Lancaster University

Toward fairer and more sustainable last mile parcel logistics

Logistics Chair international forum, Paris, November 2022,

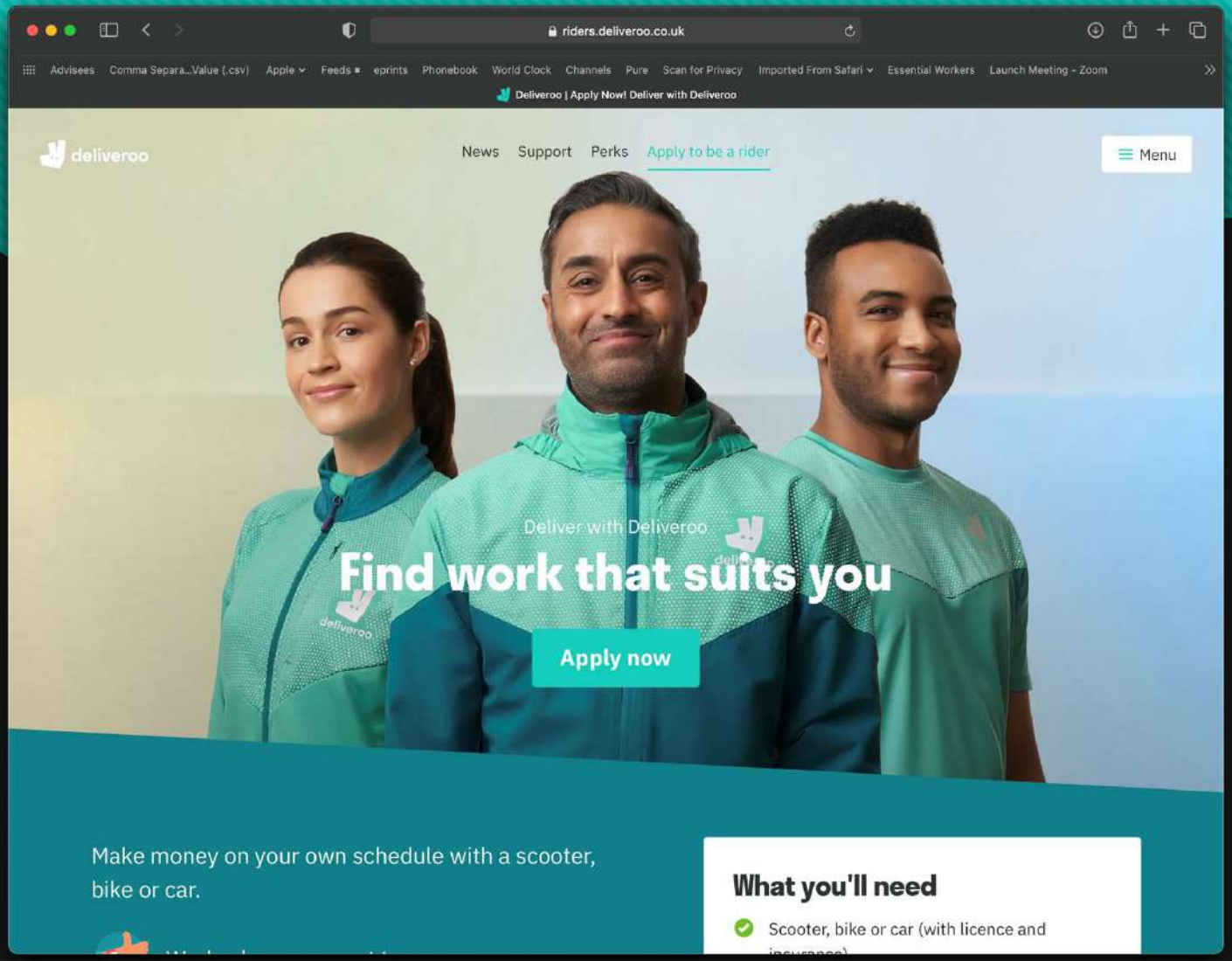
Adrian Friday..

Transport for London

MIRALIS

FlipGig EPSRC ref (EP/S027726/1)

UNIVERSITY OF Southampton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What you'll need
Scooter, bike or car (with licence and

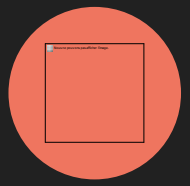
Food and parcel deliveries are changing!

- Investigate digital mediation of current gig economy courier practices
- Look at inefficiency in delivery and collections
- Promote fairness and justice for workers
- Consider how systems are leading to or away from sustainable modes of transport

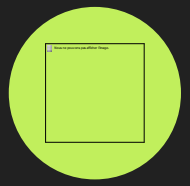
Reconstructing the gig worker lived experience

Mix of online survey methods, and face to face workshops

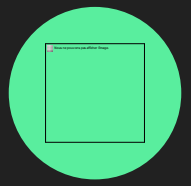
We did



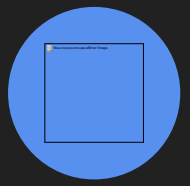
DEVELOPED METHODOLOGIES FOR STUDYING GIG WORK REMOTELY



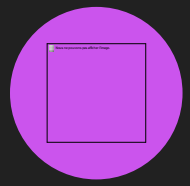
CONDUCTED FIELDWORK IN MANCHESTER, YORK, EDINBURGH (NEARLY PARIS ;) – DESPITE A PANDEMIC



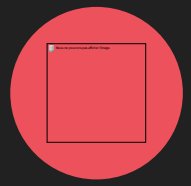
UNCOVERED CHALLENGES FACED BY GIG LOGISTICS WORKERS



