

How e-commerce transforms the store and the retail landscape: 'dark stores', 'warestores, and urban logistics

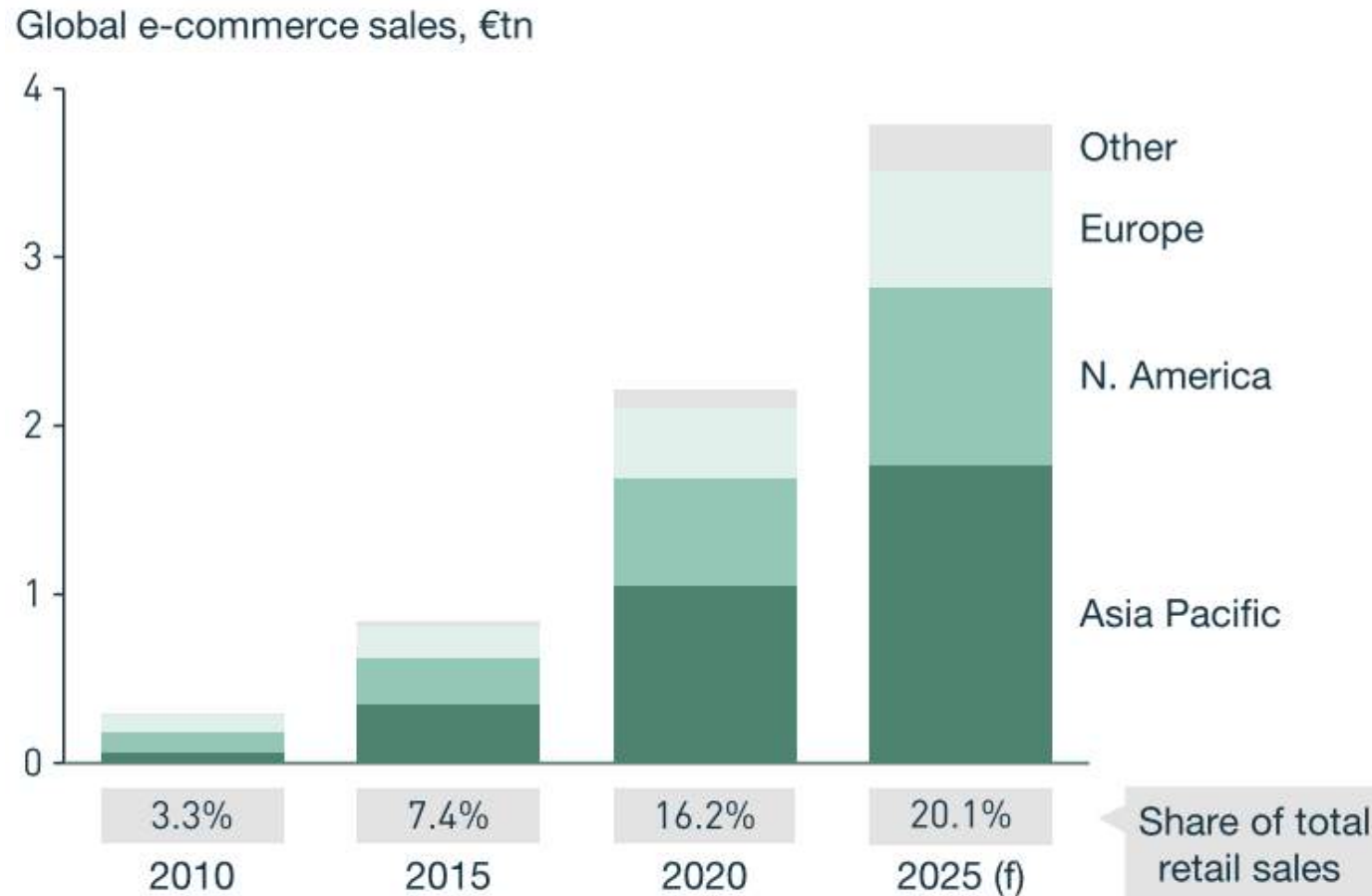
International Geographical Union, July 19th 2022

Heleen Buldeo Rai
Logistics City Chair
Univ Gustave Eiffel



E-commerce & the impact of online shopping on retail

E-commerce, a sector that has been growing at double digit rates for more than a decade



From 'retail apocalypse' and 'death of distance' to omnichannel, now common practice among a range of stakeholders



