Survey Analysis Report

Cycle Logistics Industry Survey 2016

Developed and distributed by the European Cycle Logistics Federation

Analysed by the Amsterdam University of Applied Sciences

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EUROPEAN CYCLE LOGISTICS FEDERATION

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1. Executive Summary

The European Cycle Logistics Federation (ECLF) is a membership organisation that represents and supports the needs of cycle logistics companies across Europe. One of its primary aims is to convince policy-makers and manufacturers that cycle logistics is a growing market with great potential for the sustainable and environmentally friendly distribution of goods in cities.

The use of bicycles for carrying cargo is nothing new; look back in history and you will find numerous examples of local companies providing delivery services using bikes, ranging from the traditional butchers' and bakers' bikes to the delivery of milk and beer using heavy duty bikes and utility companies sending out engineers on bikes which were used to carry their tools. But in the latter half of the 20th century the use of bicycles for carrying goods in the urban environment was forgotten by businesses and citizens alike.

However, since the start of the 21st Century there has been a rebirth in cycle logistics as citizens demand more liveable cities and municipalities look for solutions to issues such as congestion, pollution and noise. Enterprising individuals have recognised the opportunity by setting up cycle logistics businesses in towns and cities across Europe. But up until only recently there has been little or no data available on the scope and scale of cycle logistics across Europe.

In 2014 ECLF undertook a basic survey of its then membership which resulted in 61 responses from existing cycle logistics operators. This survey identified that cycle logistics operators were employing over 250 staff who were operating over 280 cargo bikes delivering over 9,000 parcels per day to over 6,000 addresses.

Building on this data a more comprehensive online survey was devised and issued in March 2016 with the aim of analysing the current scope and scale of cycle logistics across Europe and to identify common issues and problems faced by cycle logistics operators. The survey was distributed to over 400 companies and resulted in a response rate of 30%. However, the data from some respondents was removed due to duplication and invalid entries so the resulting dataset includes responses from 84 companies.

The resulting analysis summarised in the remainder of this report provides a fascinating view of the current status of CycleLogistics across Europe; some of the key findings include:

- Commercial cycle logistics businesses are operating in 93 towns and cities across 17 European countries. 66 of these businesses have started in the last 7 years.
- 48% (39 companies) of respondents are working with traditional logistics companies providing last and first mile delivery services.
- Over 900 standard bikes, trailers, cargo bikes, cargo trikes and quads are being used to provided delivery services by 80 cycle logistics operators.
- Around 1,250 staff are employed across 73 cycle logistics operators, up from 960 one year ago.
- The average pay rate for employed staff is €11.14 with the highest being €25 and the lowest €3.
- The average target income per rider to achieve a sustainable business is €24.92 with the highest being €66 and the lowest €8.
- Turnover for 56 companies responding ranged from €10,000 up to €1m or more however only 17% claim to make a profit with 46% only breaking even. A number of respondents preferred not to say.
- Only 11% of respondents are being subsidised in any way by local municipalities/authorities, etc.
- On average there are over 16,000 items delivered per day (up from 7,500 just one year ago) to over 10,000 delivery locations.

The survey also attempted to collect qualitative data on different types and manufacturers of cargo bikes and trikes and also the experiences working with traditional logistics companies. However not enough data was provided to provide a fair and unbiased analysis so unfortunately this has not been

included in the final summary report. We consider this essential information to collect and in looking forward will be exploring ways in which this data can be captured and fairly published.

Completion of the survey was entirely voluntary, could be completed anonymously and was targeted at businesses we are aware of. Anecdotally we think there could easily be a further 80 cycle logistics operators in Europe who we have yet to engage with and whose data it would be most valuable to capture.

Finally, we would like to thank everyone who responded to the survey and the research program Urban Technology from the Amsterdam University of Applied Sciences (AUAS) who assisted ECLF with the analysis of the responses and the preparation of this report.

2. Introduction

To get a better idea of the scope, scale, opportunities and common problems of cycle logistics, ECLF has distributed an online survey. The survey was open to respondents between March and April 2016. The target audience are companies that use cargo bikes/trikes to undertake delivery work. The research program Urban Technology from the Amsterdam University of Applied Sciences (AUAS) has assisted ECLF with the analysis of the response. This report presents a graphical representation of the survey answers. ECLF provided the data and the work has been carried out by researchers and student-assistants from AUAS.

The Amsterdam University of Applied Sciences (AUAS) is located in The Netherlands and has around 43.000 students, 4.000 employees, 80 bachelor programs and 8 research programs that are carried out together with academics and professionals. The research program Urban Technology explores and develops solutions for complex problems that arise in cities. The multidisciplinary projects address challenges relating to logistics and mobility, urban design, smart energy systems and circular economy.

3. Information on the data set and analysis

The survey consists of 97 questions divided in two parts. Part A has 28 questions and Part B has 69 questions. The survey has been distributed to more than 400 companies. In total 122 companies started the survey (response rate of approximately 30%) of which 38 respondents have been removed from the dataset as their answers were invalid. The final dataset includes 84 respondents that started with Part A. After finishing Part A, respondents were asked whether they would like to continue with Part B. In total 47 respondents started with Part B. None of the questions was compulsory, therefore the number of respondents (N) can differ per question. The graphical analysis is presented in 7 separate chapters. Some questions have been excluded from this report due to a lack of responses.

Analysis part A:

- General questions
- Services
- Fleet
- Staff
- Information Technology
- Financial

Analysis part B:

- Operational data

4. Analysis Part A: General questions

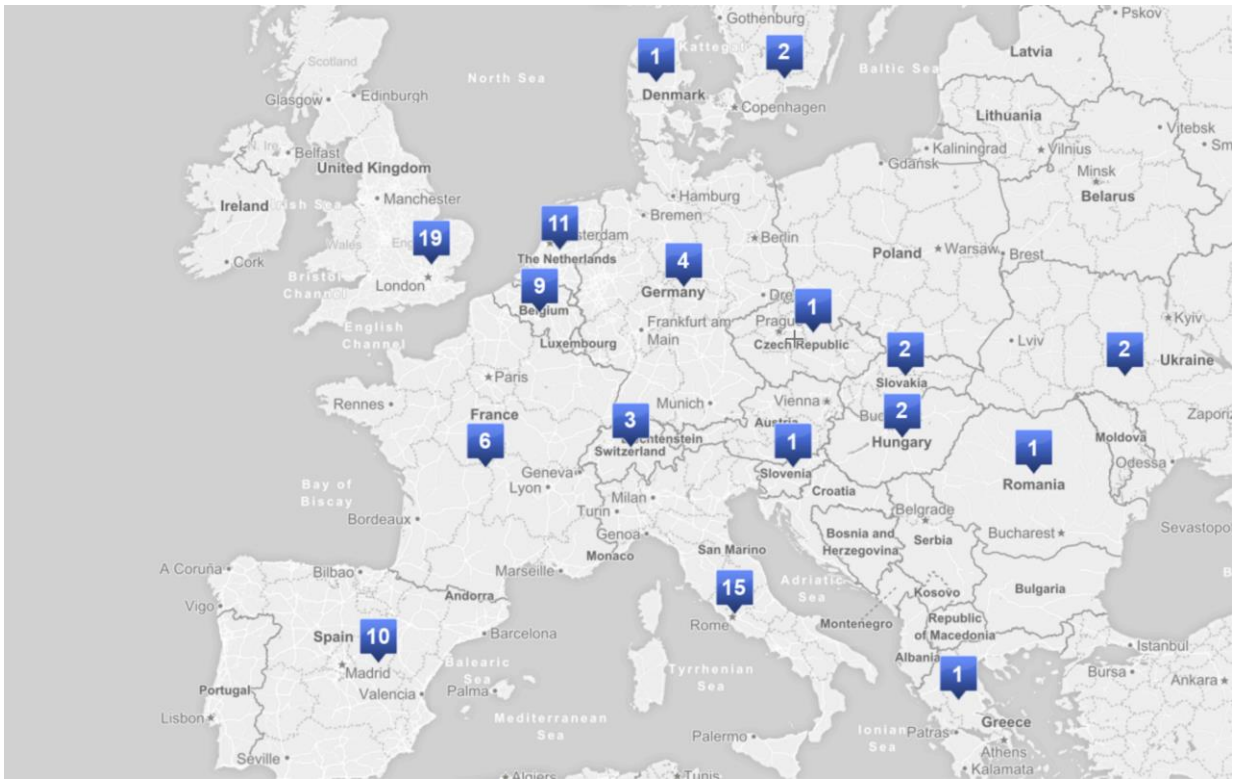
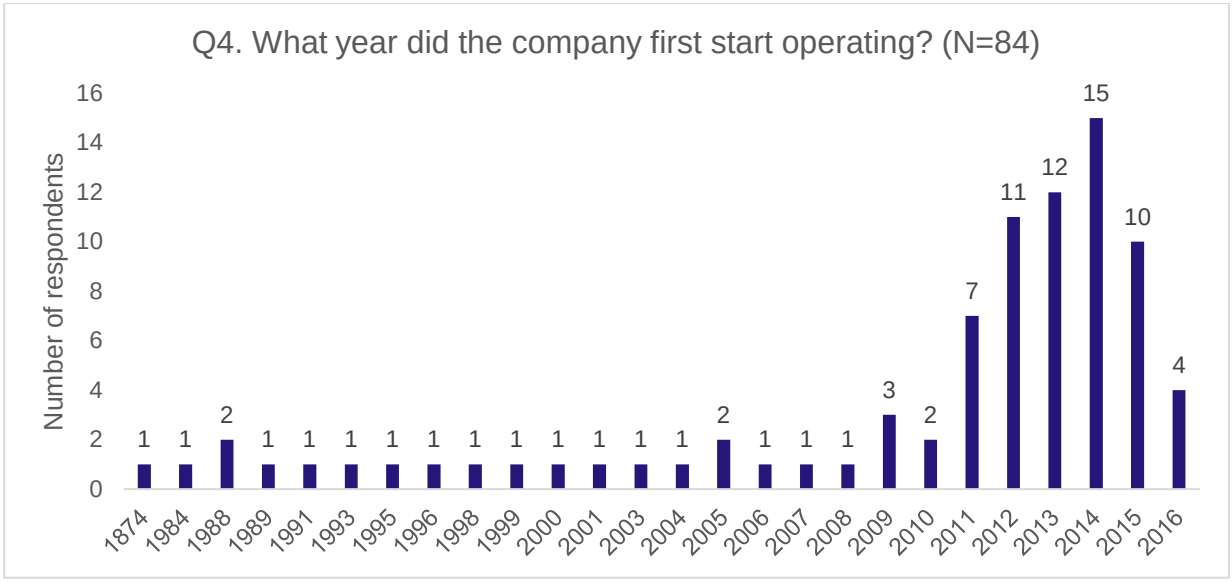
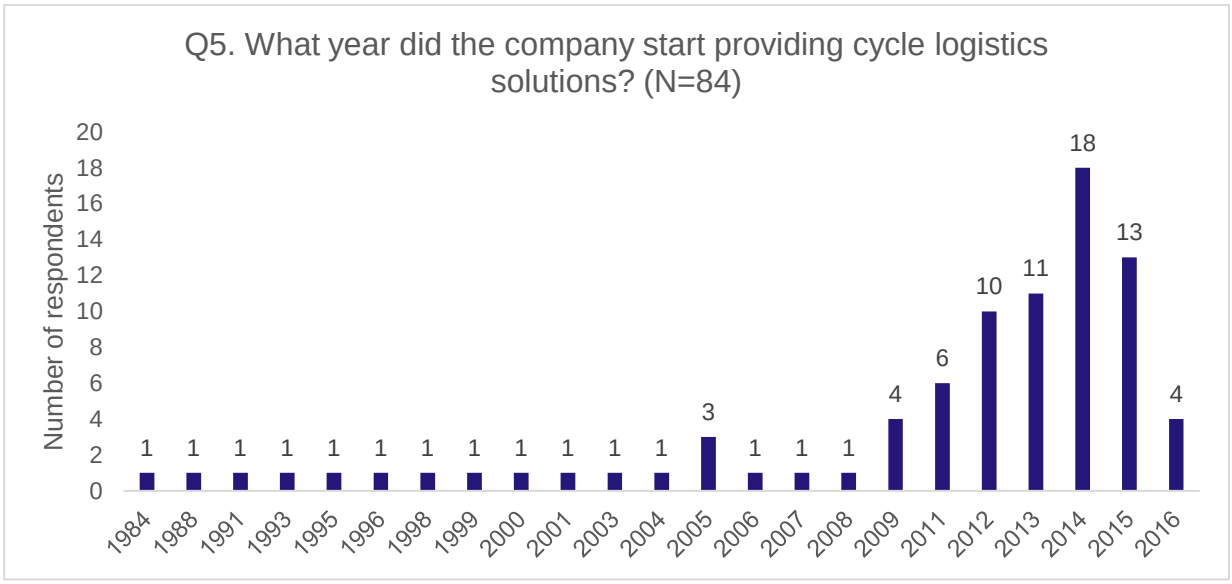