WORKED WITH COMMERCIAL PARTNERS (HERMES, ZEDIFY, ECOFLEET) TO UNDERSTAND THEIR BUSINESS AS USUAL



LOOKED AT WAYS OF DISTRIBUTING WORK OPTIMALLY



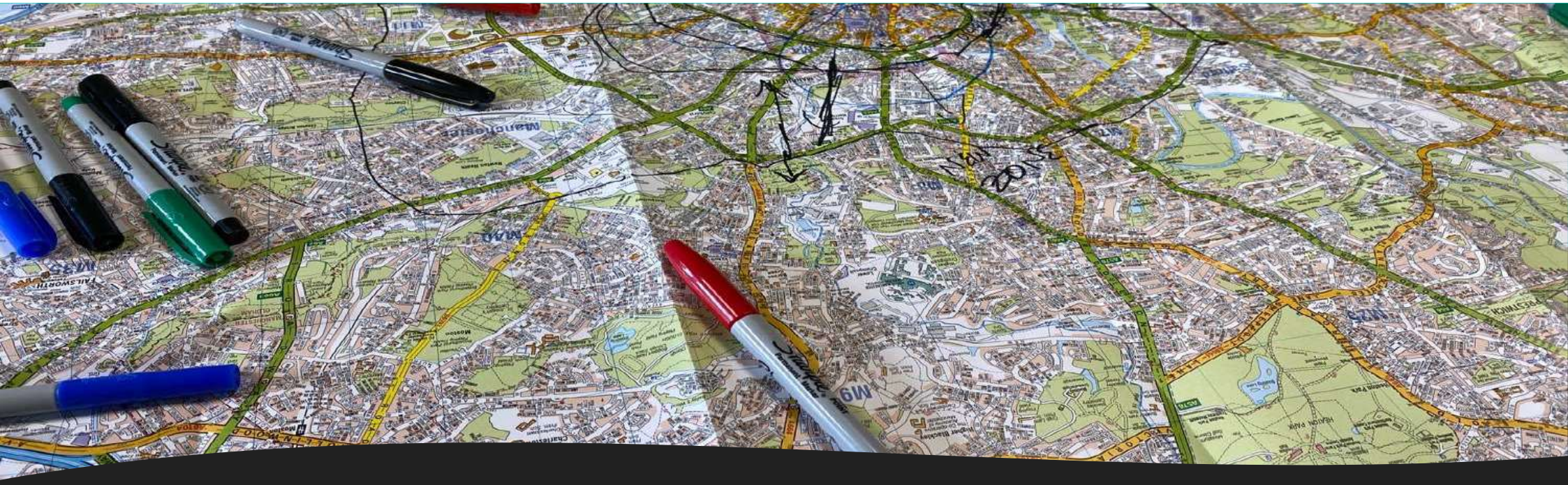
PROPOSED MORE SUSTAINABLE APPROACHES REUSING CIVIC ASSETS – LEADING TO A TRIAL IN YORK

Reconstructing the gig worker lived experience

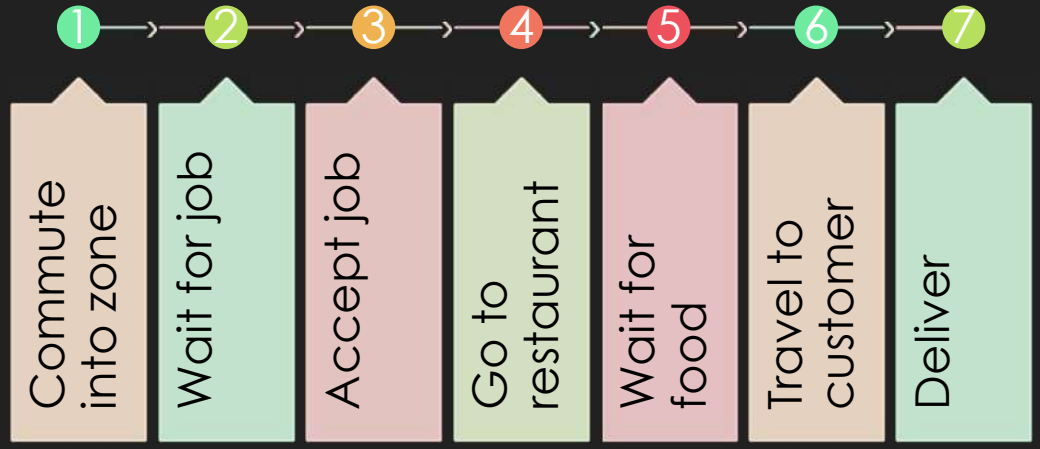
Two in-person cycle courier workshops with 'Switch-Gig' in York and Manchester

'Critical incident' survey method focusing on 'unfairness' (snowball sampling)

'Edinburgh protocol' remote method for logging & discussing gig work lived experience



- Method 1: In-person workshops



Method 2: Critical incident survey

- Adapts software usability enquiry to create an online interview method
- Where the system breaks down (beyond the software)
- Relies on insider recommendations

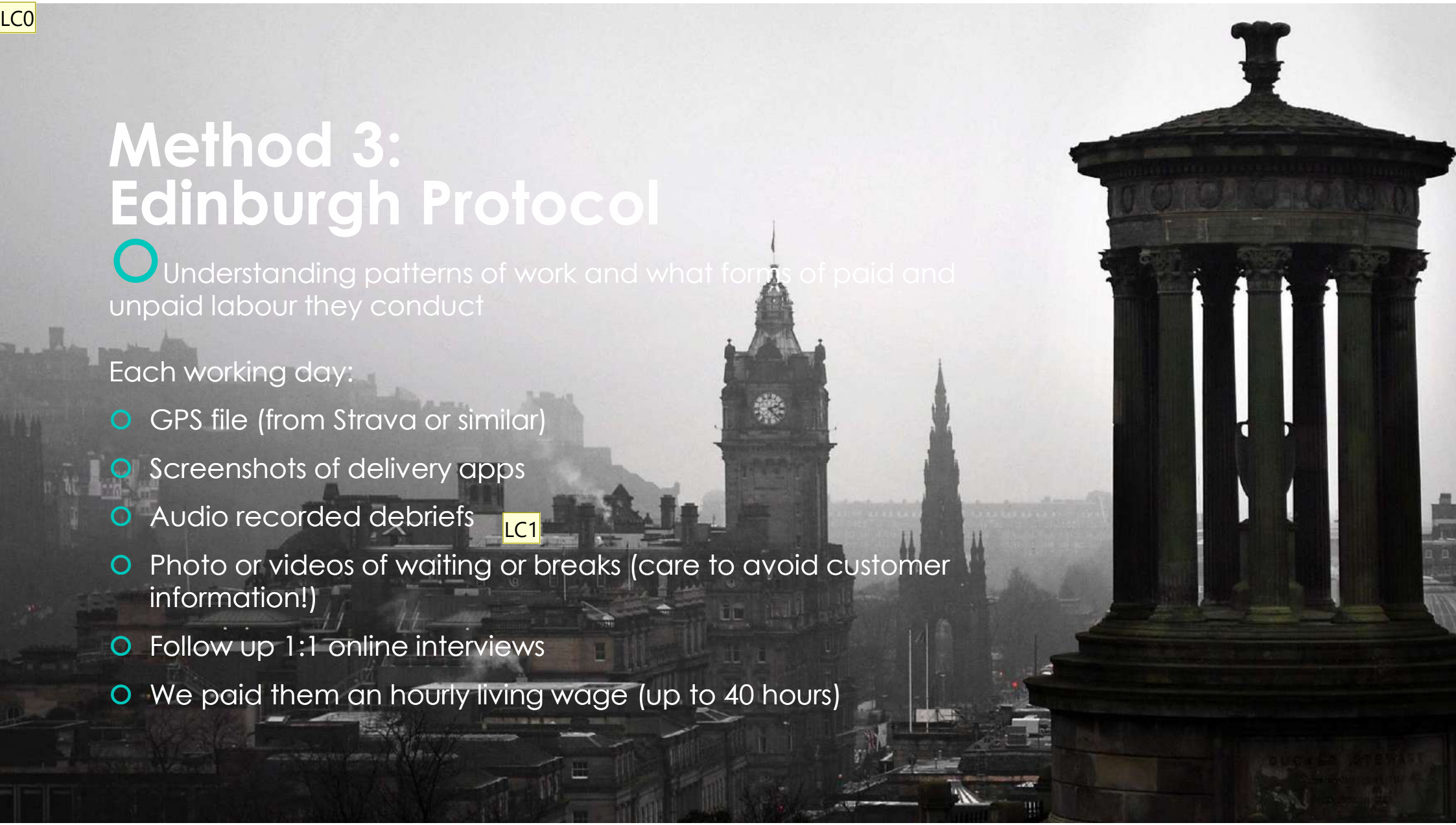
Credit to Joshua Lawrence.

