exergue le rôle des chauffeurs et livreurs dans la bonne marche de l'économie.

Par Eric Béziat et Julien Bouissou

Favorites

accenture

THE SUSTAINABLE LAST MILE.
FASTER. CHEAPER. GREENER.



Deloitte.



Logística de Última Milla
Retos y soluciones en España
Febrero 2020



WORLD ECONOMIC FORUM
"A CRITICAL TOOL FOR IMPROVING THE STATE OF THE WORLD"

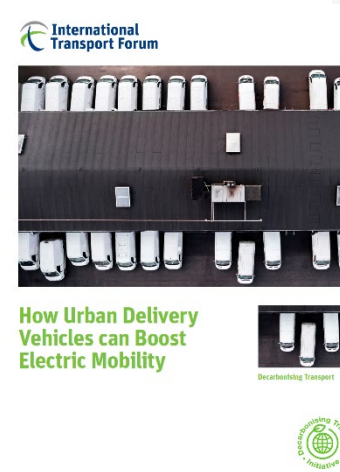
The Future of the Last-Mile Ecosystem

Transition Roadmaps for Public- and Private-Sector Players

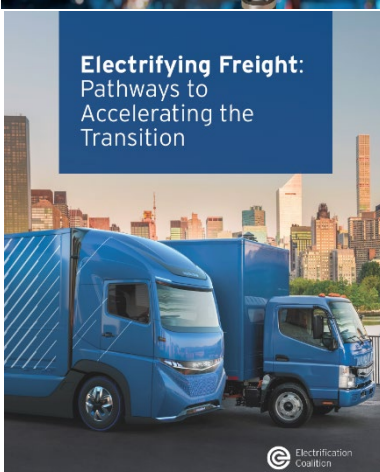
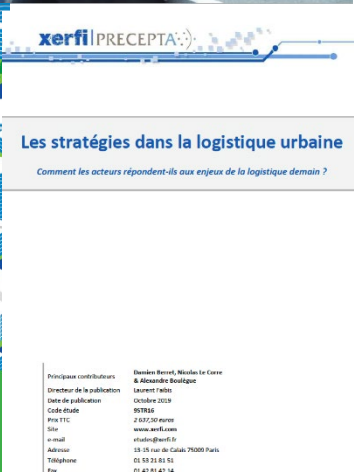
Janvier 2020



Roland Berger



Retail Carbon Footprints: Measuring Impacts from Real Estate and Technology



Converging changes and innovations worldwide

- Consumer and societal demands
- Innovative supply of logistics services, converging processes: DHL, Ifood, Prologis... catering for all metropolitan areas
- Start-ups, urban freight tech, food tech
- (Local policies remain rather different)



What's new?

- Innovations
- Clean vehicles
- Real estate
- Unresolved issues and solutions



Presentations and Panel Discussions Include:

- 📍 Algorithms and Analytics
- 📍 Delivery Drones
- 📍 Delivery Robots
- 📍 Autonomous Cars
- 📍 Autonomous Delivery Vehicle (ADV)
- 📍 Autonomous Ground Vehicles (AGVs)
- 📍 Autonomous Pods
- 📍 Robotics
- 📍 Droid
- 📍 Robot Delivery Technologies
- 📍 Van/Drone/Robot Integrated System
- 📍 System of Systems
- 📍 Smart Door Lock
- 📍 Trunk Delivery
- 📍 Parcel Box
- 📍 Parcel Locker
- 📍 Mobile lockers
- 📍 Required Support Structure
- 📍 Warehouse Locations
- 📍 Unmanned Warehouses
- 📍 Platooning
- 📍 Tracking Technologies
- 📍 Low-Density Cities
- 📍 High-Density Cities
- 📍 Medium-Density Cities
- 📍 Same-day, Instant Delivery or Sunday delivery
- 📍 Same-Day delivery
- 📍 On-demand delivery
- 📍 Drones, Remote locations
- 📍 Self-Driving cars, Remote locations
- 📍 Robots, Gated communities and closed campuses
- 📍 Storing packages for buyers to pick up
- 📍 Maximizing Delivery
- 📍 Not-at-Home & Failed Deliveries
- 📍 Gated Communities, Residential Buildings and Office Buildings
- 📍 Hospital Campuses, Corporate Campuses, and Universities

Modeling tool for urban freight flows (LAET, Lyon): from FRETURB to SILOGUES



Includes B2C flows

Carbon footprint of freight for city of Paris (2020, with 2018 data)