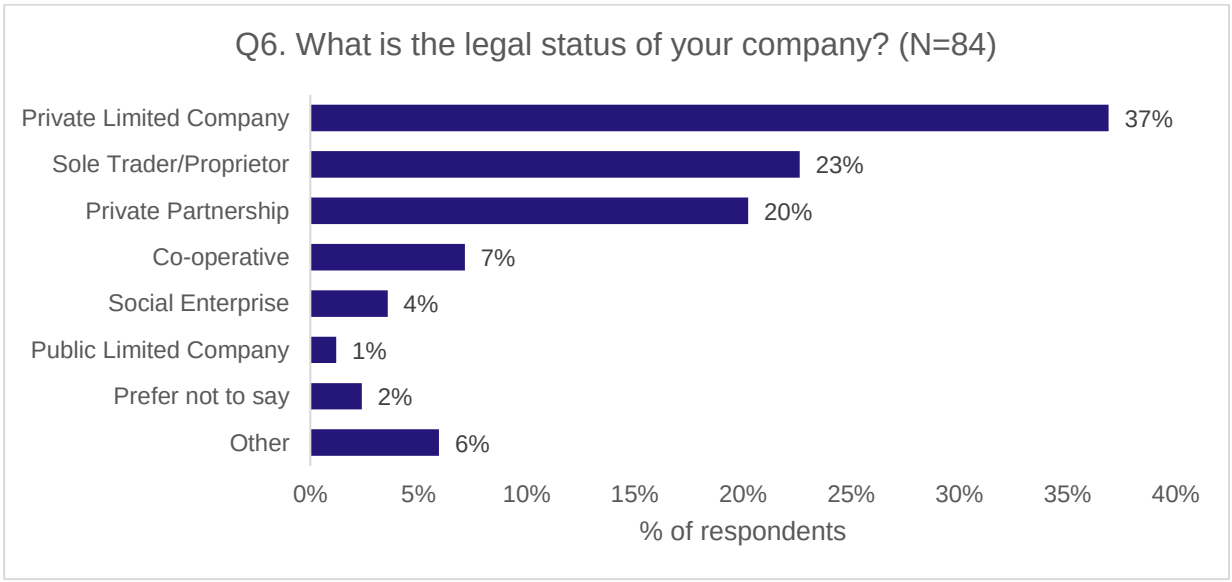
Figure 1 Q8a. Map of countries where cycle logistics companies currently operate

Country	Number of cities/towns where cycle logistics companies currently operate
Belgium	7
Czech Republic	12
Denmark	1
France	9
Germany	3
Greece	1
Hungary	1
Italy	15
The Netherlands	10
Romania	1
Slovakia	2
Slovenia	1
Spain	10
Sweden	2
Switzerland	1
UK	15
Ukraine	2

Table 1 Q8b. Table of cities/towns where cycle logistics companies currently operate

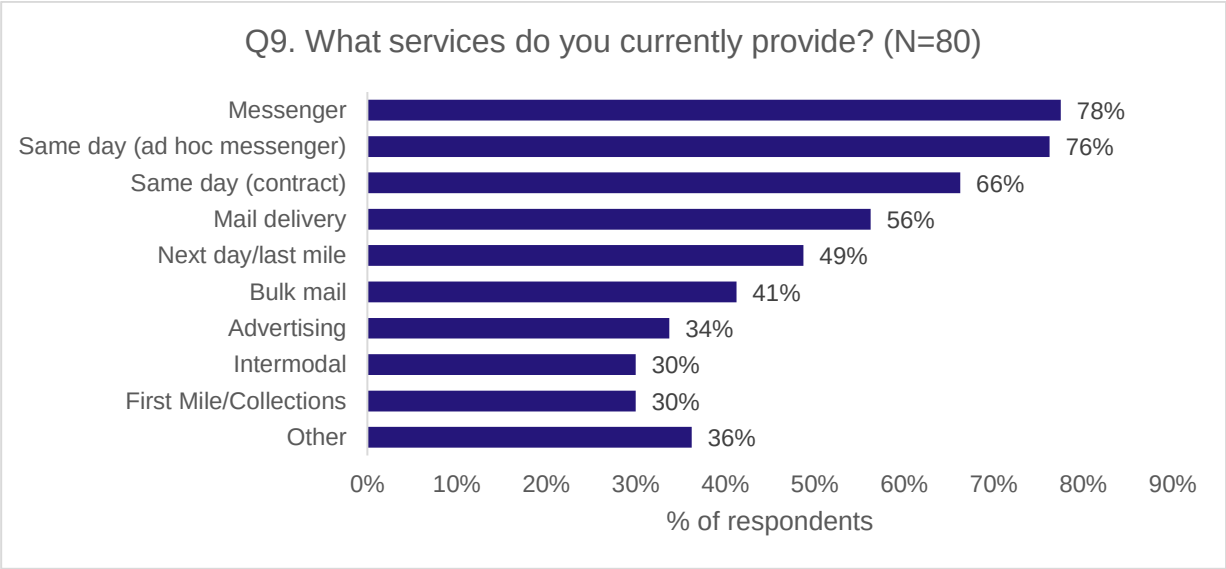




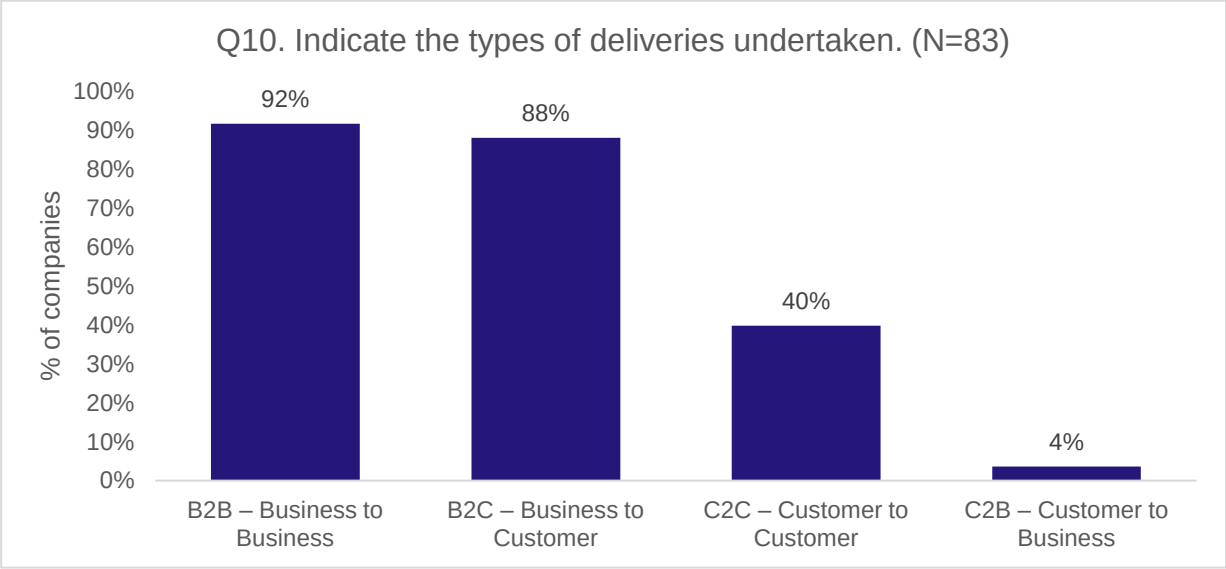


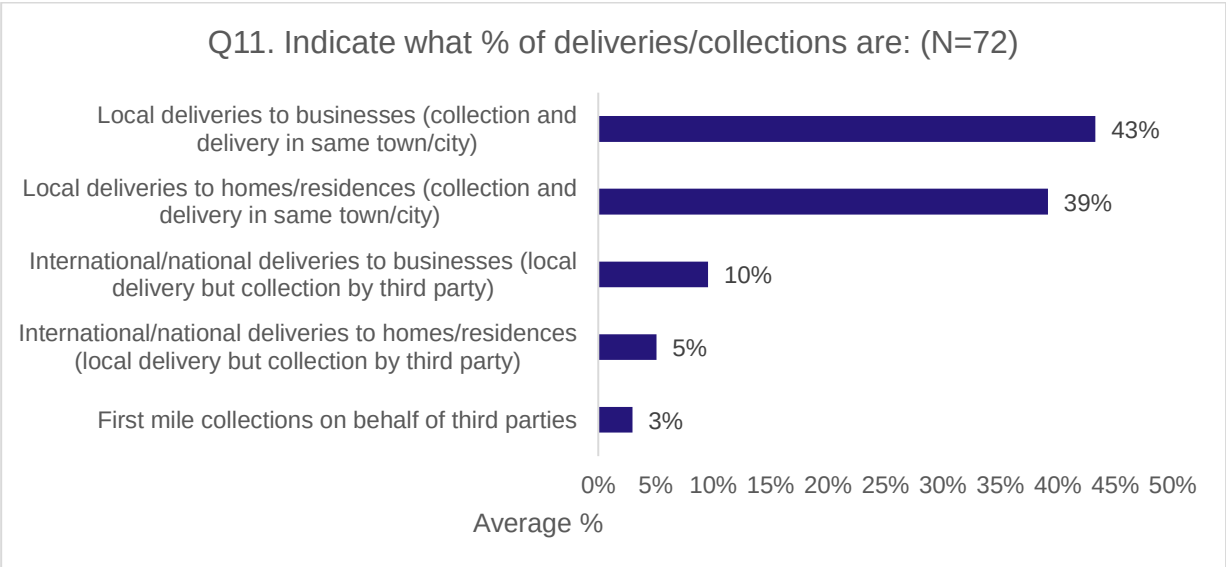
Examples of category 'Other': Cycling culture association, Community of goods etc.