Critical Incident Technique

The Critical Incident Technique is one method that can be used. Here's how we adapted it:

Question Purpose	CIT	Our Adaptation	
1. Cause	What were the events leading up to the critical incident?	Tell us about your experience and what you think caused it?	← Changed incident to experience to improve intelligibility.
2. Action	What were the behaviors' that took place during the incident?	*Combined with Q1.*	
3. Sentiment	How did you feel during the incident, and afterward?	How did this make you feel during the experience, and afterwards?	
4. Outcome	Did you change how you behaved after the incident?	Has this led to a change in how you work? Or what might happen if you don't change how you work?	← Changed behaviours to work to increase applicability.
5. Ideal Outcome	If behaviors' change, what are other possible future outcomes?	What would have been a better outcome?	
6. Anything Else?	n/a	Is there anything else you'd like to tell us about the experience?	← Open question to learn more about the incident.

LC0



Method 3: Edinburgh Protocol

- Understanding patterns of work and what forms of paid and unpaid labour they conduct

Each working day:

- GPS file (from Strava or similar)
- Screenshots of delivery apps
- Audio recorded debriefs
- Photo or videos of waiting or breaks (care to avoid customer information!)
- Follow up 1:1 online interviews
- We paid them an hourly living wage (up to 40 hours)

LC1

Diapositive 9

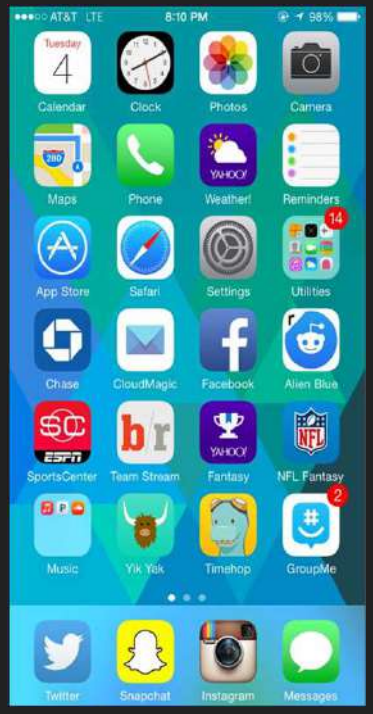
LC0 I would specify which study, the previous slide claims 3 different methodologies.

Title: Edinburgh study
Lord, Carolynne; 2022-04-26T14:07:55.642

LC1 potentially add and home screen (when customer data showing)

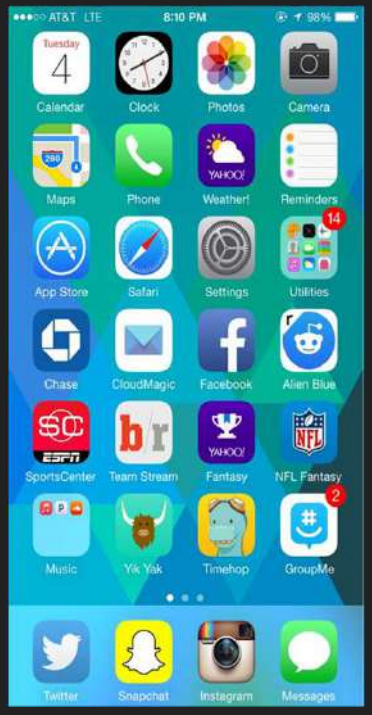
T&Cs of apps mean that they shouldn't be sending us customer information.
Lord, Carolynne; 2022-04-26T14:09:03.706

Uploaded screenshots for each job

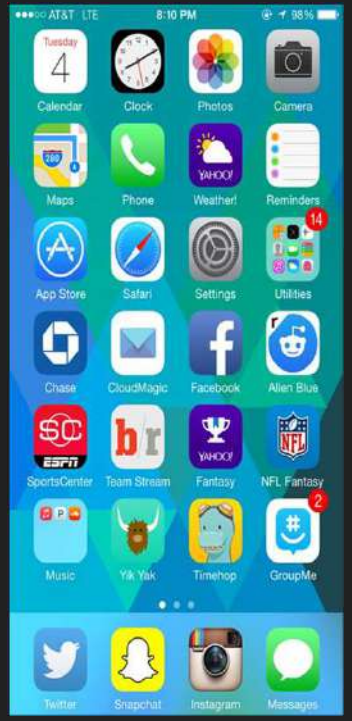


Accepted order

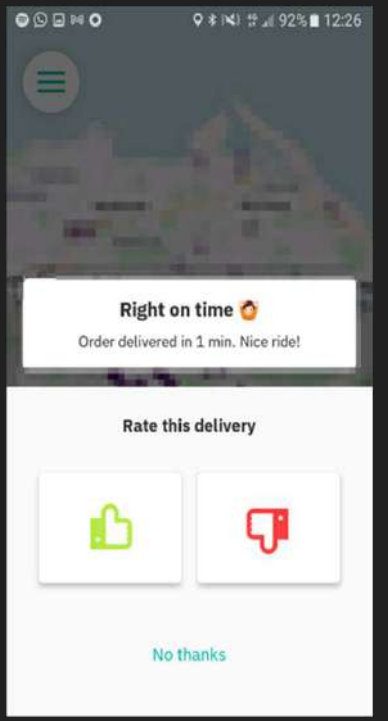
Arrived at restaurant



Received order (from restaurant)