Bilan des émissions
de gaz à effet de serre de Paris

Janvier 2020

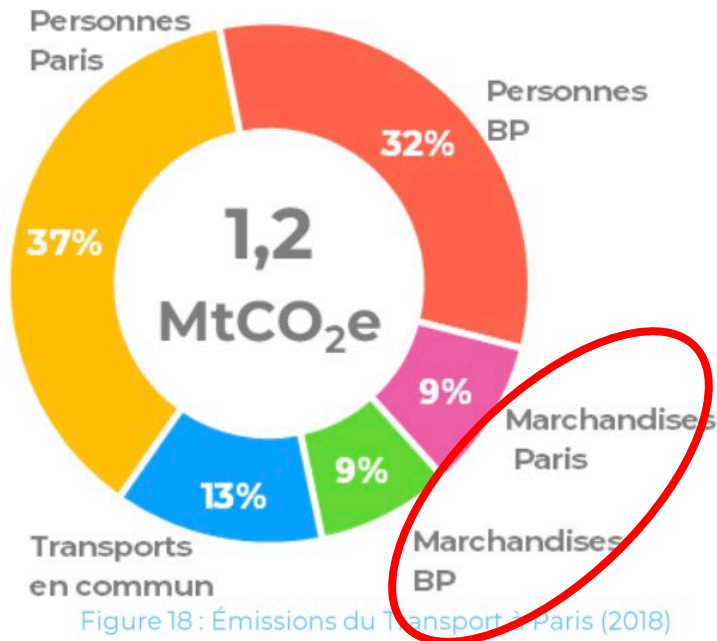


Figure 18 : Émissions du Transport à Paris (2018)

- **Global CO₂** emissions from freight in 2018 (including what is imported to be consumed by Parisians): 5 Mt (21% of all carbon footprint of Paris)
- **Local CO₂** emissions from freight in 2018: 1.2 Mt

On-demand 'instant delivery' services

- Deliveries in less than two hours
- Smartphones, platforms, algorithms
- Gig workers, self-employed couriers