5. Analysis Part A: Services

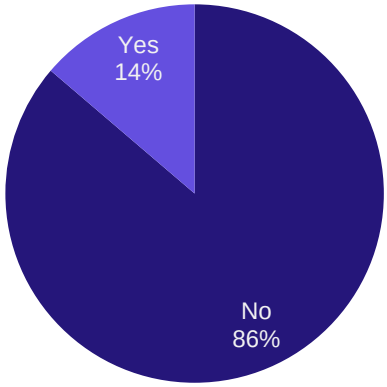


Examples of category 'Other': Food delivery, Trade waste recycling, Taxi-Bike service

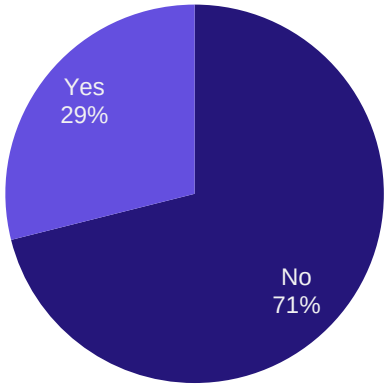


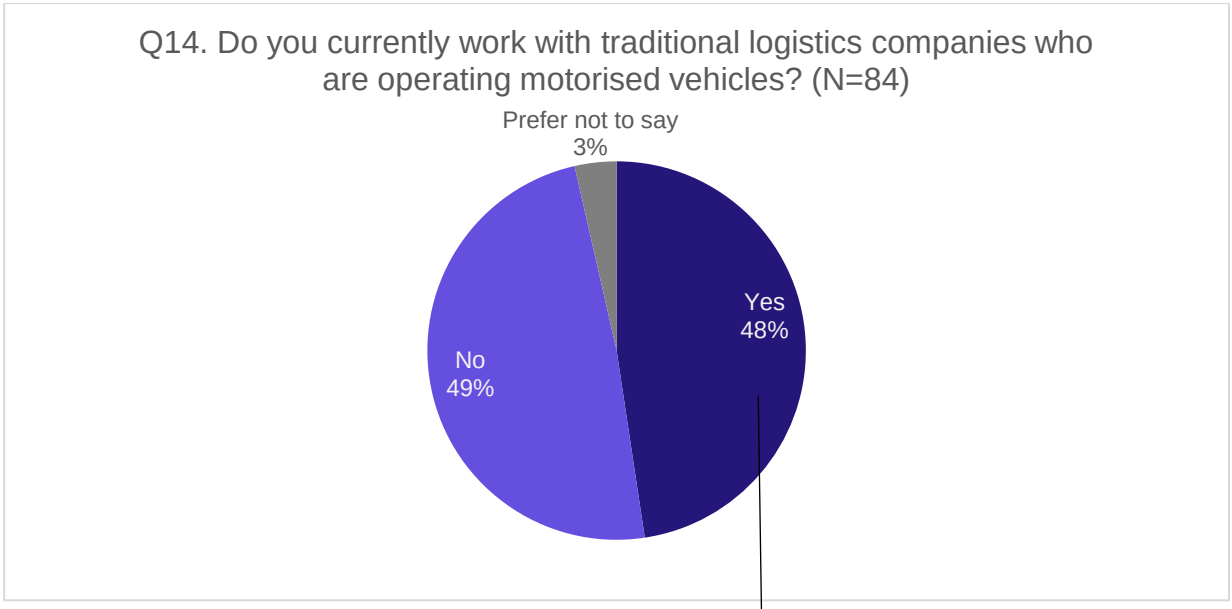


Q12. If you are unable to make a delivery do you currently drop items in a locker system? (N=80)



Q13. In the cities/towns you operate do you make use of a micro-consolidation centre (remote from your main depot)? (N=83)





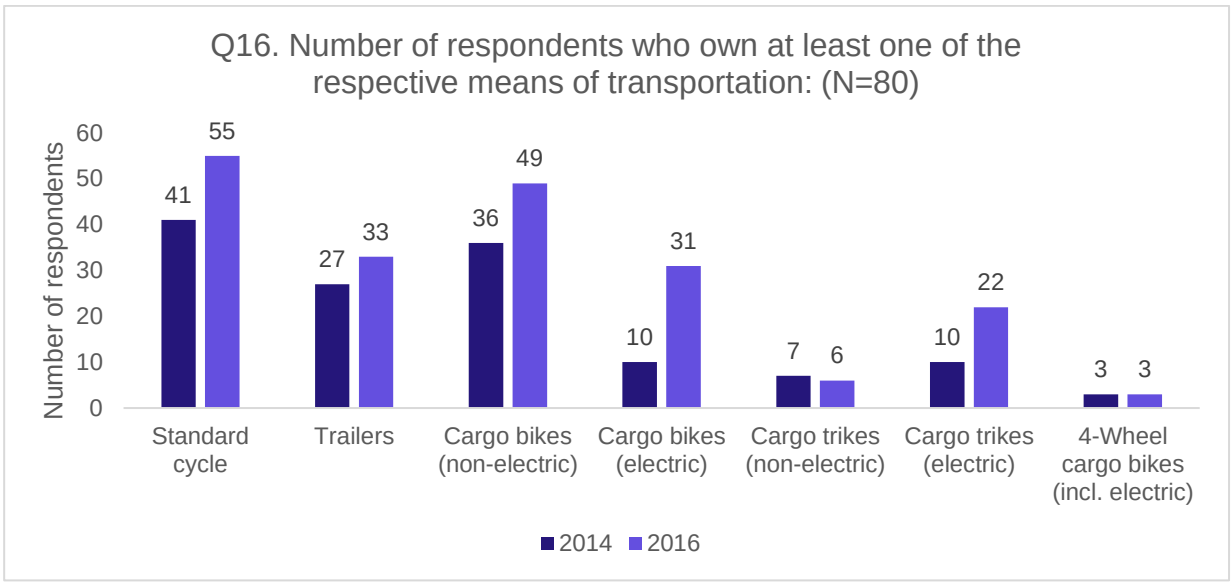
Number of logistics companies	Number of respondents
1	18
2	9
3	4
4	2
5	3
10	1
>10	2