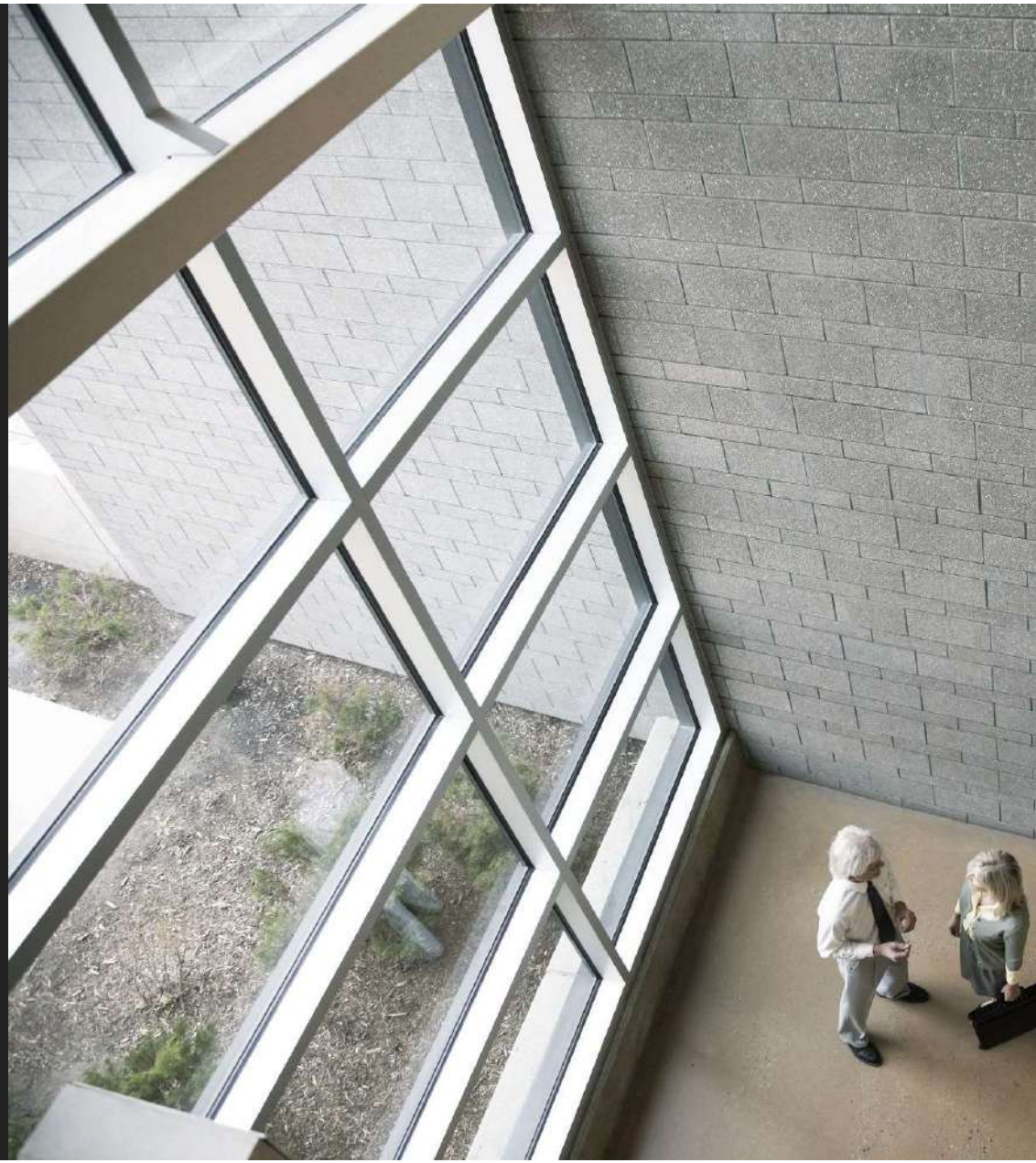
Arrived at customer



Delivered

x (The number of orders you do during a shift)

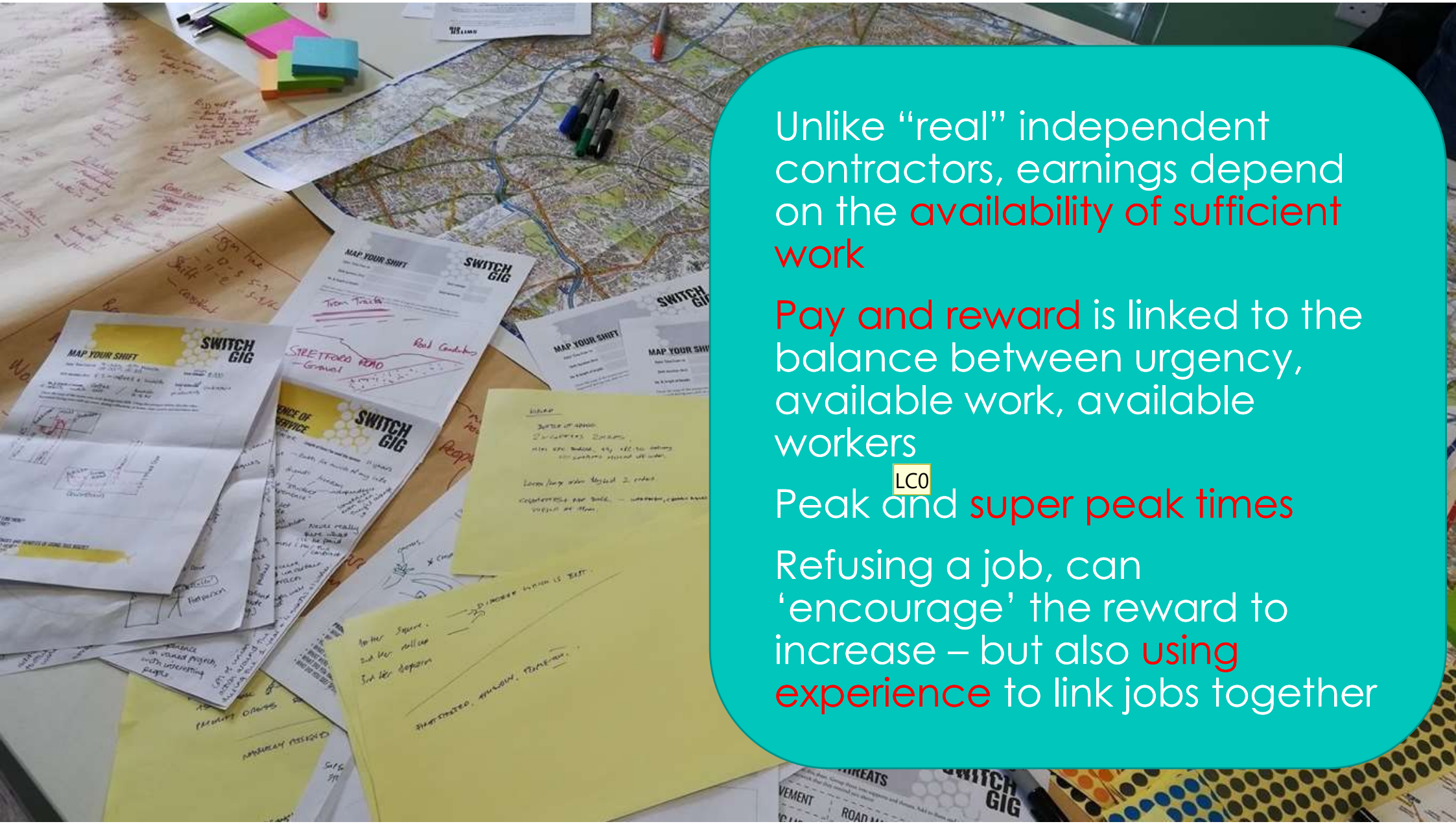
What did we find out?



Why do these people gig?

