



VISUALISING DATA PATHS OF LONDON FREIGHT DRIVERS

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UCL CENTRE FOR ADVANCED SPATIAL ANALYSIS

FREIGHT TRAFFIC CONTROLLER 2050 PROJECT





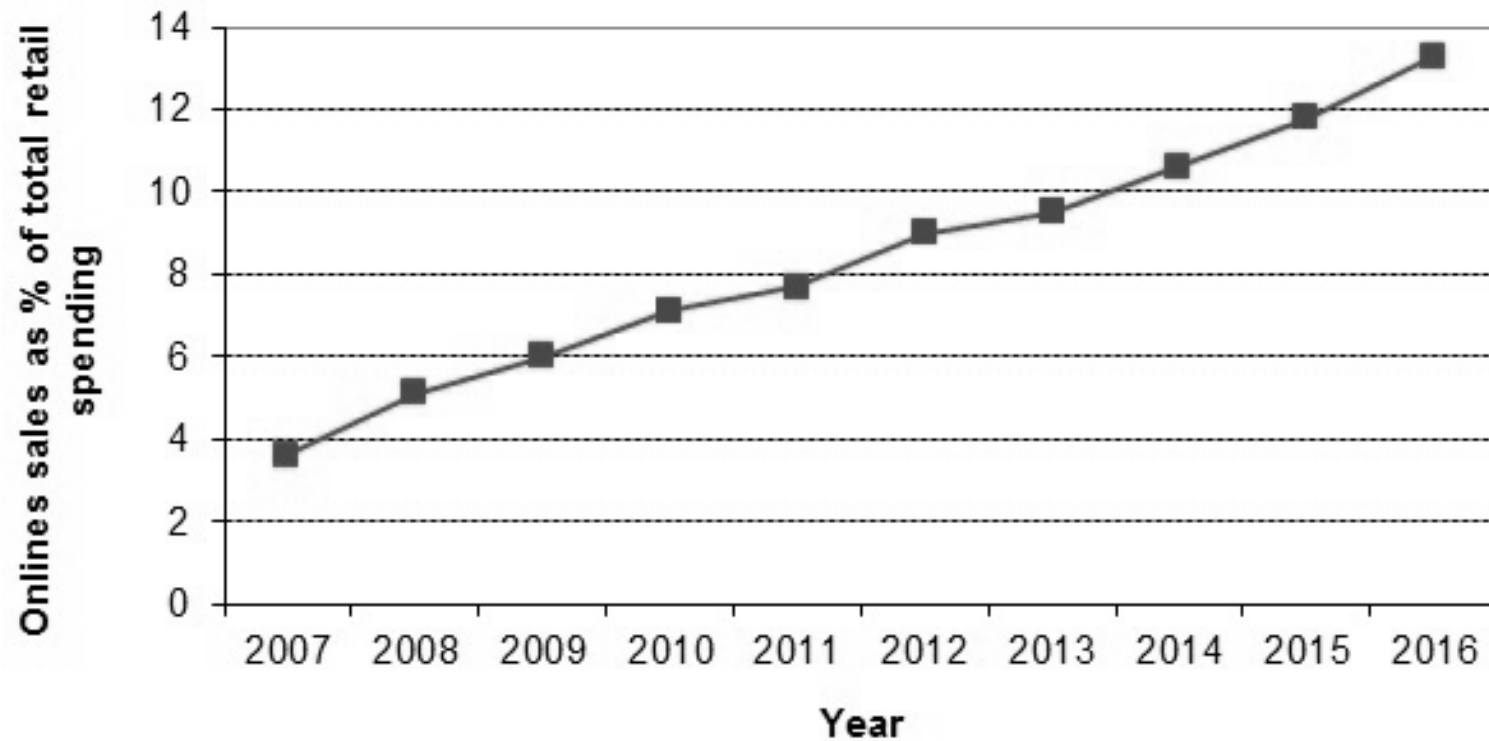
CLAIM #1: FREIGHT IS A (GROWING!) CONCERN



PARCELS MARKET AND CARRIER OPERATIONS

- **£7-8 billion** and **~2 billion parcels/packages** in 2015
- Annual revenue per parcel ranges
- **Rising light goods vehicle (LGV) traffic** in London and nationally
- HGVs and LGVs are relatively significant in influencing **road traffic, CO² emissions, air pollutants, and road traffic casualties**
- LGVs include servicing vehicles as well as goods transport
- A lack of LGV activity data is available to the public

ONLINE SALES AS A PERCENTAGE OF TOTAL RETAIL SPENDING IN THE UK, 2007-2016



Note: data is for end of July in each year.