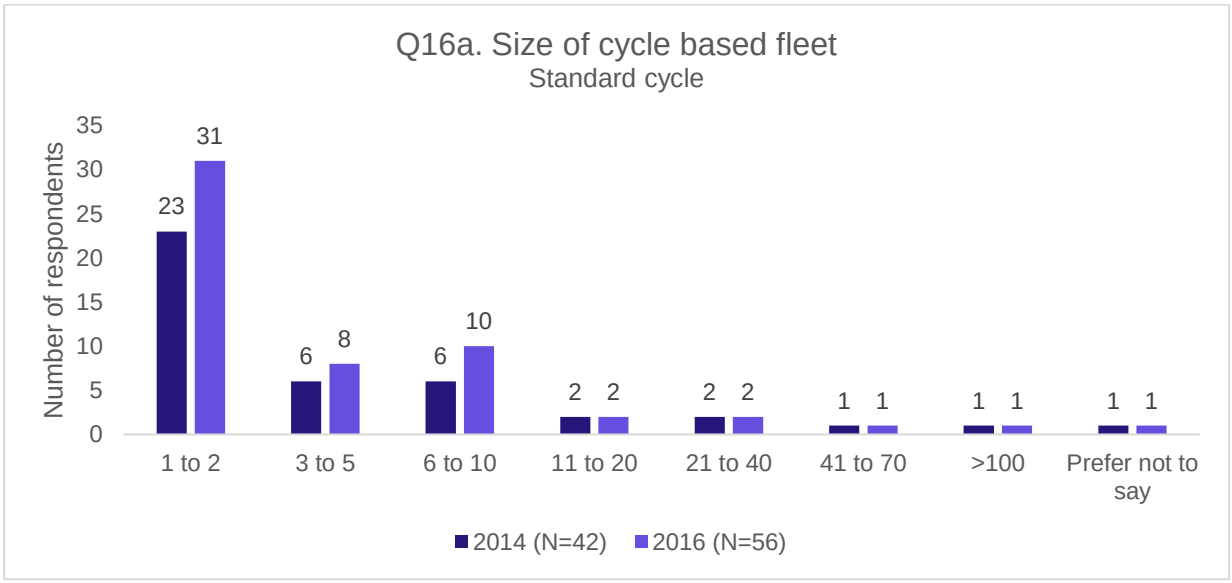
Table 2 Annex to Q14

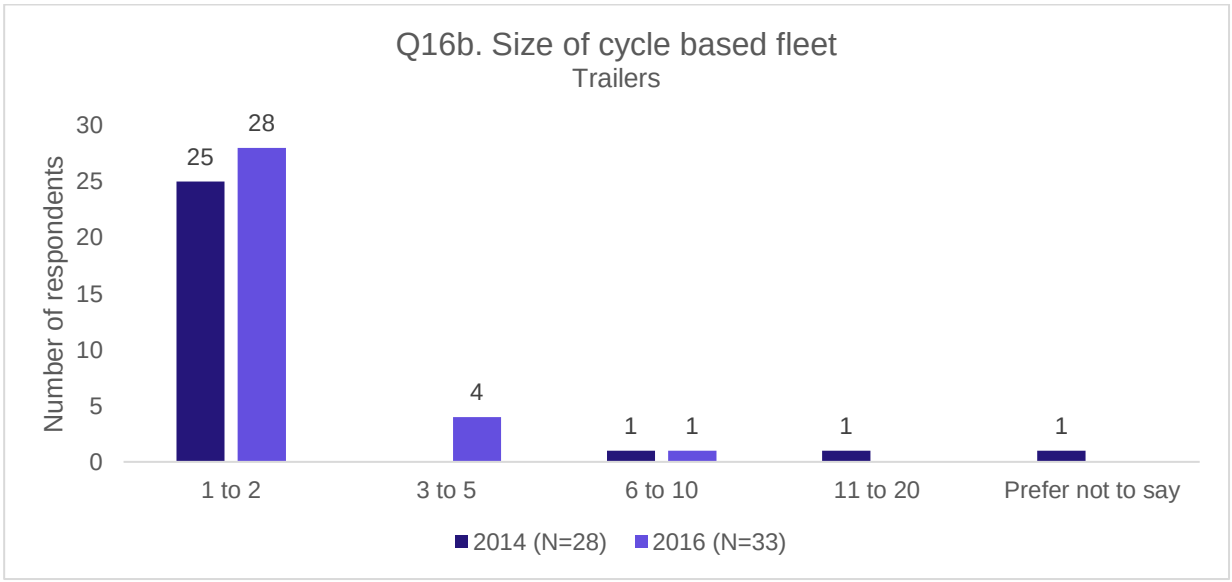
Table 3 Annex to Q15

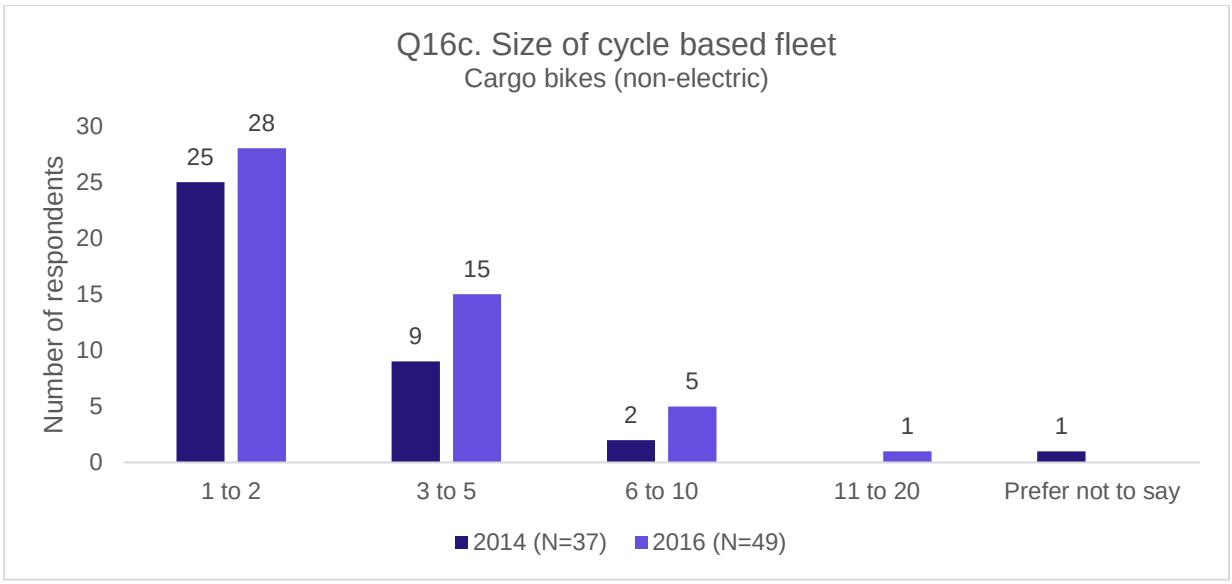
Category	Example
General organizational problems	*"Stability of the logistics organization and structure."*
Pricing	*"Pricing only works for very short distances."*
IT	*"The need of a common delivery application for all companies."*
Size/volume parcels	*"Size of consignments."*
Time management	*"Getting items on-time at my hub due to traffic."*
Fluctuating quantities	*"Variable quantities week to week/day to day."*
No direct connection to end customer	*"They aren't as careful as we are. We often have to be the public face of their mistakes."*
Delivery (location of stations/hubs)	*"Decentral pick-up station."*
Use of cargo bikes and first/last mile deliveries	*"Large operators are still skeptical about the value of cargo bikes in the city centre for last/first mile deliveries and are reluctant to increase the volume of parcels we deliver. Also they seem to think that delivery by cargo bikes should be much cheaper than by van."*
Inefficiency	*"Spending time at their depot sorting other drivers deliveries."*
Other	*"Worried about security."*