Buenos
Aires



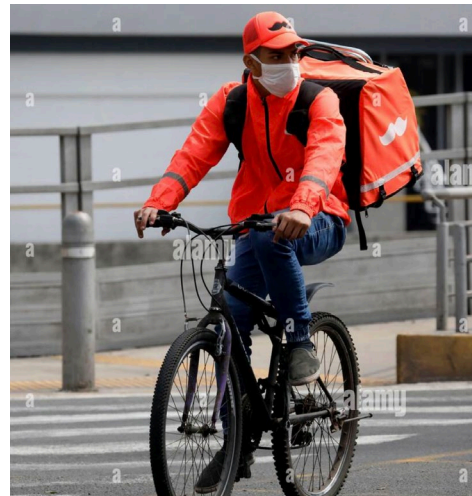
Stockholm



Lagos



Lima



Mumbai

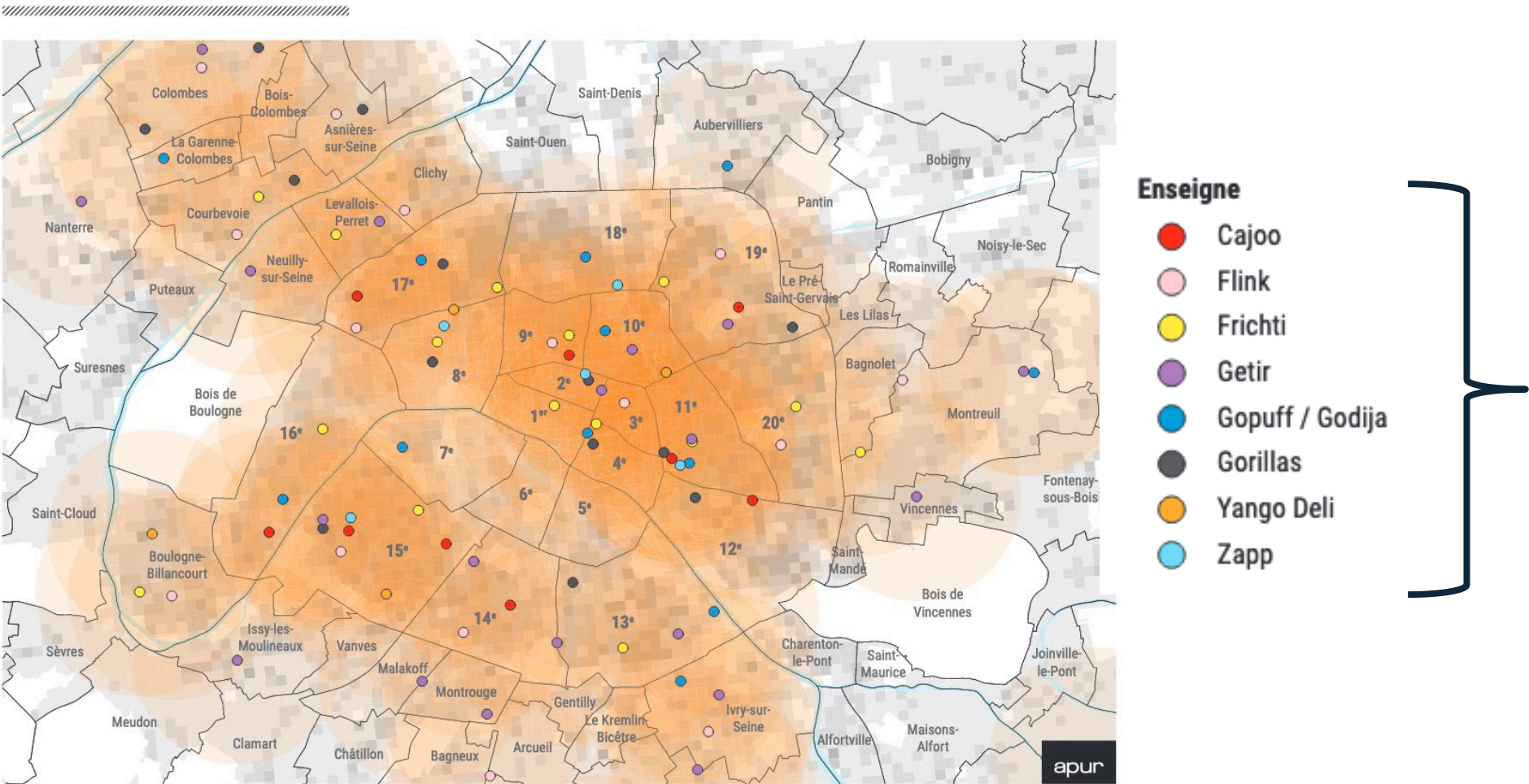


Quick commerce: very fast changing, concentrating

Map from Paris planning agency, January 2022

February 2023

IMPLANTATION ET ZONE DE LIVRAISON DES DARK STORES



Getir

Quick commerce: new facades and vehicles



- Introduction of electric mopeds in European cities

Partnerships



- Auchan click&collect with Deliveroo partner
- Local rest area for delivery drivers



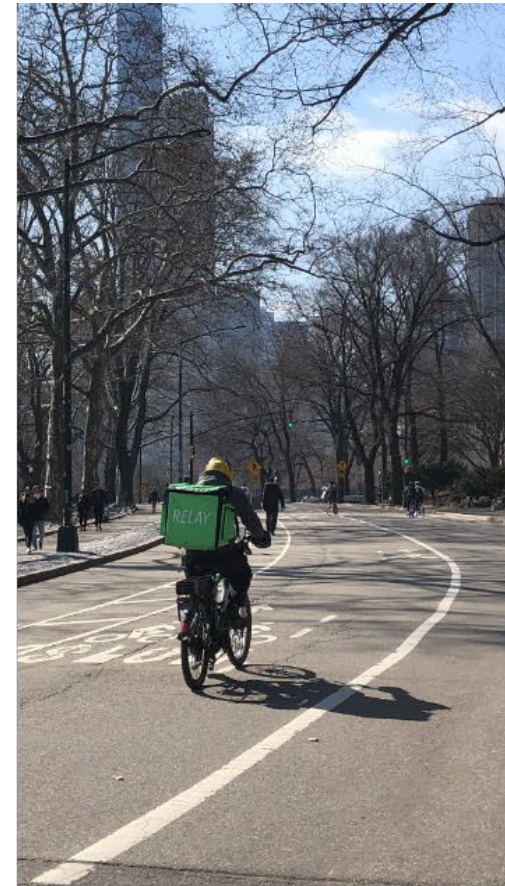
Increasingly diverse vehicles for urban deliveries

- Cars, mopeds, e-mopeds, cargo-bikes, bicycles, walking/transit could already represent more than 25% of last-mile vehicles already in large European cities



Bikes, e-mopeds and pedestrian deliveries ... Manhattan in March 2022

Photos L. Dablanc et M. Schorung



Curb management needed

Beijin April 2020



Arte

Paris Dec 2021



H. Buldeo Rai

NYC March 2022



M. Schorung

Electric delivery vans

UPS: two generations of electric vans



Rivian trucks delivered to Amazon since Sept 2022



Cargo-bikes in Europe



International Cargo Bike Festival, Groningen, October 2022

- Access to bike lanes is a key competitive advantage
- Not robust enough
- Lack of attractivity to future drivers?