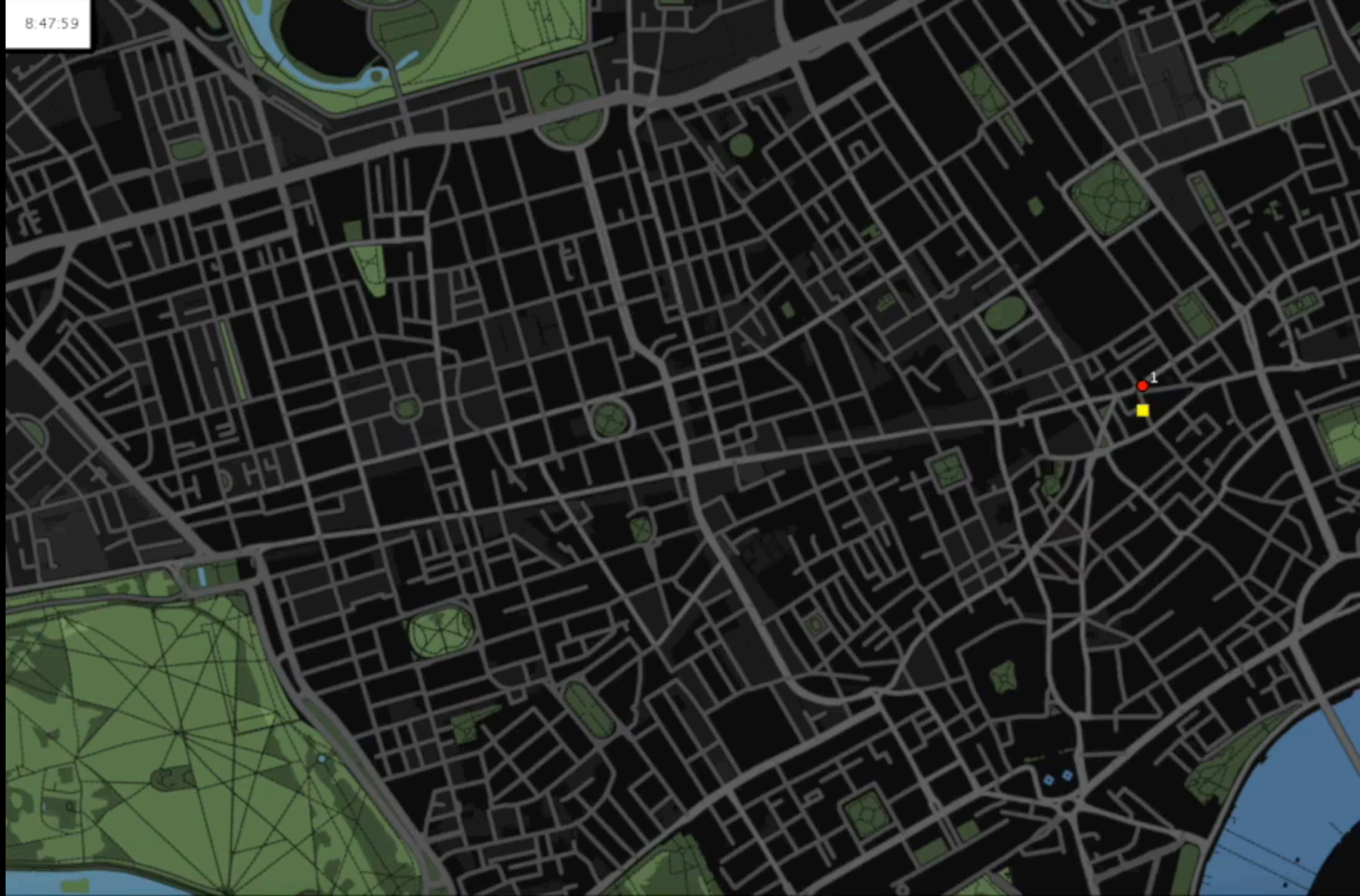
Source: produced from data provided in ONS (2016)

Sector	Grocery retail	Non-food retail			Non-food retail	Takeaways
Products delivered	Food shopping	Parcels and packages – by parcel carrier	Parcels and packages – by courier	Parcels and packages – by crowdshipping	Large white and brown goods	Ready to eat meals
Typical lead time from order to delivery (i.e. responsiveness of delivery)	1 or more days (but 30-60 minutes in new rapid response services)	1 or more days	Same day	Same-day and economy	1 day to several weeks	Usually within 15-60 minutes
Incidence of first-time delivery failure	Very low	High	Low-medium	Low	Very low	Very low
Return rates	Low	High	Low	High	Very low	Very low
Type of delivery operation	Multi-drop rounds	Multi-drop rounds	Single drop rounds (point to point)	Single drop rounds (point to point)	Multi-drop rounds	Single drop rounds (point to point)
Type of vehicle/s used for home delivery	Vans (with some motorbikes and bicycles)	Vans (with some cars for deliveries to residential addresses)	Motorbikes, bicycles, vans and cars	Motorbikes, bicycles, cars, air and public transport	Lorries	Motorbikes, bicycles and some cars
Typical number of orders delivered per round trip	10-15	50-200	1-5	1	5-10	1
Average size of delivery	Several bags full	From one parcel (residential) to multiple parcels (businesses)	Usually one parcel or letter	Usually one parcel	Single item but large and heavy	Single bag/box
Bookable delivery times available?	Yes, 1- or 2-hour delivery slots	Often not. But some carriers allow consumer selection of delivery day or time (often for an additional charge). And some carriers send message to consumer either one hour or the day before delivery.			Some offer 1- or 2-hour delivery slots for extra charge	No, but usually within 15-60 mins of order
Number of people on/in vehicle	One	One	One	One	Two	One
Locations from which	Shops		Point-to-point: driver does not			Shops

HUGE VARIABILITY WITHIN THE MARKET!

and on and on...