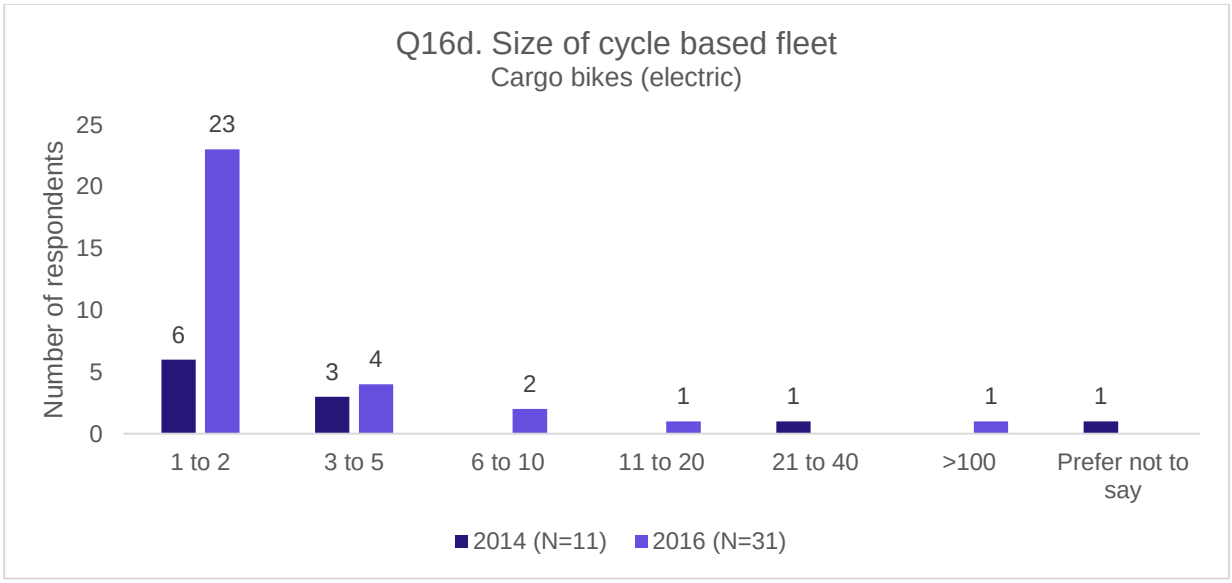
6. Analysis Part A: Fleet

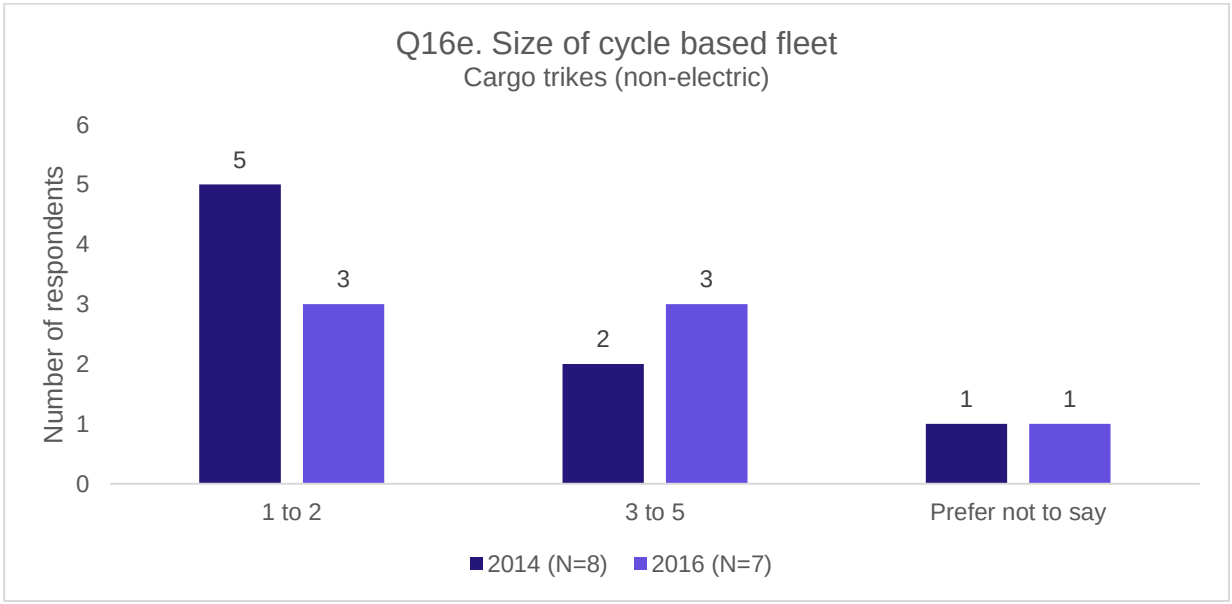


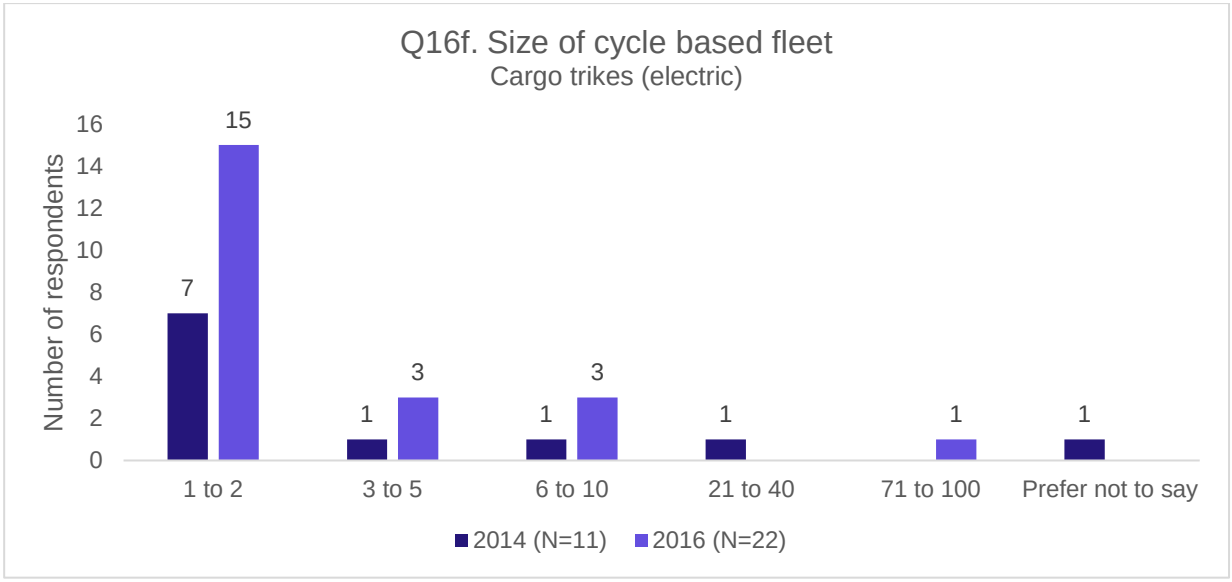


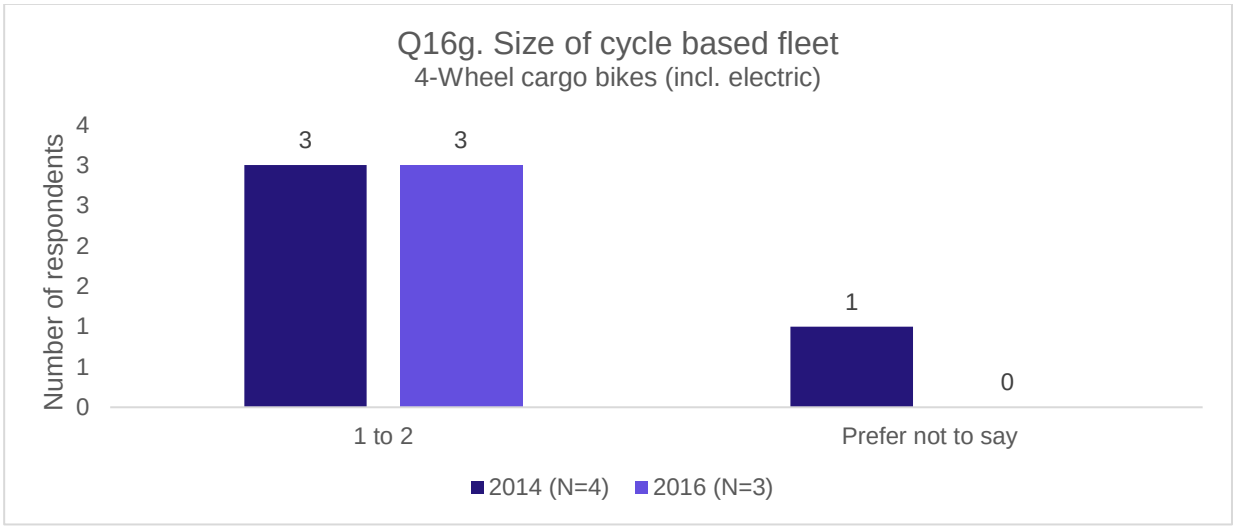


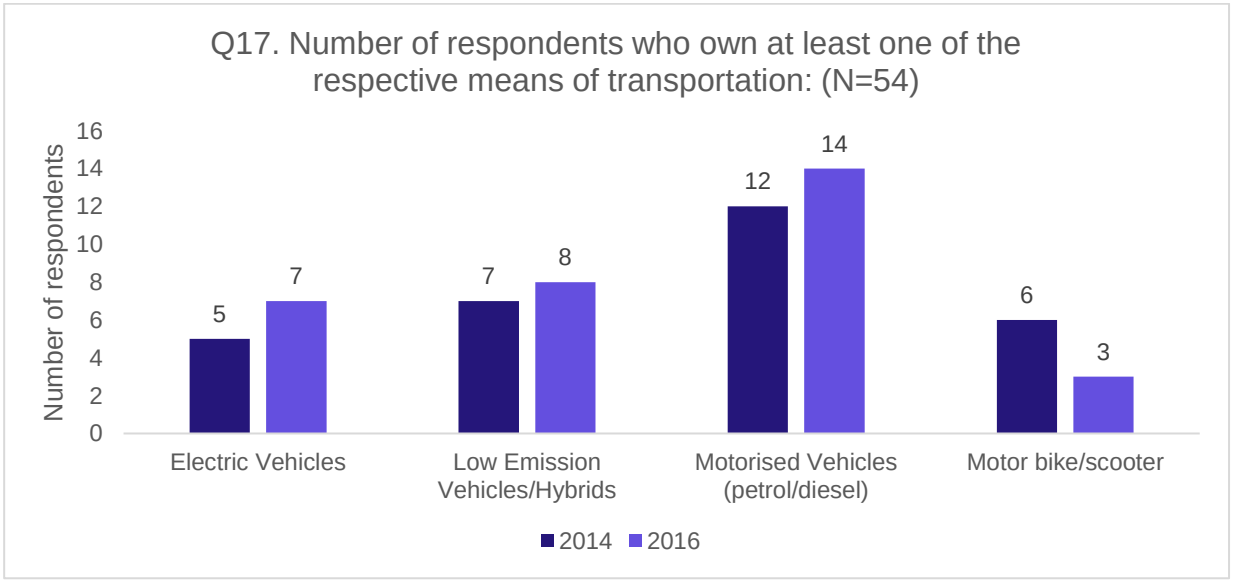


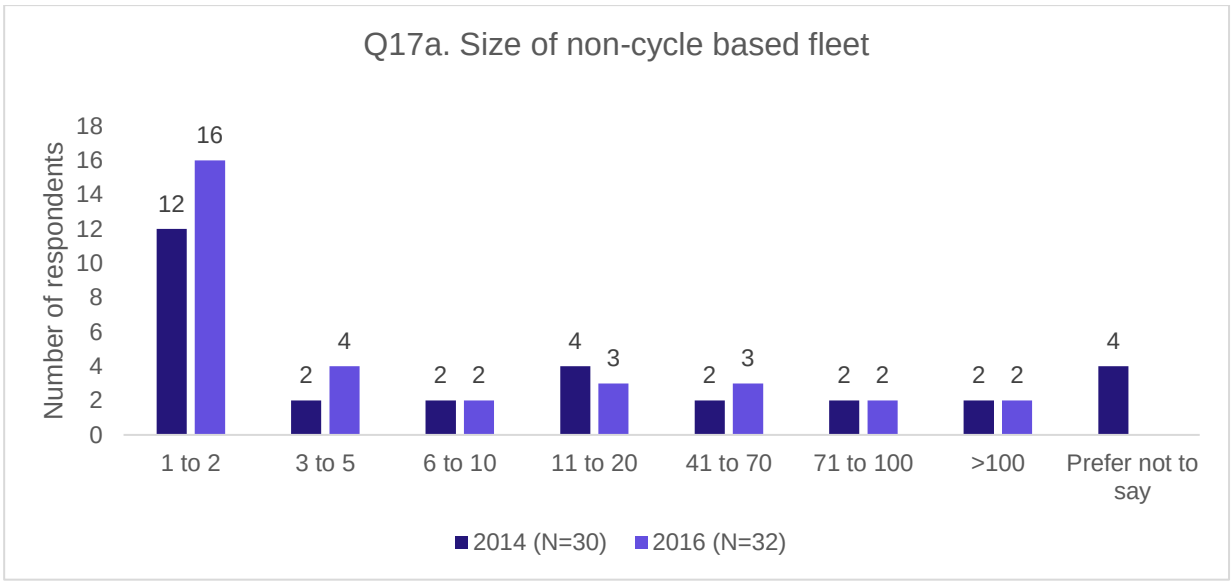








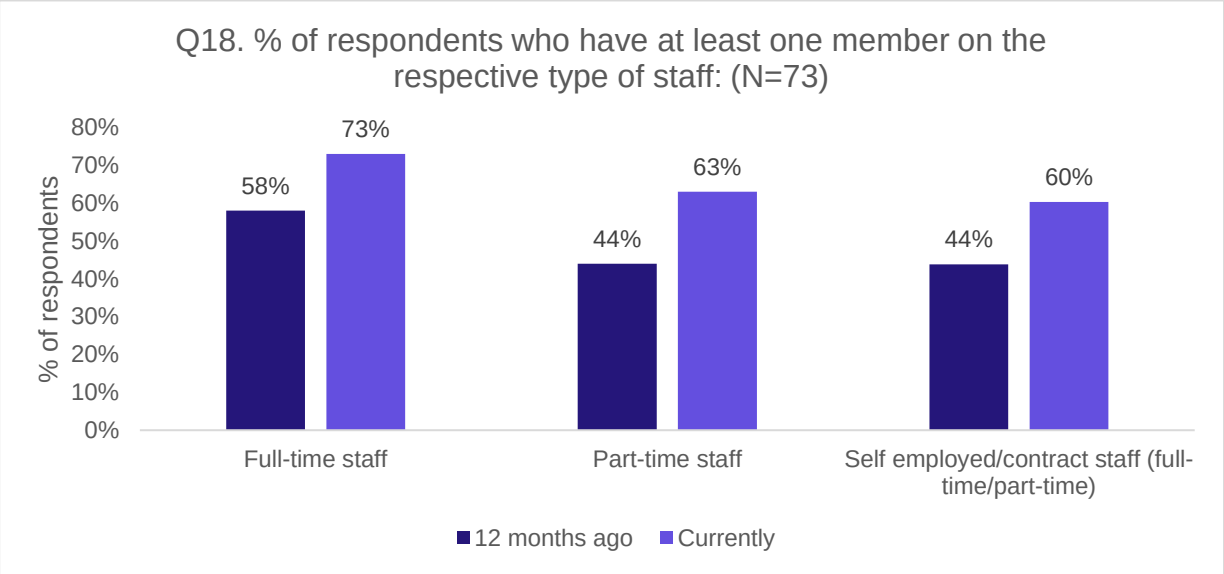




Summary of: Electric Vehicles, Low Emission Vehicles/Hybrids, Motorised Vehicles (petrol/diesel) and Motor bike/scooter

7. Analysis Part A: Staff

For this and each following graph or table concerning Q18: 'currently' is April 2016.