Motorized two-wheelers for deliveries

- In Paris, 45% of UberEats and Deliveroo deliveries (Logistics City Chair, 2022)



Zero emission trucks are relevant but still too expensive



Schenker France Septembre 2022 tests of Volta Zero

- Lorries still represent one third of all deliveries in French cities

Tesla Semi : le premier client PepsiCo prudent face à son autonomie

PUBLIÉ LE 21 DÉCEMBRE 2022 À 16:00 | MIS À JOUR LE 22 DÉCEMBRE 2022 À 13:48 | PAR BENJAMIN DEFAY



35 Tesla Semis to PepsiCo in December 2022





Docks are returned to promenade after transloading



FLUDIS: cargo-cycles in electric barges on the Seine



CHAQUE JOUR LES COURSIERS
LIVRENT ENVIRON 800 COLIS EN VÉLO CARGO

New formats in urban warehouses, micro-hubs, logistics hotels

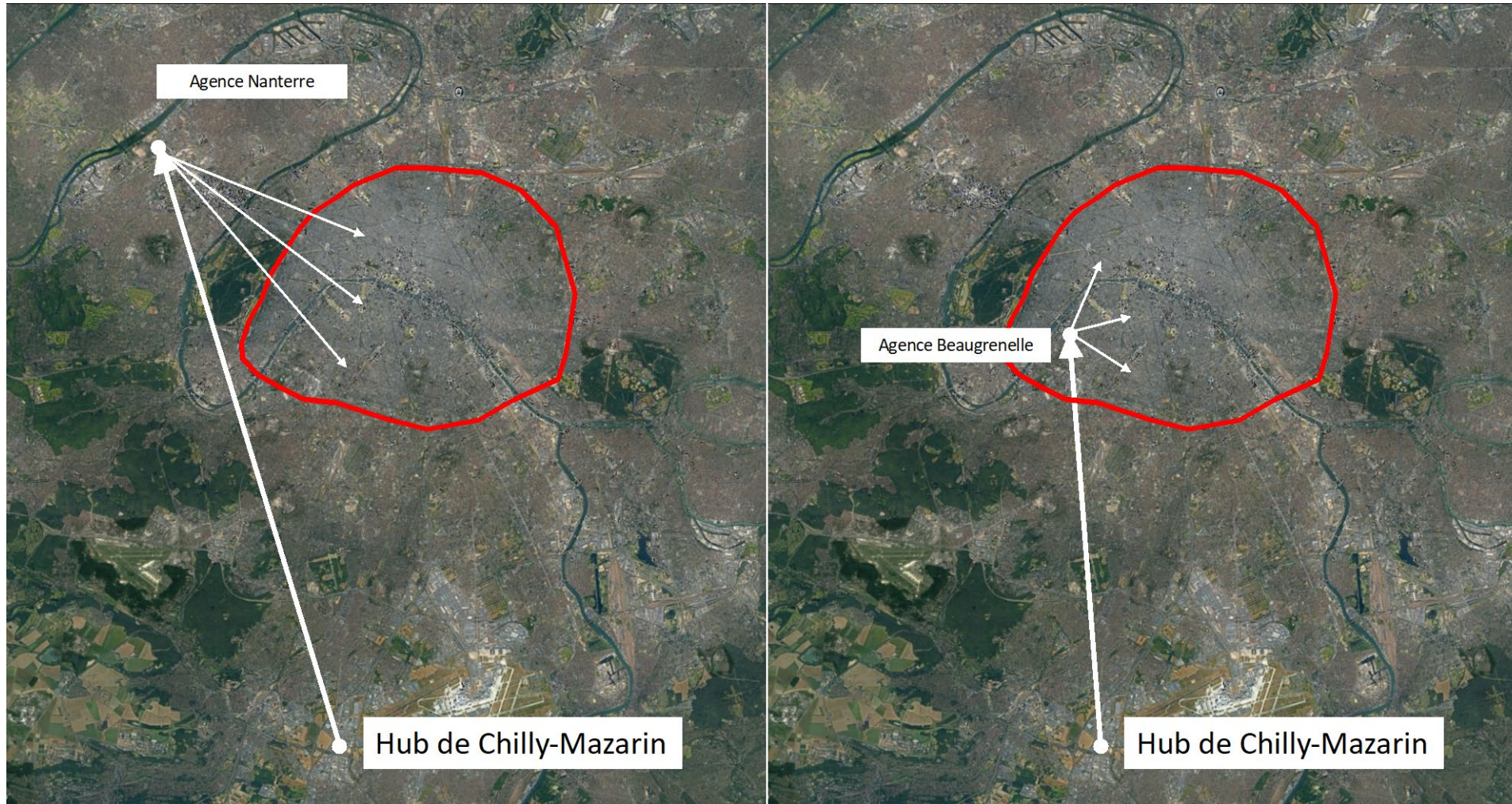
- **Vertical** (underground and multistory)
- **Mixed-use**: logistics hotels
- **Temporary**: use of spaces waiting for a development permit, use of spaces available during the day