Omnichannel retail has profoundly changed the role of the traditional store, transforming setting and offering

	Modified store setting	New store setting
Operational offering	<p>Showrooms, zero-inventory stores, digital assortment extension, digital shelf extension, virtual shelf expansion</p> <p>Buy online, pick-up in store (BOPIS/BOPS), click-and-collect, curbside pick-up, reserve online, pick-up and pay in store (ROPS)</p> <p>Buy online and return in store</p> <p>Buy online, get it delivered from the store (BOGIDS), ship-from-store (SFS), warestores, dedicated stores as fulfilment nodes, dark stores</p>	<p>Click-and-drive, third party access points, lockers, collection points, pick-up stations, delivery points</p> <p>Stores-on-wheels</p>
Experimental offering	<p>Experience stores, flagship stores, concept stores, pop-up stores, temporary stores, third places</p> <p>Cashier-less stores</p>	

Operational implications of omnichannel store concepts, from upstream supply flows to downstream delivery flows

	Supply	Inventory	Fulfilment	Processing	Delivery
Showrooms, zero-inventory stores, digital assortment extension, digital shelf extension, virtual shelf expansion	✓	✓	✗	✗	✗
Buy online, pick-up in store (BOPIS/BOPS), click-and-collect, curbside pick-up, reserve online, pick-up and pay in store (ROPS)	✓	(✓)	(✓)	✓	✗
Buy online and return in store	✗	✓	✗	✓	✗
Buy online, get it delivered from the store (BOGIDS), ship-from-store (SFS), warestores, dedicated stores as fulfilment nodes, dark stores	✓	✓	✓	✓	✓

Dark stores & quick commerce,
deciphering the developments

Retailers 'turned' stores 'dark' during lockdown, temporarily or permanently, to increase delivery capacity and speed

09/03/2020

Whole Foods Goes Dark in Brooklyn



Gina Agosto
Editor-in-Chief

It seems like the pandemic-related dark store trend in the United States is going to stick.

Whole Foods Market announced Wednesday it has opened its first, permanent online-only location in Brooklyn, New York.

"This new delivery-only retail model will allow Whole Foods Market to serve even more customers and continue to meet the growing demand for grocery delivery," the company said in a blog post. The store will serve customers only in the Brooklyn area.

News of the new format comes after Whole Foods converted at least six stores earlier this year to help meet COVID-19 demand. Four of the six stores have since con



Whole Foods Market has opened its first, permanent online-only location in Brooklyn, New York.

14/03/2020

Bed Bath & Beyond converts 25% of its stores into regional fulfillment centers



Marianna Wilson
Editor-in-Chief

Bed Bath & Beyond has made a quick pivot to meet surging online demand during the COVID-19 pandemic.

The home goods retailer said it converted approximately 25% of its stores across the US and Canada into regional fulfillment centers — almost doubling its digital fulfillment capacity — to support a significant rise in online sales. Bed Bath & Beyond said its digital sales are up by more than 85% to date in April.



Les « dark stores », ces supermarchés sans clients et entièrement conçus pour la vente en ligne

Ils ont la fonctionnalité d'un entrepôt, mais l'organisation d'un magasin. A Paris, des salariés de Monoprix préparent des commandes à des dizaines de mètres sous terre.