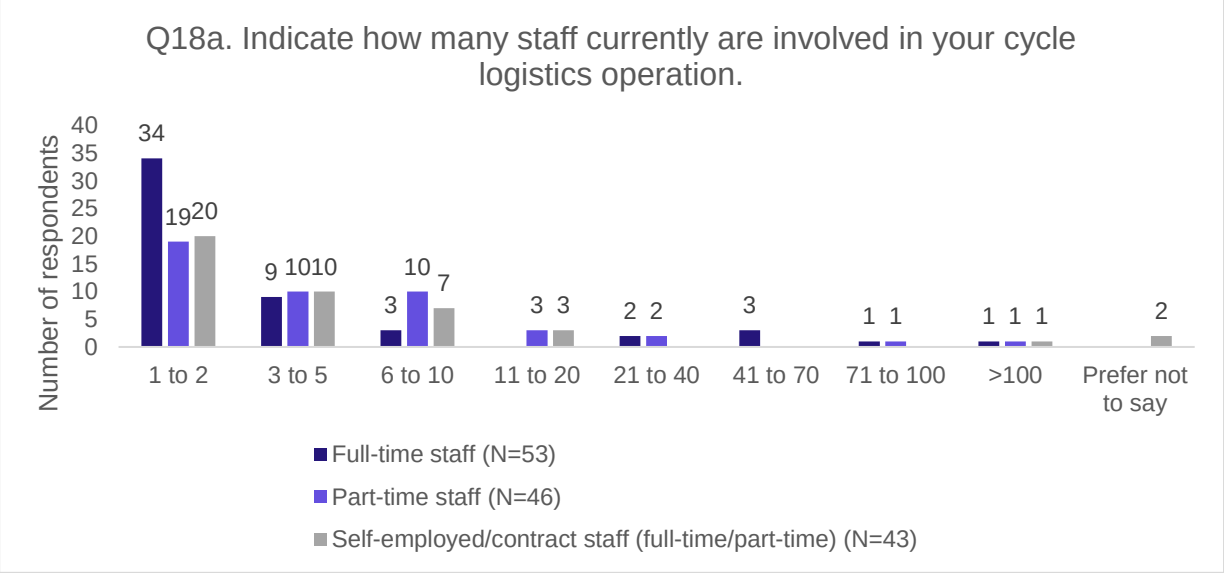
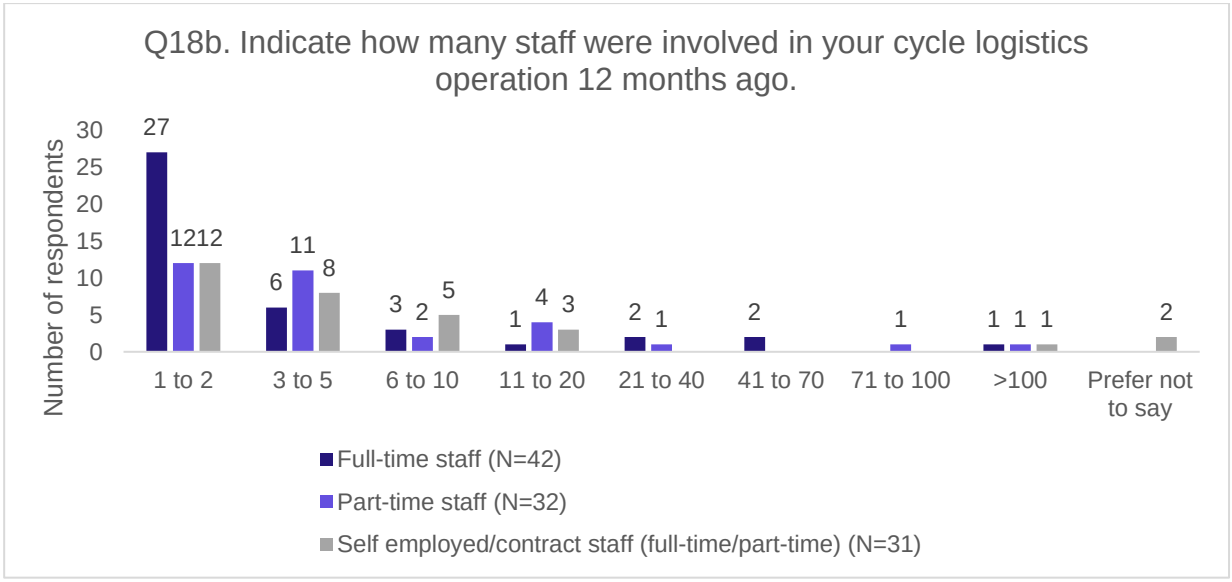
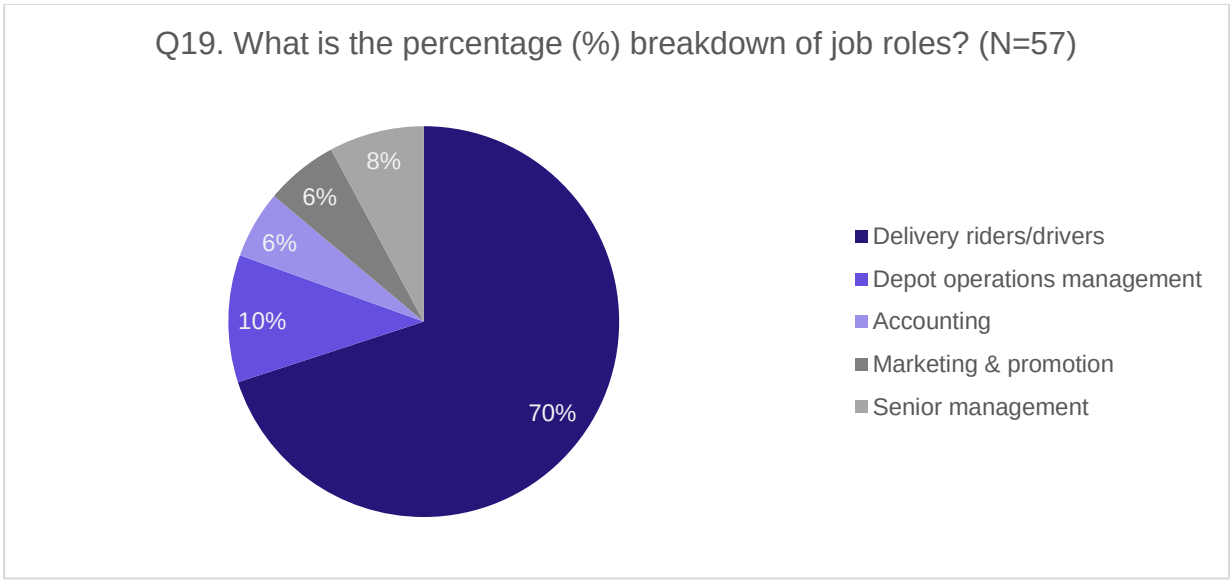
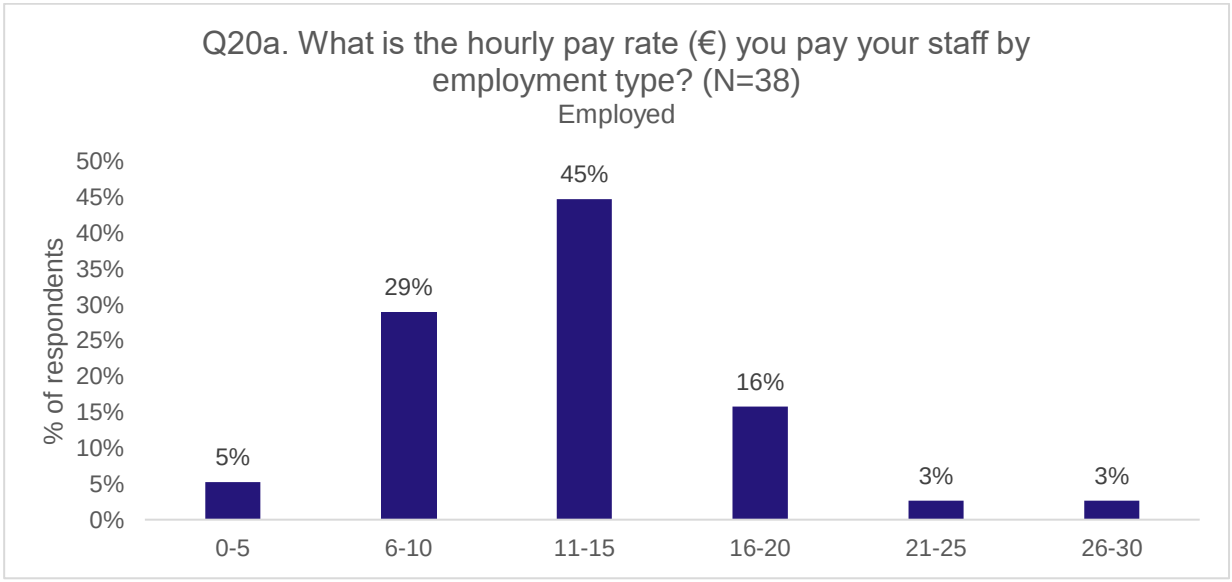


Table 4 Annex to Q18: Minimum and maximum total number of employees

Employment type	**12 months ago**		**Currently**	
	Min	Max	Min	Max
Full-time staff	298	454	415	633
Part-time staff	293	419	355	528
Self-employed/contract staff (full-time/part-time)	199	274	225	320
Total	**790**	**1147**	**995**	**1481**







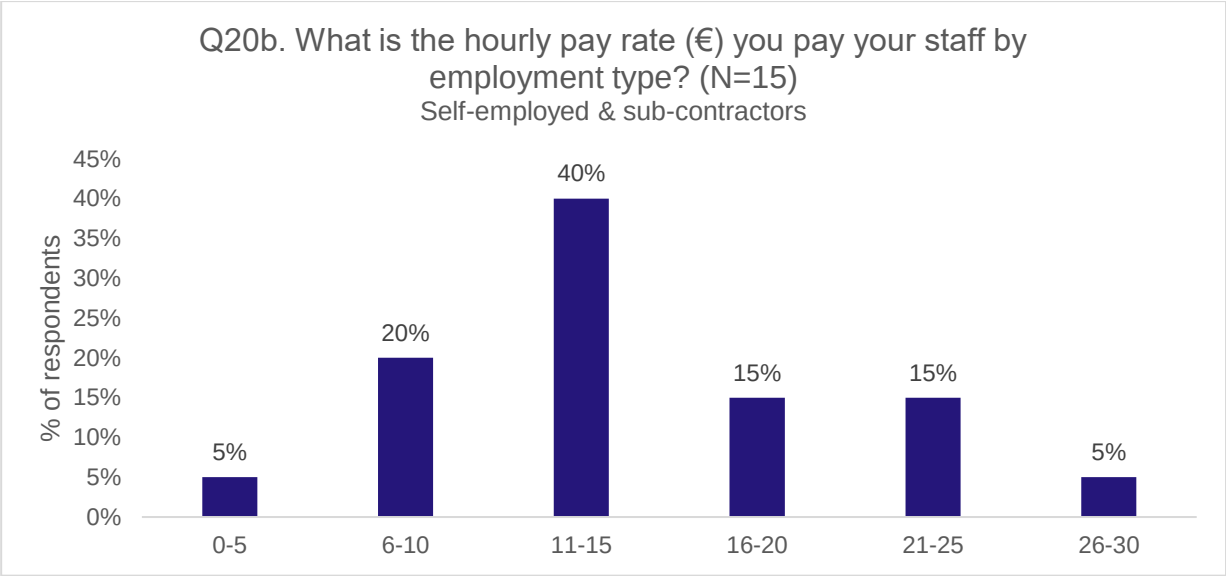


Table 5 Annex to Q20

Employment type	Responses	Rate (€) average	Highest (€)	Lowest (€)
Employed	38	11,14	25,00	3,00
Self-employed	18	13,13	25,00	2,00