- Love of cycling (50 miles a day is common)
- Can do better than basic living wage (some earn £15ph vs. £8.21)
- Mixture of money, adrenaline and endorphins
- Flexibility to time work around other constraints, e.g. family

Image: https://www.facebook.com/yorkcollective/



Unlike "real" independent contractors, earnings depend on the availability of sufficient work

Pay and reward is linked to the balance between urgency, available work, available workers

Peak and super peak times

Refusing a job, can 'encourage' the reward to increase – but also using experience to link jobs together

Diapositive 13

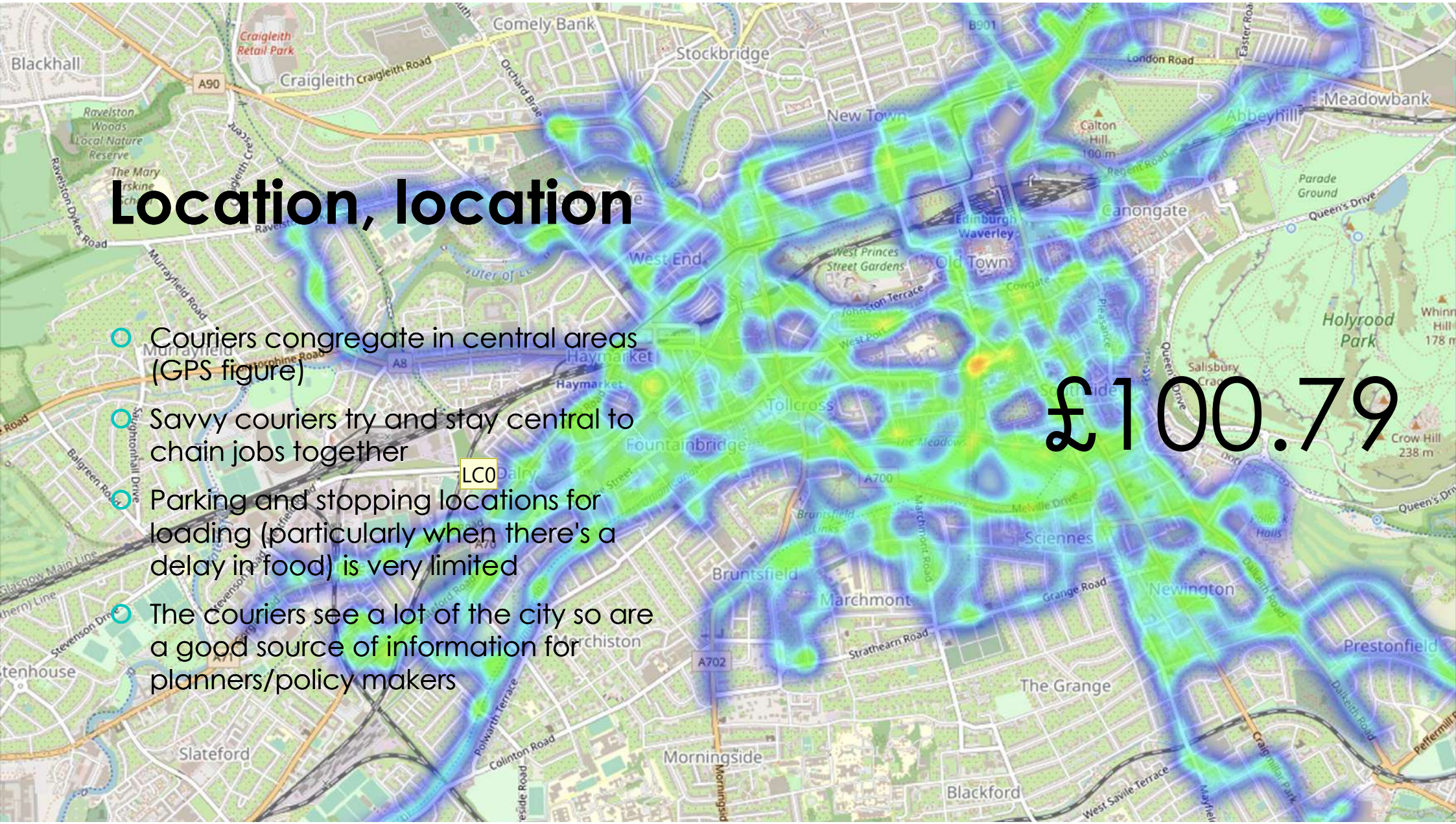
LC0 job rejection is particularly interesting, some of the best paid couriers rejected the most work - i.e., they knew which jobs looked better than they were (e.g., long delivery and therefore bigger pay, but would leave you out in the sticks and no where near a restaurant for the nexxt job).

Rejection in my view isn't just about encouraging the algorithm to increase the fee, it's also about knowing the city and which deliveries you can piggyback others from.

Lord, Carolynne; 2022-04-26T14:14:15.245

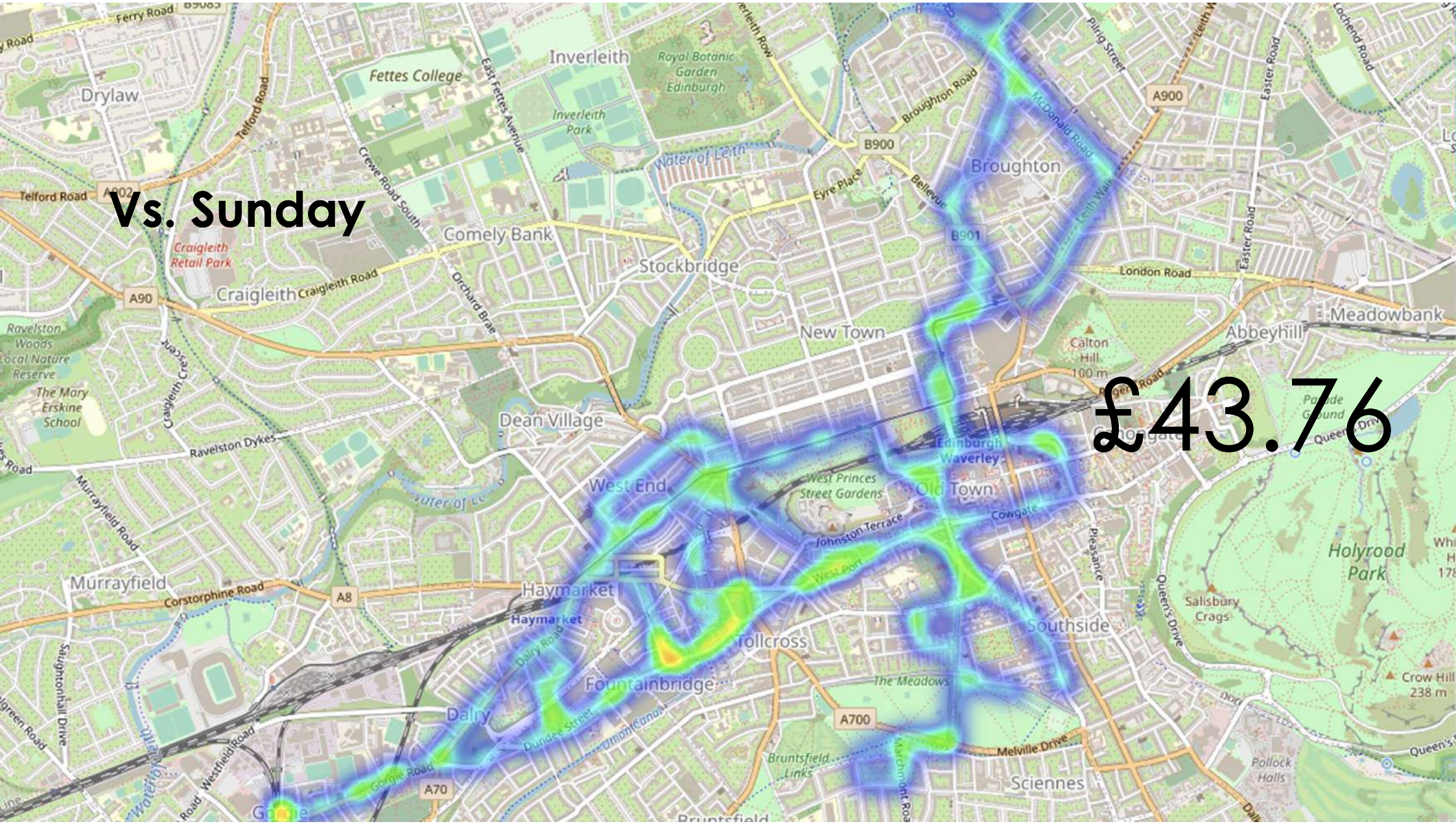
Location, location

- Couriers congregate in central areas (GPS figure)
- Savvy couriers try and stay central to chain jobs together
- Parking and stopping locations for loading (particularly when there's a delay in food) is very limited
- The couriers see a lot of the city so are a good source of information for planners/policy makers