- P.L.U.M.E by Novaxia and FM Logistic: recycle vacant urban buildings into temporary logistics hubs
- Empty space turned into logistics hub under the Paris ring-road, reconvertible quickly

Reducing CO₂ emissions by using an urban hub, example of Chronopost parcel deliveries

Without an urban hub: 151 tons CO₂/y With an urban hub: 74 tons CO₂/y



*Jonction 2017 +
Grelier 2020*

Micro-hubs: an urban logistics facility under Paris ring-road



New urban warehouses are based on goods flow consolidation ... and use of trucks

Tokyo



Brooklyn



Paris



Two recent evolutions

Solar pannels
Amsterdam, Sept
2022



**Reduction in
land footprint**

2021 Amazon
fullfilment center
in Delaware, US

350,000 m2 on
70,000 m2
footprint



Delivery services from underground municipal car parks

Under the Louvre, Paris



Under Plaza Mayor, Madrid (FM Logistic Ibérica)



News

CITYLogin opens micro-hub under Madrid's Plaza Mayor

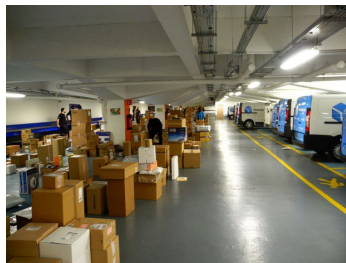
CITYLogin and Madrid's Municipal Transport Company (EMT) have inaugurated a micro-fulfilment centre under Plaza Mayor, the Spanish capital's famous main square. The 200-sqm...