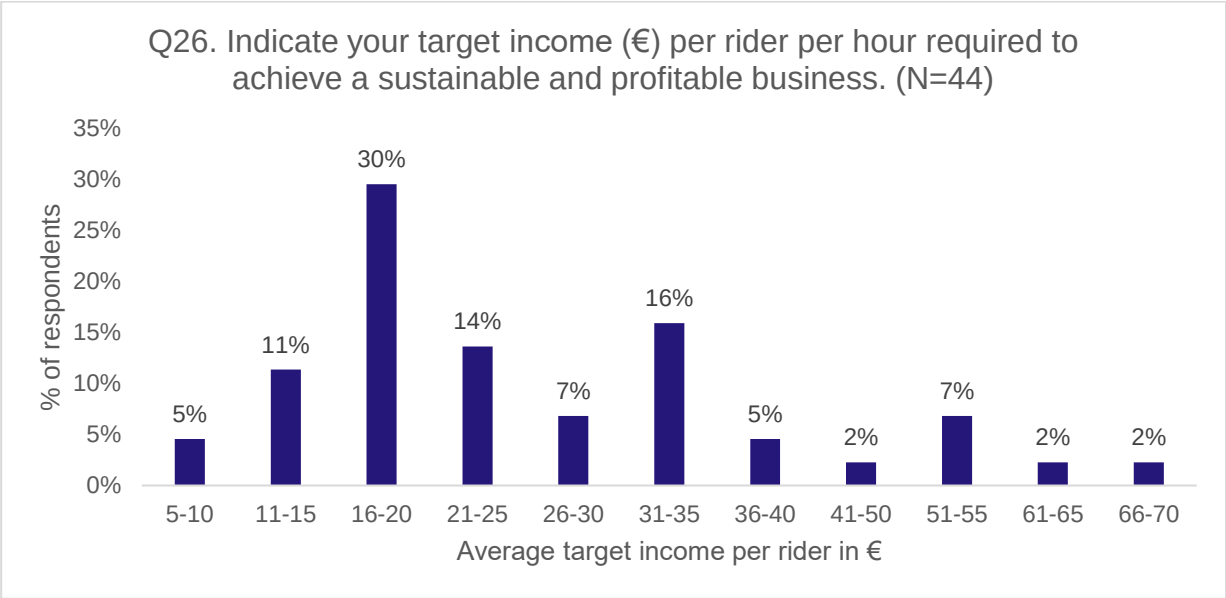


Table 6 Annex to Q26

Responses	Rate (€) average	Highest (€)	Lowest (€)
44	24,92	66,00	8,00

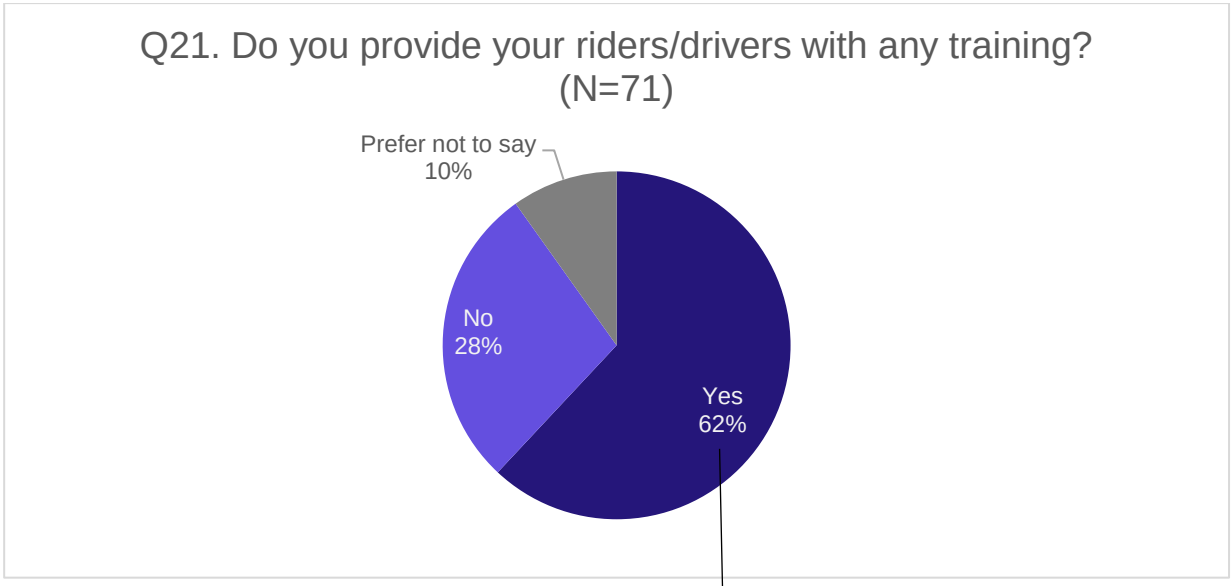
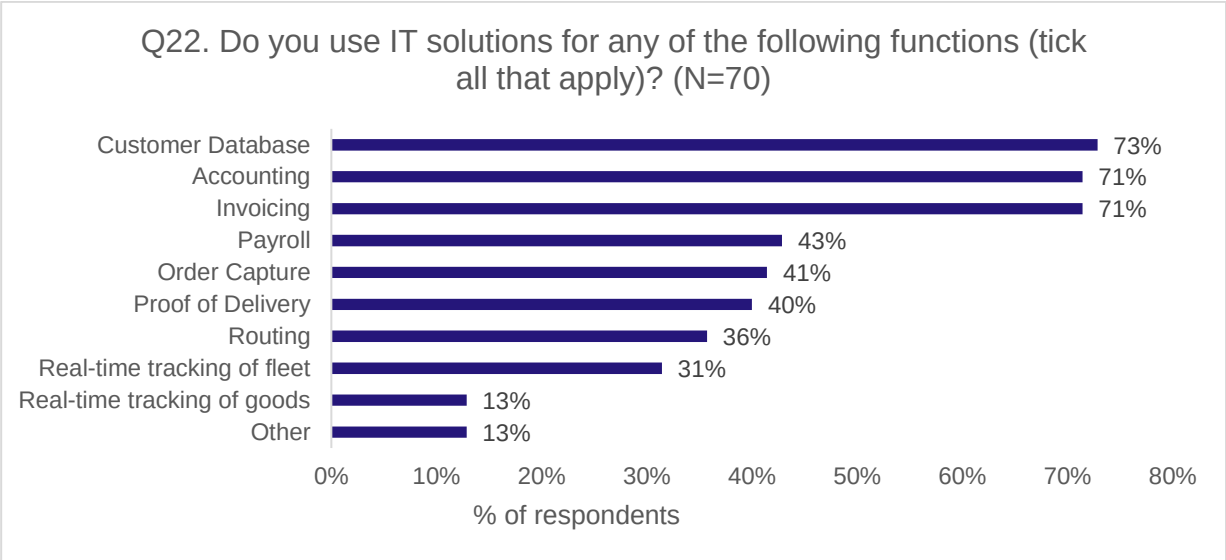


Table 7 Annex to Q21

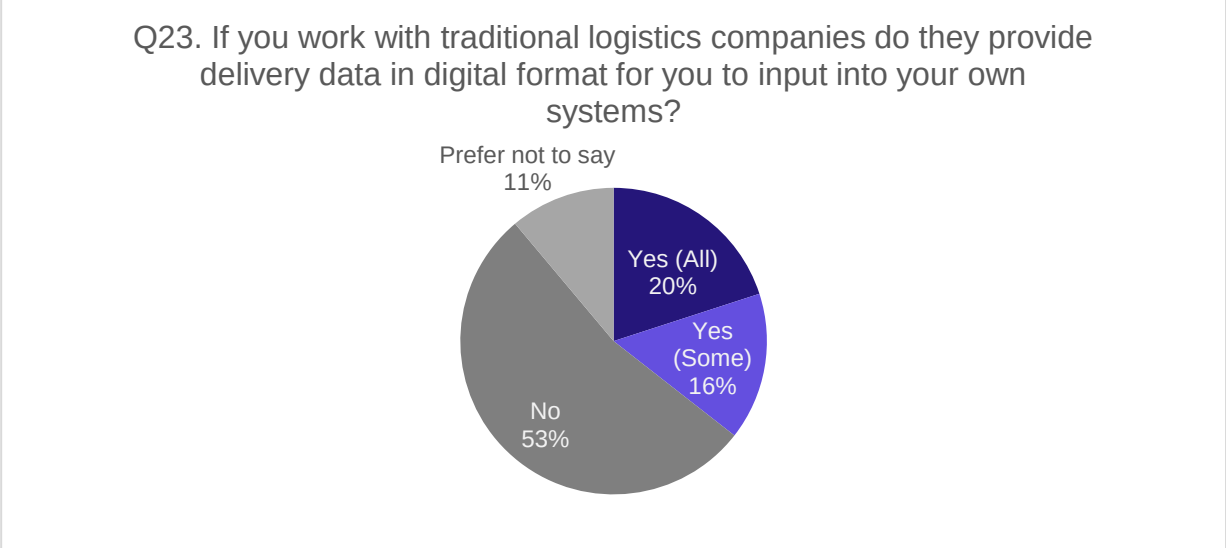
Type of training (N=44)
3 days training on the job
Policies, procedures, health and safety at work place
Bikeability - National Standard of Cycling UK
How to trike, how to use the energy system etc.
Week shadowing rider, with basic company inductions, still developing official training manual
Basic cargo training (empty and full bike), health and safety food guidelines
About 10 minutes
Familiarity with different cycles. Local knowledge. Delivery requirements for individual clients.
Special services, identification of clients, communication etc.
Two half days practical training on the road
GLS official trainings, 5 days gor first, and 3 hour/quarter year
National Standard for Cycle Training Level 2 - in-house induction to use of e-cargo bike
Significant cycling and logistics training - ongoing basis - quarterly reviews
Bikeability level 3 plus in-house procedures
I am following the course provided by Aftral "management of a logistic unit"
School of riding, training of communication with clients
Bikeability level 3
Free training provided by Go:Cycling
First Aid
Getting them out there with experienced couriers. Bike mechanics basics/check of knowledge
Lesson and books
Full training on SOP's
Use of terminal and local training
Bicycle repair, cargo biking, billing, IT usage
Cargo bike and traffic driving; customer relationship modes
We always hold their hand the first week and comfort them when they are feeling afraid. In the second week we throw them in a small room with nothing but their bike. That way we will ensure that they become one with their bike.
Operations, safety
Handling hazardous goods (provided by logistics company)
Operations and Customer relations

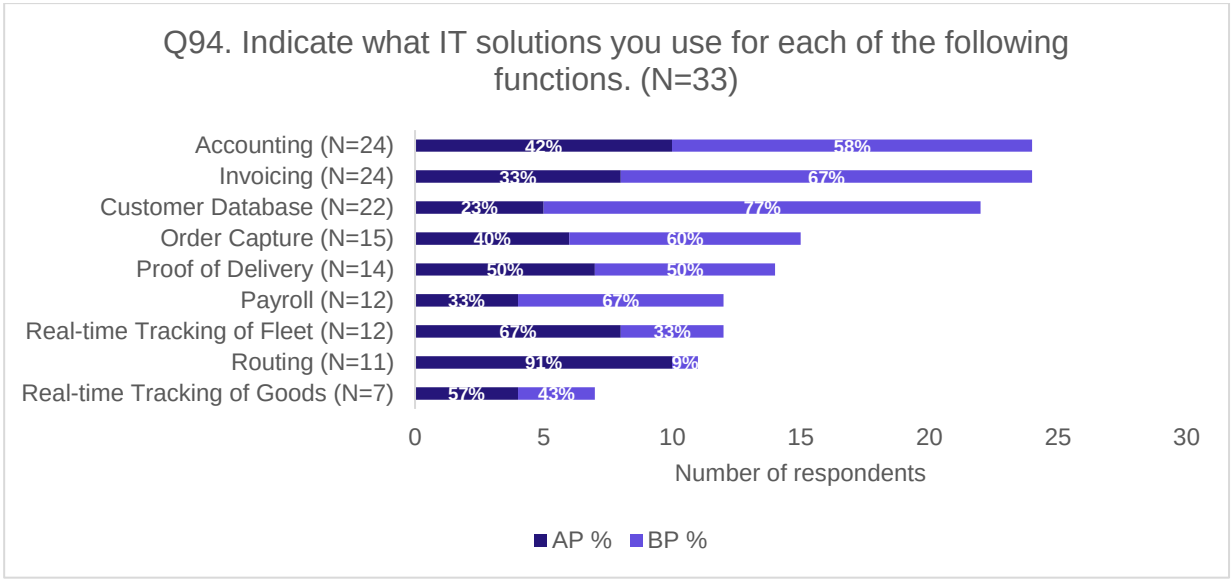
Use of: different vehicles, different devices, customer schedules, how to develop routes, etc.
Health and safety at the depot & on the road. How to plan the route efficiently.
Aspects of safety are gone over and I help new riders with routes. The cargo bikes are always tested off-road before anybody can use them on the road.
Safe driving, Handy cells utilization in accordance with logistic operator, general routines
Training on schedule, delivery mode, equipment (bike)
Access to detailed documentation and riding along first working occasions.
Bikeability level 3
Various days of doing the job with an experienced person
Most need to learn trike riding
Safety
Customer requirements
Various days of doing the job with an experienced person, procedures for each client type
Regulations
Riding in town
Customer care, *estudio callejero*