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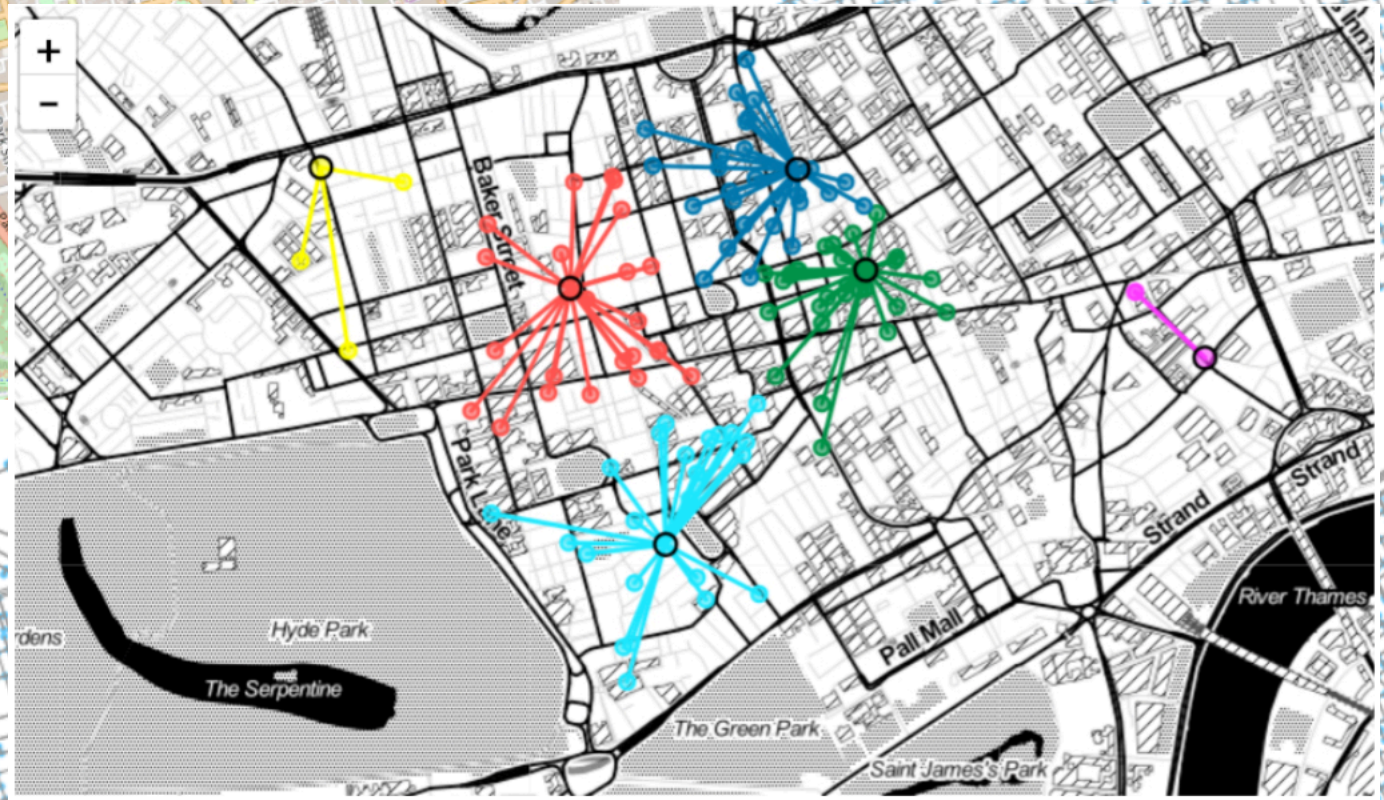
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**CLAIM #2: CHANGING THE WAY WE THINK ABOUT
FREIGHT IS POSSIBLE – AND NECESSARY**





MAJOR QUESTIONS I WANT TO RAISE

■ EMPLOYMENT

- delivering at night means that workers need to be present to handle deliveries at times outside of normal work hours - what does that mean for the workforce?

■ INFRASTRUCTURE

- how can we use smaller depots to minimise presence of vehicles on roads during the day?
- how could we change parking restrictions during the day/night to facilitate this process?
- how will the electric grid respond to changes in technology (e.g. greener vans)

■ SOCIETY

- how do we understand the ecological impact of freight at different times of day?
- how can we balance the need for quiet hours with the convenience of delivering at night?



THANK YOU!

MORE INFORMATION AVAILABLE AT
[HTTP://WWW.FTC2050.COM/](http://www.ftc2050.com/)

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