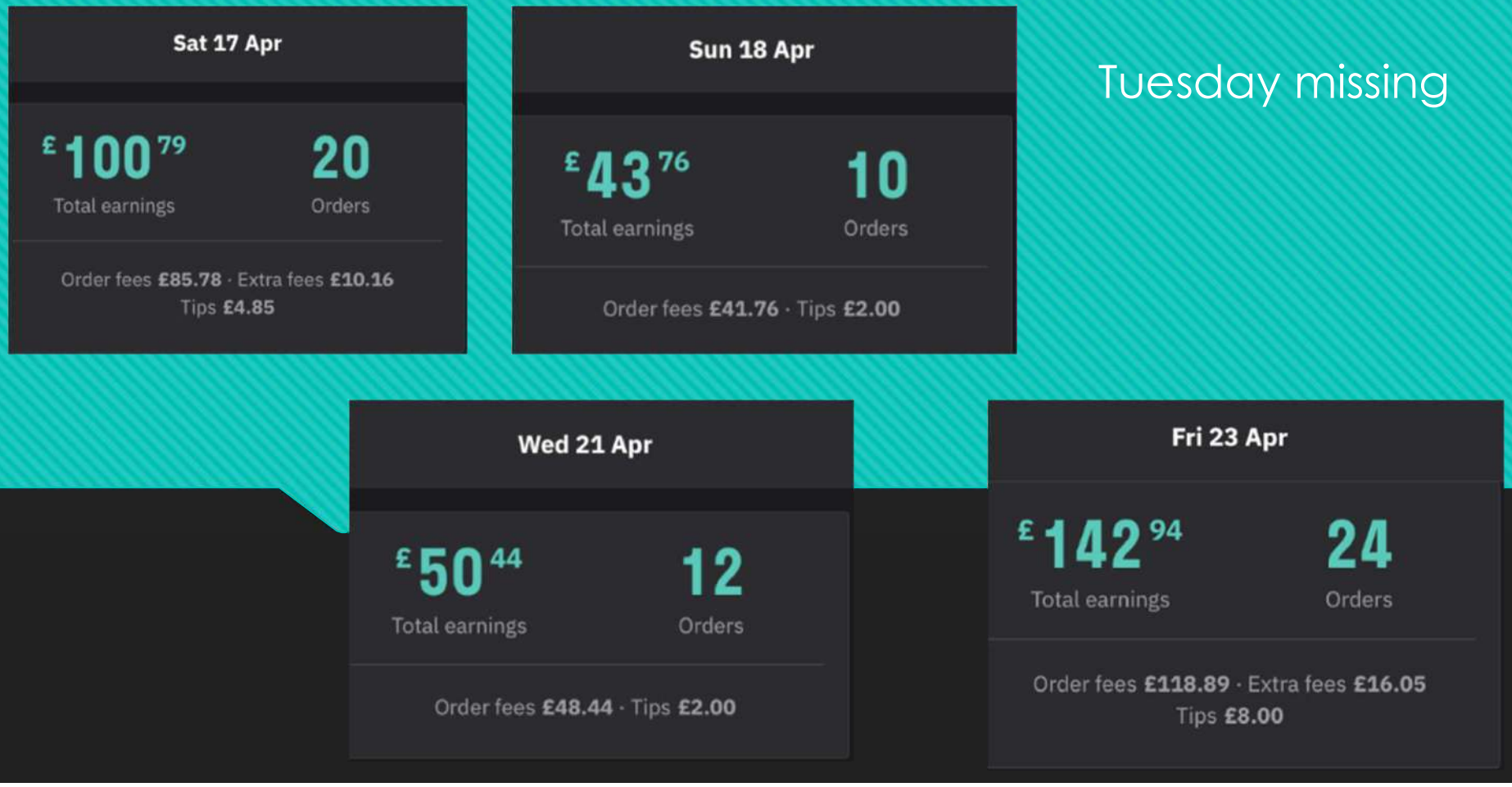
Diapositive 14

LC0 aaa this is where it comes in. Maybe ignore my previous comment then
Lord, Carolynne; 2022-04-26T14:14:51.684


Vs. Sunday
£43.76
Drylaw
Inverleith
Fettes College
Royal Botanic Garden Edinburgh
Inverleith Park
Broughton
Comely Bank
Stockbridge
Craigleith
Craigleith Retail Park
New Town
Dean Village
West End
Edinburgh Waverley
West Princes Street Gardens
Old Town
Abbeyhill
Meadowbank
Holyrood Park
Salisbury Crags
Murrayfield
Haymarket
Tollcross
Fountainbridge
Dalry
Southside
Sciennes
Bruntsfield
Ravelston Woods Local Nature Reserve
The Mary Erskine School
Calton Hill 100 m
Crow Hill 238 m
Pollock Halls
Bruntsfield Links
The Meadows
Water of Leith
Ferry Road
Telford Road
Craigleith Road
Ravelston Dykes
Corstorphine Road
Melville Drive
London Road
Broughton Road
Eyre Place
Bellevue
Pilrig Street
Easter Road
Queen's Drive
Pleasance
Johnston Terrace
Cowgate
Dundee Street
Union Canal
Gorgie Road
Westfield Road
Saughtonhall Drive
Murrayfield Road
Craigleith Crescent
Orchard Brae
Crewe Road South
East Fettes Avenue
Leith Walk
McDonald Road
A90
A902
A8
A70
A700
A900
B900
B901

Earnings, distance, and number of orders
160
140
120
100
80
60
40
20
0
Saturday 17th
Sunday 18th
Tuesday 20th
Wednesday 21st
Friday 23rd
Total Earnings (£)
km
Number of Orders

Payment Screens (EDIN10)



Tuesday missing

Your future as a beta test

"I have worked with deliveroo for 3 years and within my first year they terminated my contract due to rejecting jobs which were too far and as I was on an hourly rate of £6 plus £1 per delivery and considered traveling these 1.5 miles plus distances not worthwhile the time and risk."