Par Cécile Prud'homme

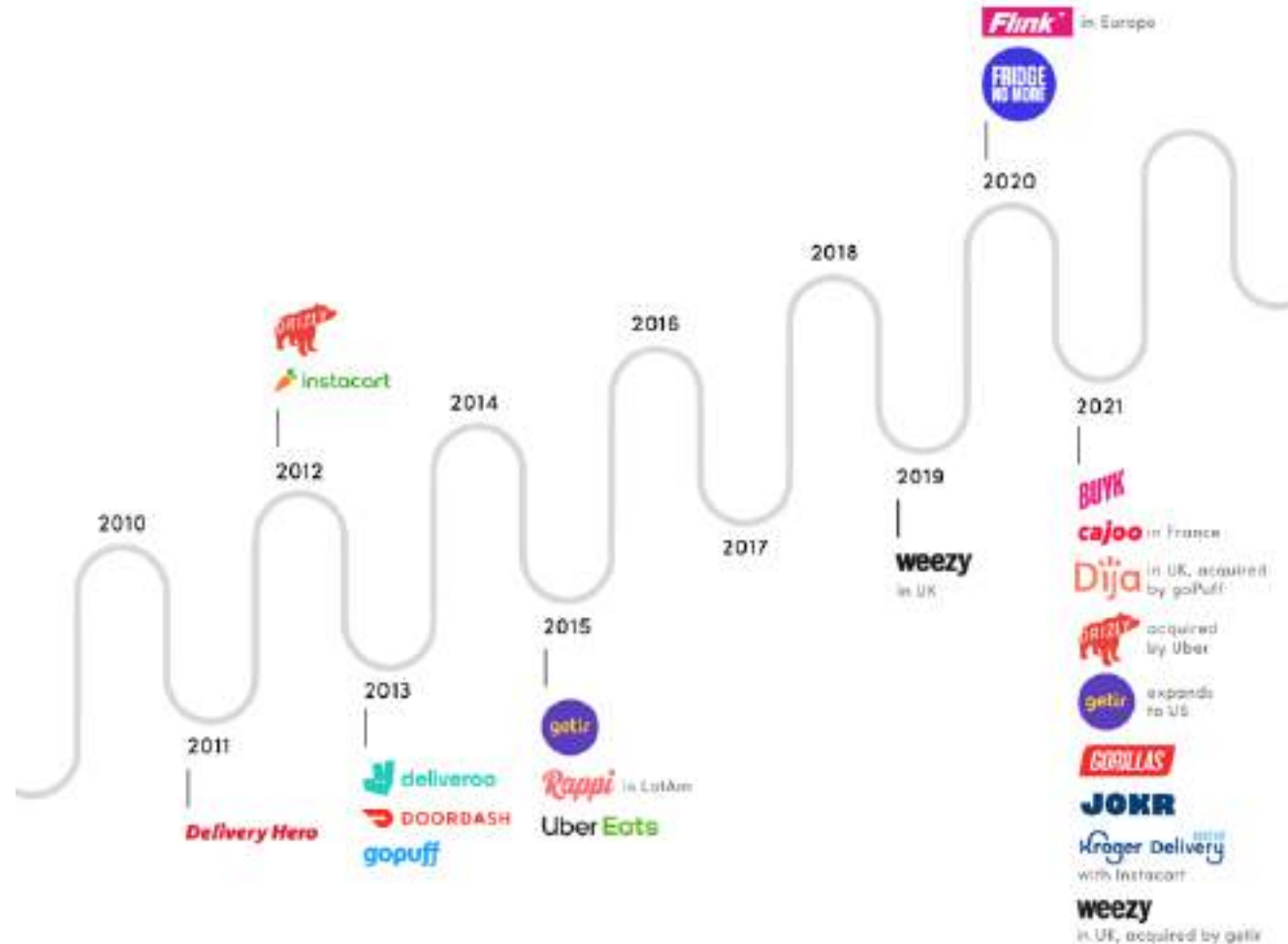
Publié le 17 mars 2020 à 01h27 - Mis à jour le 17 mars 2020 à 16h41 - Lecture 7 min.