On October 20, 2021

Opera



Beaugrenelle



Concorde



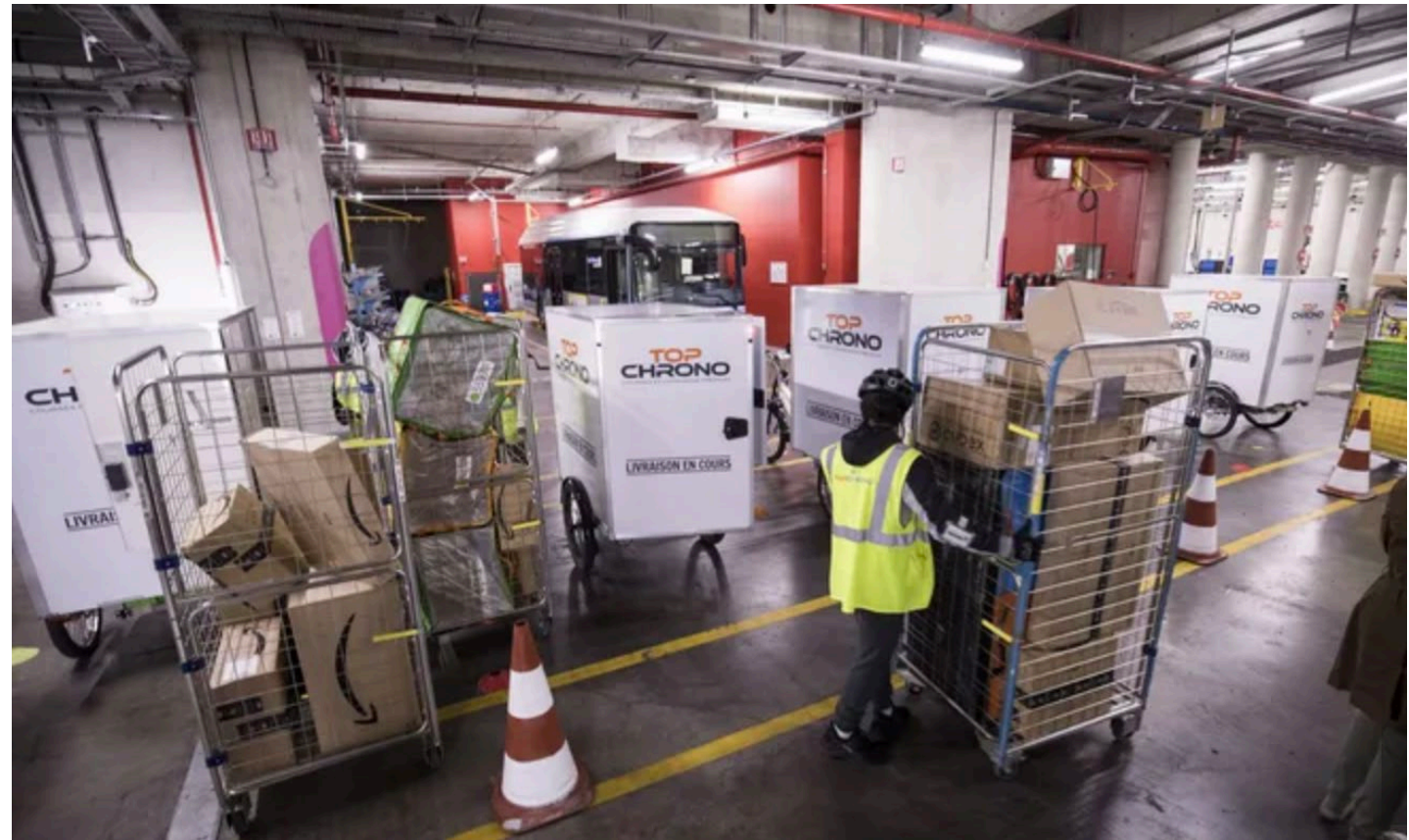
Temporary rental and time-sharing

Swoopin, Paris 11th
Six-month rental before
redevelopment for social
housing project



L. Dablang

Amazon, Paris 14th
use of of a bus depot during the day



F. Bouchon Le Figaro

An interactive map of available logistics micro-hubs in London

<https://crossriverpartnership.org/urban-logistics-hubs/>

Urban Logistics Hubs in London



Urban logistics hubs and micro logistics hubs play an important role in promoting sustainable and efficient freight activity in London. Their use allows goods to be rationalised and distributed via low and zero-emission vehicles for the 'last mile' of the supply chain. This **improves air quality, reduces delivery vehicle trips, and decreases traffic congestion on roads.**

Use the interactive map below to **explore potential sites that have been advertised by Local Authorities and Landowners for use as urban logistics hubs and micro logistics hubs** across central London.