"now conscious not to get fired again so I have to only reject jobs under dire circumstances regardless if I'm getting paid less than £5 for doing a 4 mile trip for instance or if the route is unsafe for bikes" P26

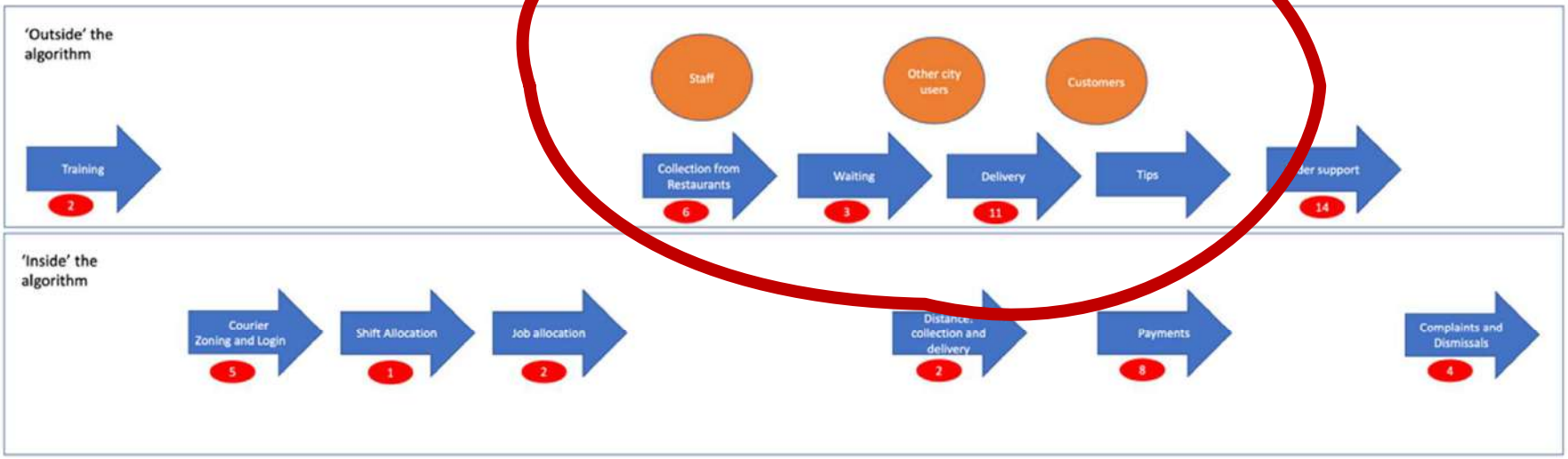
Customers play too

- *"I had a customer enter an incorrect address which didn't exist. When I called the customer to find out where I should take the food he asked me to deliver to an address outside my zone of work on a high-rise housing estate I don't know well and did not feel comfortable entering. I told him I was cancelling the order. I was really frustrated by the loss of time as I was not paid for this, and Deliveroo made me return the food to the restaurant."* P4

Collaborative work, but workers at ‘on the frontline’

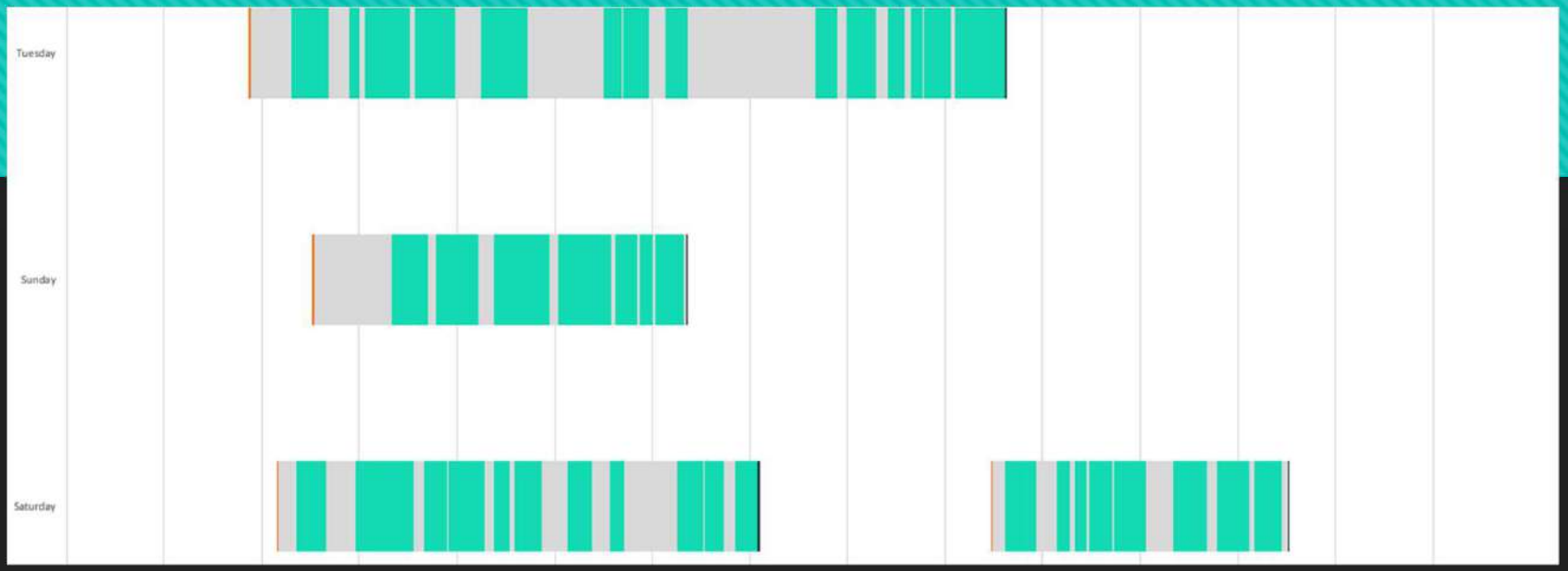
Mapping unfairness

Where does 'unfairness' emerge in the critical incidents reported by gig economy couriers?



Tensions in Cities

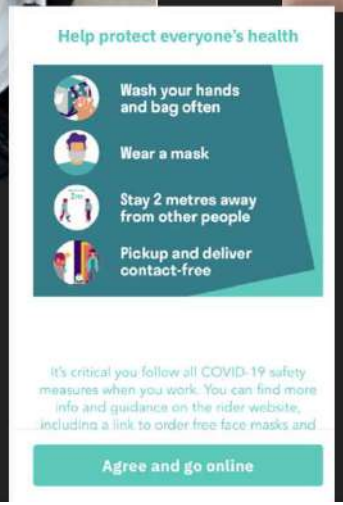
- Adversarial first contact - The single point of contact between a city and courier tends to be law enforcement
- Gig couriers not treated the same as other couriers
  - Royal Mail workers in York are allowed to be on bikes/vans in the pedestrianised zones when gig couriers aren't
- Feel under pressure and can 'take risks' to speed things up
- Couriers feel friction with other road users (e.g., lorries), yet are respected by others (e.g., buses)
- Risk of theft and personal violence with little protection in most cities