Article réservé aux abonnés



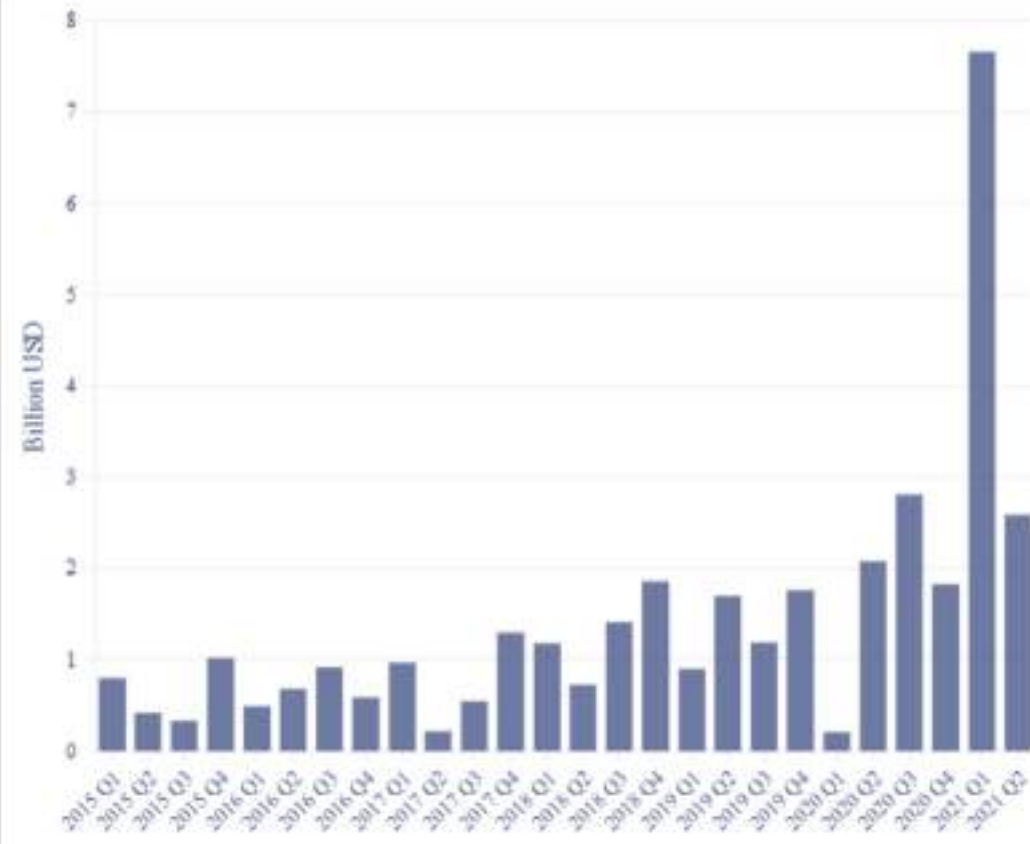
A l'arrière d'un « dark store » de Monoprix, situé dans le 15^{ème} arrondissement de Paris, le 12 mars. A. POTTERICH / MONOPRIX

Simultaneously, the number of instant grocery delivery start-ups, that rely on dark stores, increased rapidly



Venture capitalists invested nearly \$4 billion in instant grocery delivery in 2021, following a strategy of ‘blitzscaling’

Global VC deal activity in grocery delivery by quarter: 2015 to 2021



Global venture capital investments in ultrafast grocery delivery



Press coverage focuses on locally present start-ups, but instant grocery delivery is a global phenomenon, some examples



In fact, the instant grocery delivery model finds its origins in Asia and is an established practice in China in particular



Dark stores by Missfresh



Warestores by Hema Fresh

Dark stores of instant grocery delivery start-ups share several characteristics



Fricti in Paris 11

- Are overall between 200 m² and 400 m², have limited infrastructural needs and count about five to fifteen employees

- Target 'A' markets, but do not necessarily need 'A' locations in those markets

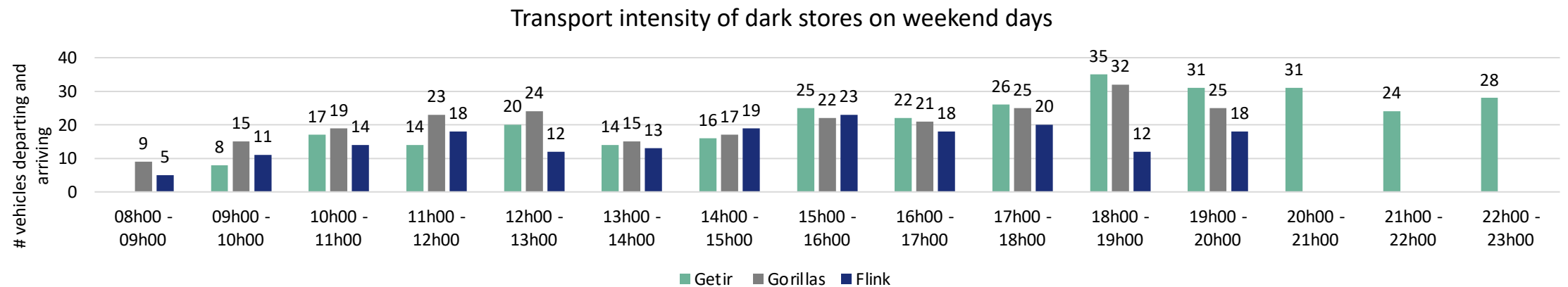
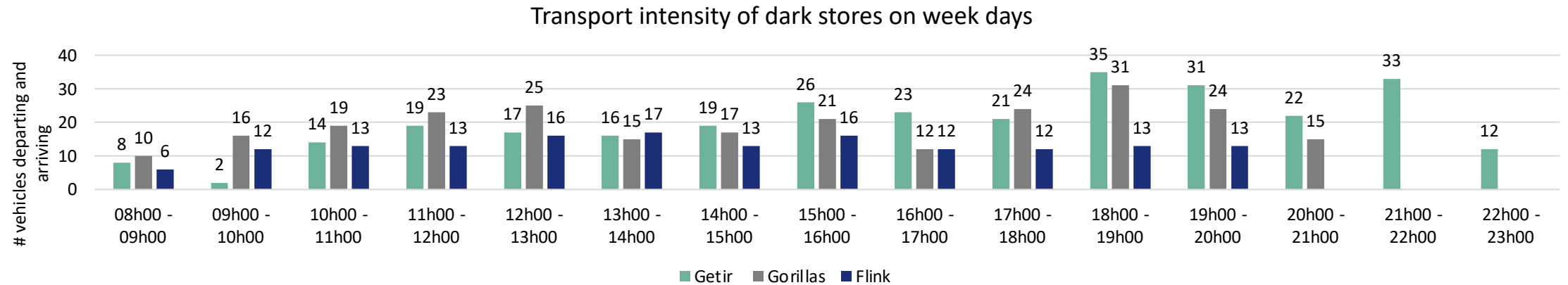
- Serve neighbourhoods in ten to twenty minutes within a 2 km radius