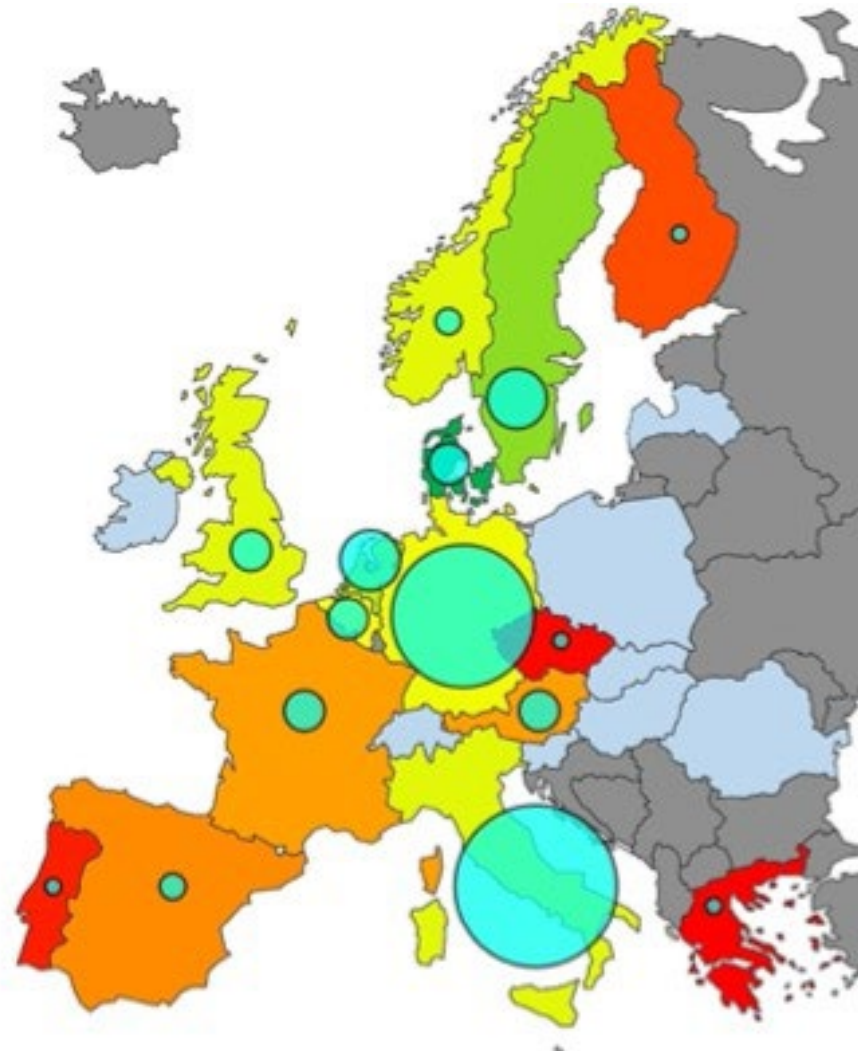
Cross River Partnership (CRP) would like to recognise and thank the Central London Sub-Regional Transport Partnership (CLSRTP), and Transport for London as the funder for this online tool.



Low/zero emission zones for trucks and vans in Europe



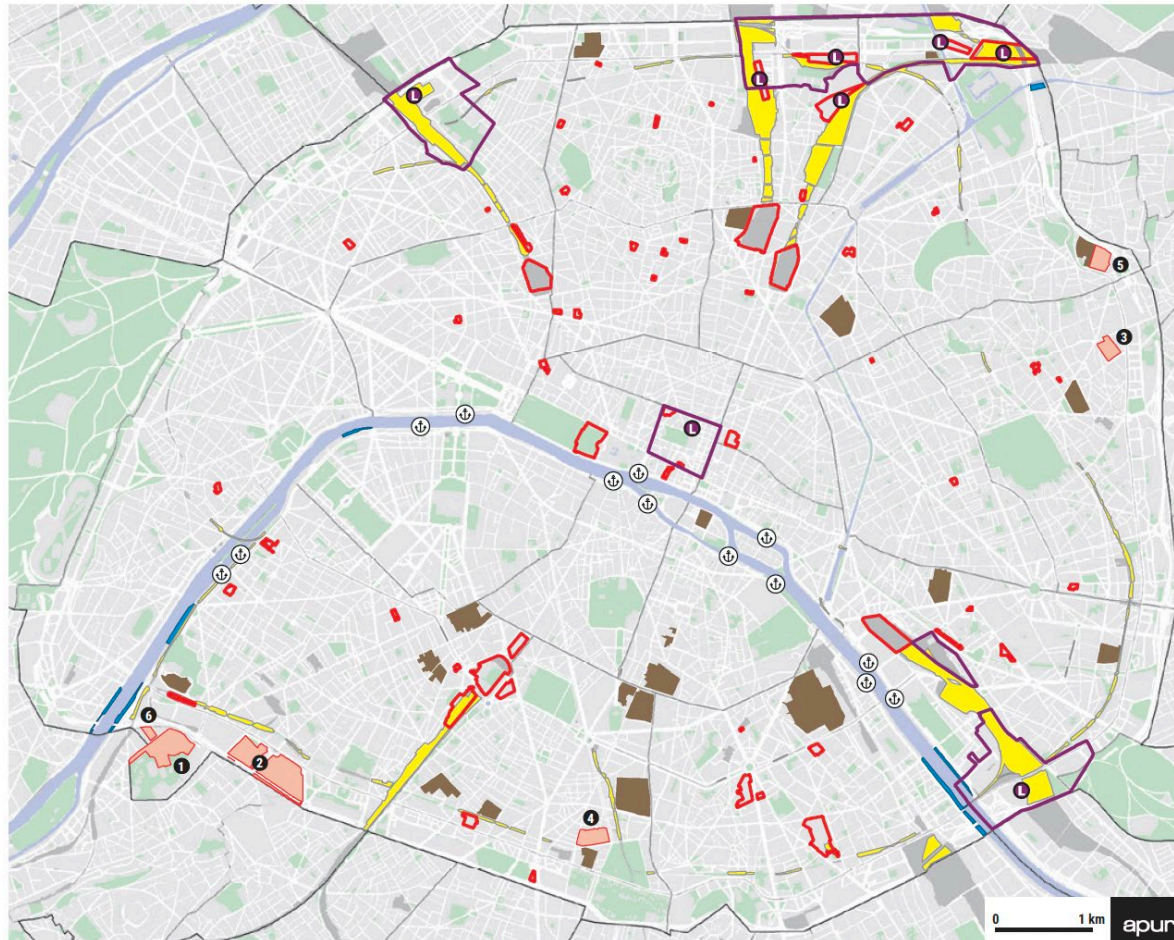
Pays	Indice d'efficacité des ZFE
Grèce	0.9
Tchéquie	0.95
Portugal	1.15
Finlande	1.5
Espagne	2
Autriche	2.15
France	2.15
Belgique	2.9
Allemagne	2.95
Italie	3
Norvège	3
Royaume-Uni	3
Pays-Bas	3.15
Suède	3.3
Danemark	3.8
Sans système de régulation	
Dotés d'autres systèmes de régulation	