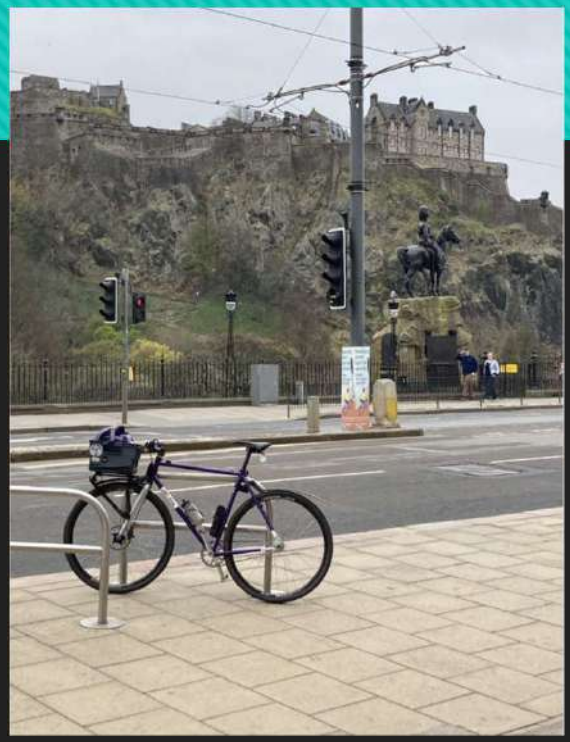


Green = on a job, grey = waiting for work

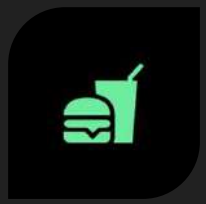
Gaps, atomised work, or multiplatform potential?

No break rooms, bulletin boards or secure spaces





Restaurant Behaviours



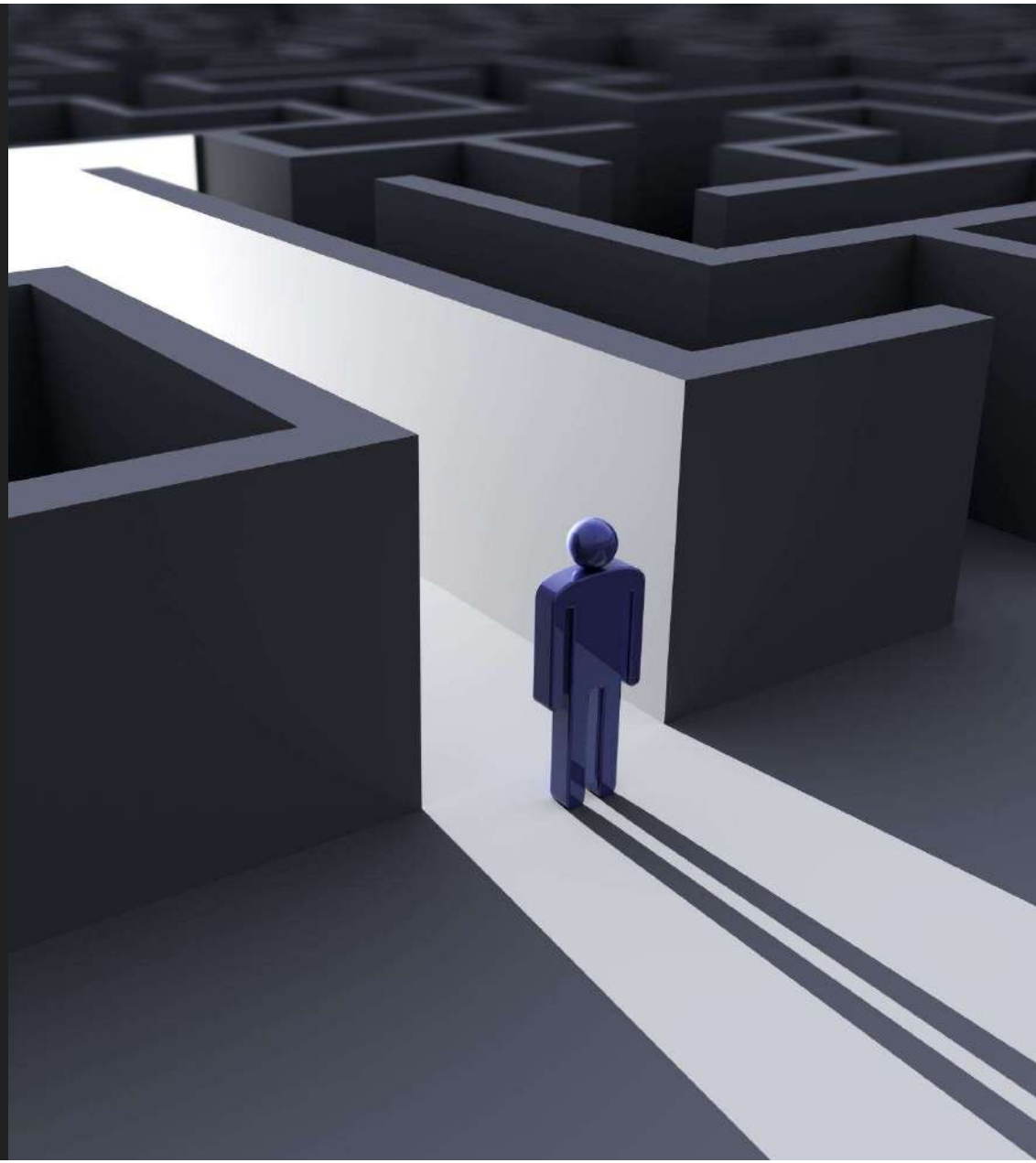
Waiting time at restaurants/ shops is highly variable

Food delivery and waves of demand

Restaurant attitudes varies, So workers are more likely to reject certain orders

Couriers' experiences at a restaurant used to predict waiting time / cost benefit of accepting a job

The future?



The Future and the system we are designing

- What can be done to improve transparency and fairness for workers?
- What systems are we getting locked into?
  - Meta platform? Is that just more and more atomised work?
  - Opportunity: bringing life and designing gig infrastructure in cities in a designed way, rather than leaving it to 'just emerge'; accelerating sustainability?
- Fair Work Zone – city commitment to rights and facilities? Toward a minimum supply of work, maximum number of workers, cycling zones?

Appreciating gig workers' experiences

Design provocations, courtesy of Ben Kirman, et al. https://switchgig.wordpress.com/output/

https://switchgig.wordpress.com/output/

NOT-EQUAL

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coop

digital creativity labs

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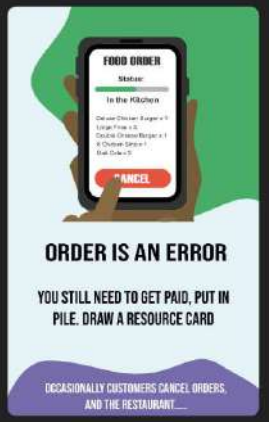
https://switchgig.wordpress.com/output/

Coming Soon



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Questions?

My thanks to Oliver Bates, Carolynne Lord (Lancaster), Ben Kirman (York), Tom Cherrett, Toni Martinez-Sykora, Fraser McLeod and Andy Oakey (Southampton)

- a.friday@Lancaster.ac.uk
- @gulliblefish

- http://flipgig.org, http://wp.lancs.ac.uk/sds, and https://switchgig.wordpress.com/output/

Image: unsplash/jon-tyson-hhq1Lxtuwd8