- Use two-wheelers, including electric scooters and cargo-bicycles

- Need parking space as equipment and vehicles are provided

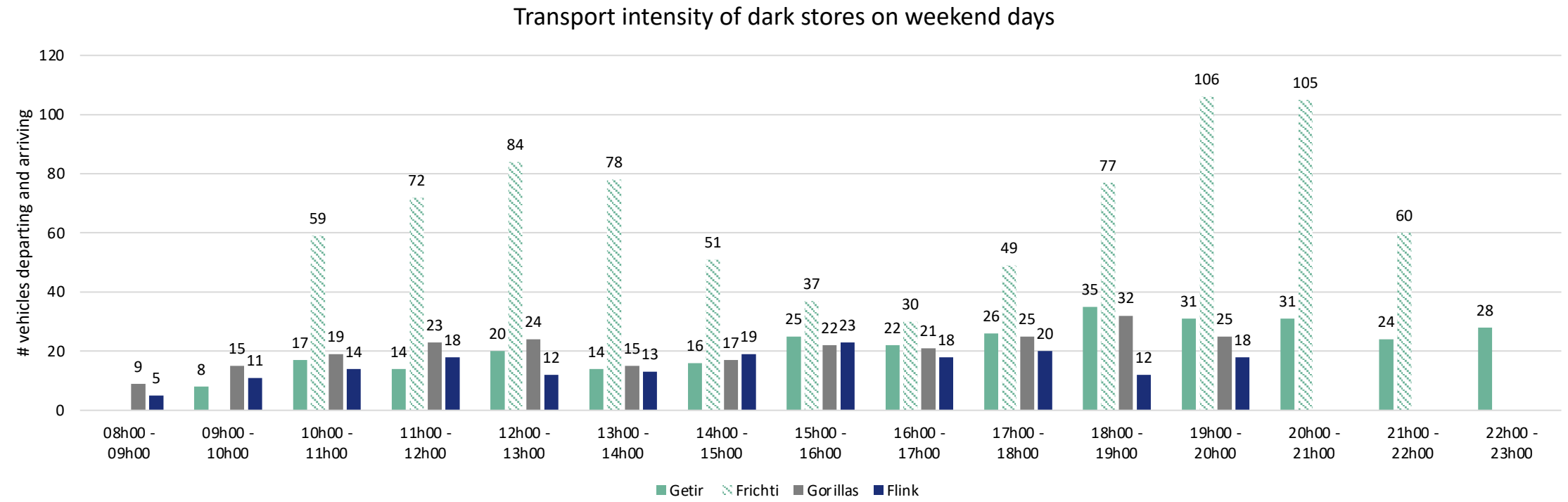
- Carry about 2,000 product references, about one third from local producers

Transport and land use intensity of dark stores, observations from Getir, Gorillas, Flink and Frichti in February and June 2022



= About 1 departure or arrival every 3 minutes

Transport and land use intensity of dark stores, observations from Getir, Gorillas, Flink and Frichti in February and June 2022



= About 1 departure or arrival every minute when dark store/kitchen combined.