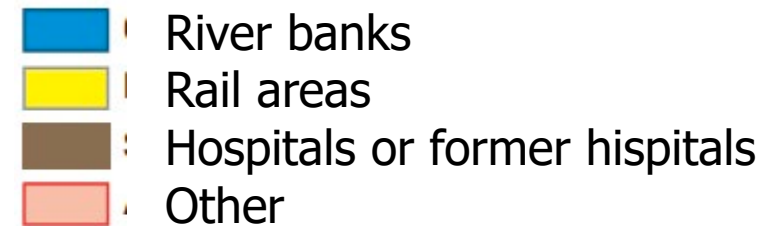
- Number of Low Emission Zones
- Standard level
- Enforcement efficiency

Belliard/Logistics City Chair, 2021

2016 zoning ordinance of Paris: regulations incentivizing the implementation of logistics facilities



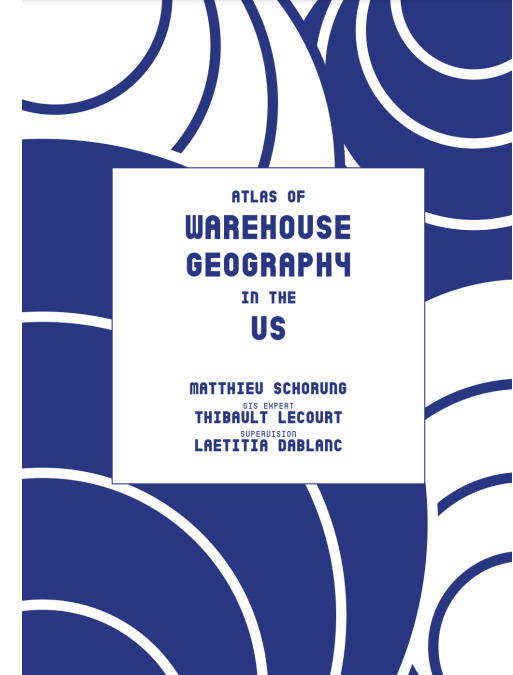
- Areas dedicated to large urban services



- 61 location perimeters for logistics activities 

Ressources

- CHAIRE LOGISTICS CITY: www.lvmt.fr/en/chaieres/logistics-city-sogaris/
- METROFREIGHT www.metrotrans.org/metrofreight
- Platform delivery gig workers' surveys:
- Browne, M., Behrends, S., Woxenius, J., Giuliano, G., Holguin-Veras, J. *Urban logistics. Management, policy and innovation in a rapidly changing environment*. Kogan Page, London
- Urban Freight Lab: <https://depts.washington.edu/sctlctr/urban-freight-lab-0>
- Urban freight platform: <https://www.chalmers.se/en/centres/lead/urbanfreightplatform/Pages/default.aspx>



Sous la direction de
Laetitia Dablan et Antoine Frémont

LA MÉTROPOLE LOGISTIQUE

LE TRANSPORT DE MARCHANDISES
ET LE TERRITOIRE DES GRANDES VILLES



ARMAND COLIN