Transport and land use intensity of dark stores, observations from Getir in Paris 11 in February 2022



Regular supplies in small quantities
about five pallets



About 11 to 13 vehicles occupy the
parking spaces

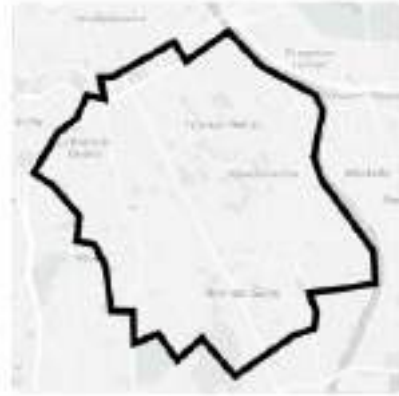


1,3 deliveries per departure during the
week and 1,5 during the weekend

To deliver on their instant delivery promise for urban markets as a whole, dark stores are needed in numbers to succeed



Sentier



Vitry-sur-Seine



Aigre



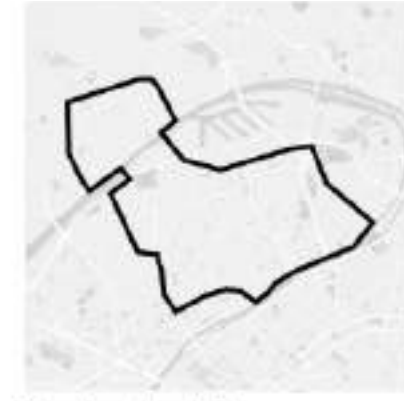
Bastille



Batignolles



Champs-Élysées



Colombes - Argenteuil



Courbevoie



Boulogne-Bellechamps



Belleville - Les Lilas



Boulogne - Billancourt



La Garenne - Colombes



Levallois-Perret



Montmartre

From dark store to dark city? Photomontage of Amsterdam by NRC Handelsblad



Growing aversion among local residents, authorities and businesses, referring to noise, space, safety and competition concerns



Instagram page in Amsterdam



My Bodega Online initiative in New York



Public meeting on reporting unauthorised dark stores in Paris

Live fast, die young?

Instant grocery delivery strategies moving forward



Acquisitions

Delivered in
10 minutes?
Bananas!



Partnerships



Services

Dark stores & quick commerce,
an illustration of three existing
trends in urban logistics

1 - Service differentiation and specialisation



Vandaag Bezorgd

€ 0,99 (bedrag exclusief Select)

Vandaag besteld, vandaag in huis. Van maandag t/m vrijdag voor 13:30 uur besteld, dezelfde dag (thuis)bezorgd tussen 18:00 en 22:00 uur.*



Avondbezorging

€ 1,50 (bedrag exclusief Select)

Van maandag t/m vrijdag bezorgen we tussen 18:00 en 22:00 uur, als je de dag ervoor bestelt.*



Zondagbezorging

€ 0,50 (bedrag exclusief Select)

Bezorgen op zondag. Komt zondag jou het beste uit om je pakketje in ontvangst te nemen? Dat kan ook.* Ook op zaterdag besteld, zondag in huis.



Vandaag ophalen

€ 0,99 (bedrag exclusief Select)

Bestel je op werkdagen vóór 13:00 uur? Dan kun je het pakketje dezelfde middag ophalen bij een bol.com afhaalpunt bij Albert Heijn vanaf 17:00 uur.



Kies de dag die jou uitkomt

Werp een blik op je kalender. Laat je bestelling bezorgen op de datum die jou het beste uitkomt.*



2 - Modal shifts in the last mile and last 'fifty feet'



3 - Proximity logistics real estate




Design for a new multi-story distribution center in Brooklyn



Micro-hub constructed under the ring road in Paris



Model view of West Truck Terminal redevelopment in Seoul

A photograph of a storage room. In the background, there are two large refrigerators with glass doors, labeled '59' and '60', filled with various food items. To the right, a smaller refrigerator labeled '67' is open, showing boxes inside. In the foreground, two bicycles are parked: a white one on the left and a blue one on the right. To the right of the bicycles, there are metal shelves with various items, including a box labeled 'TOOLS COBOX' and a sign that says 'don't touch'. The text 'Thank you, questions?' is overlaid in the center of the image.

Thank you, questions?