8. Analysis Part A: Information technology

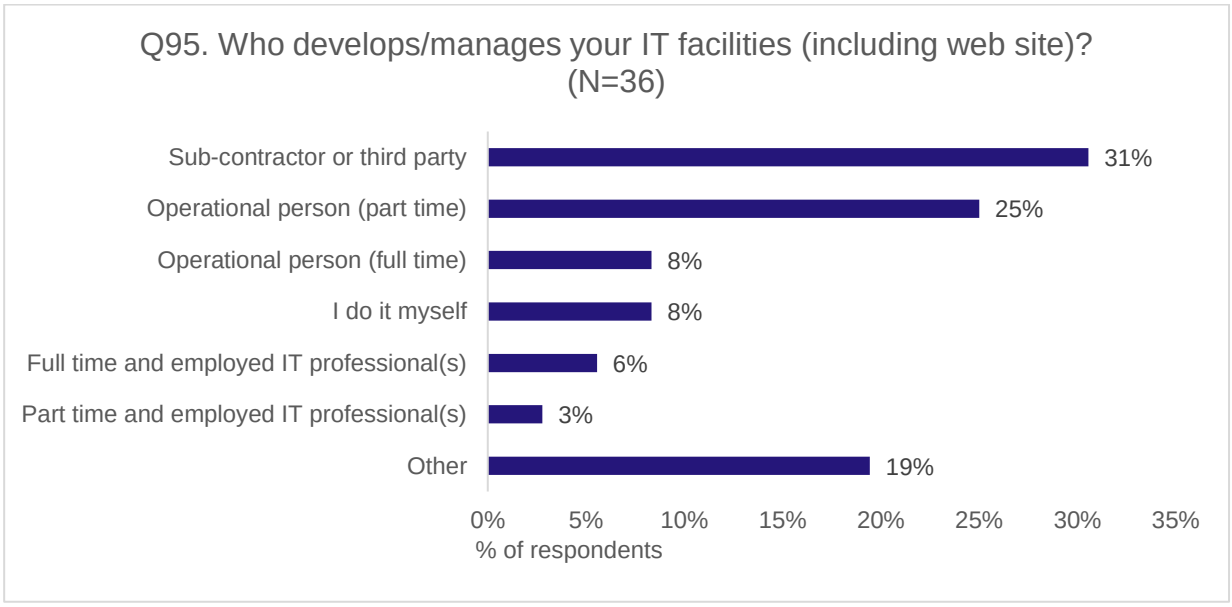


Examples of category 'Other': Information screen on trike, CO_2 savings, Mileage calculation, ERP





AP = apps/packages and BP = bespoke/proprietary



Examples of category 'Other': No specific person, Employed students, Relative, We don't use IT

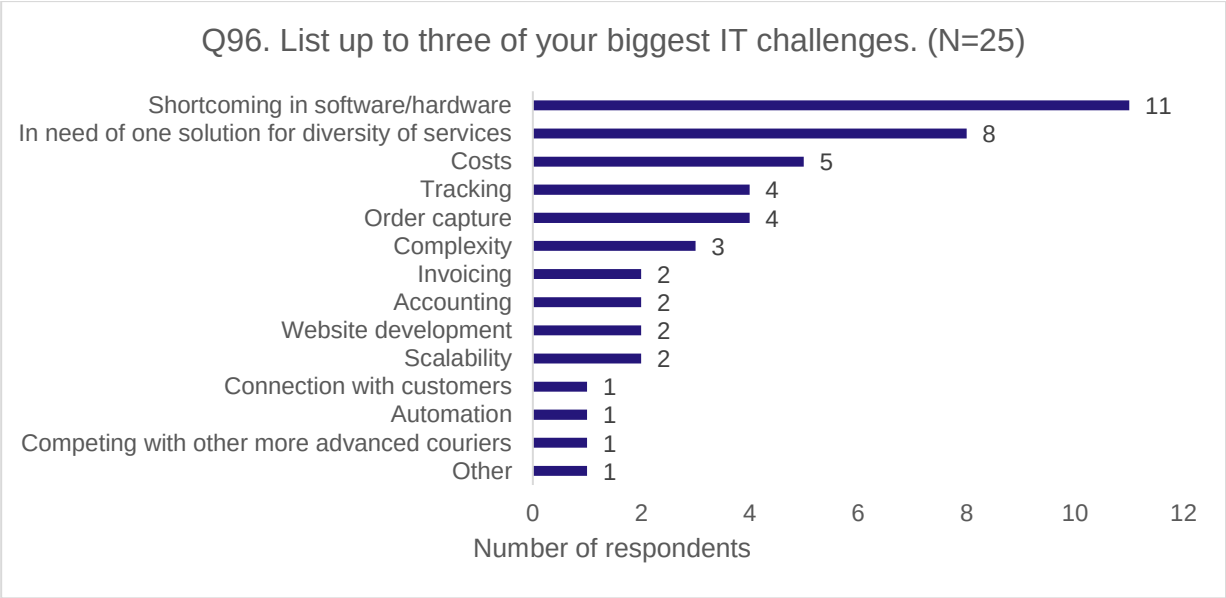
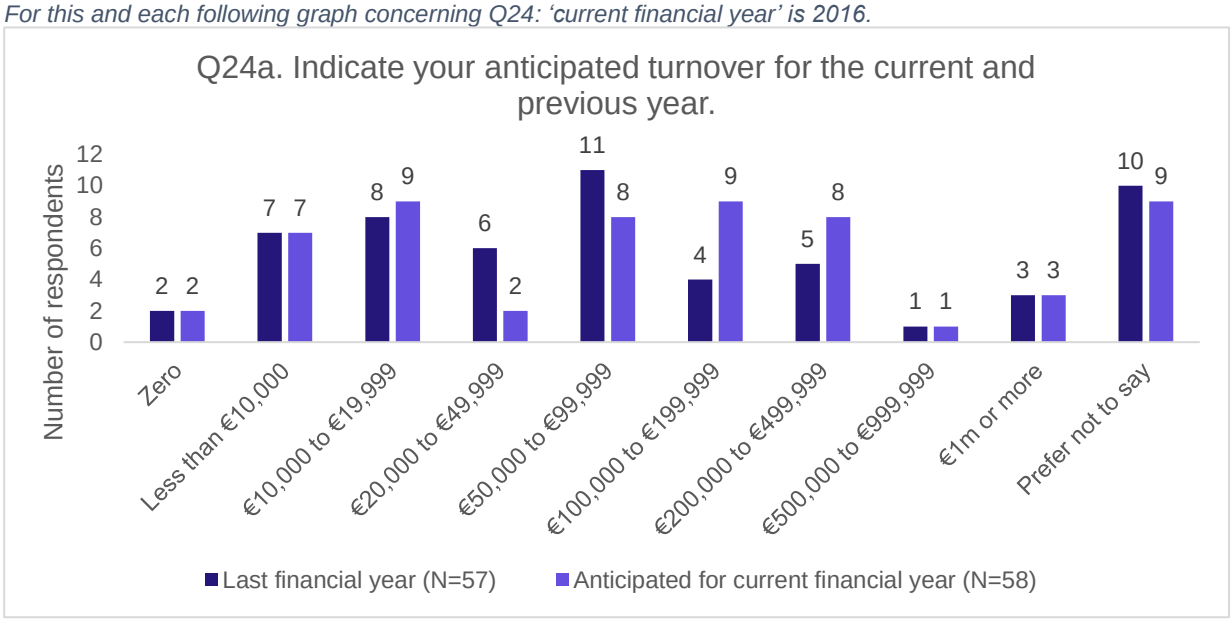


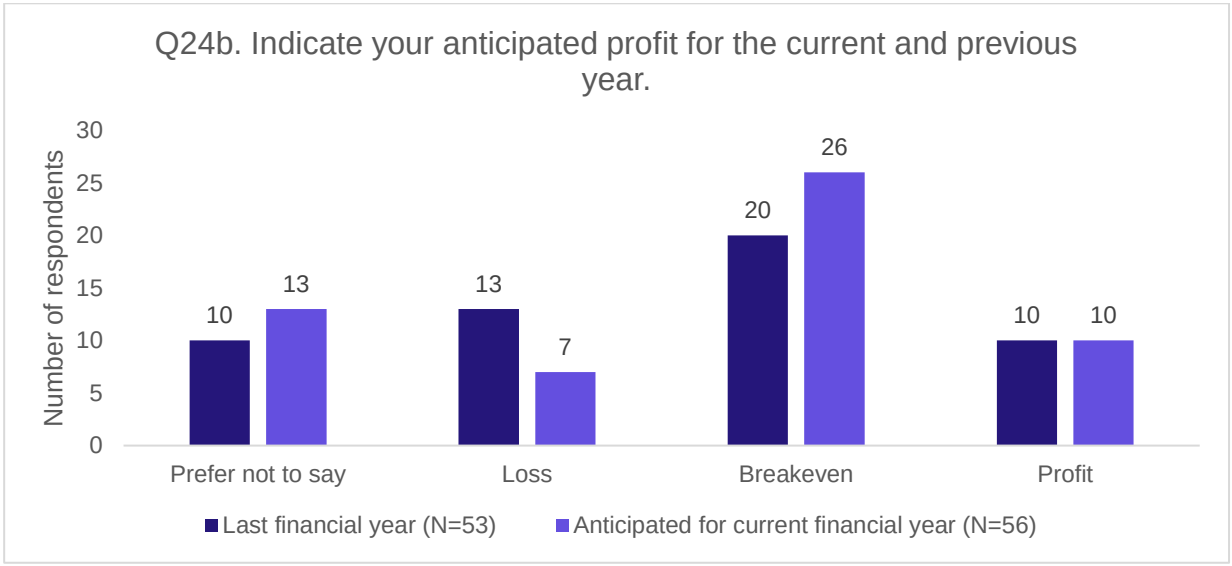
Table 8 Annex to Q96

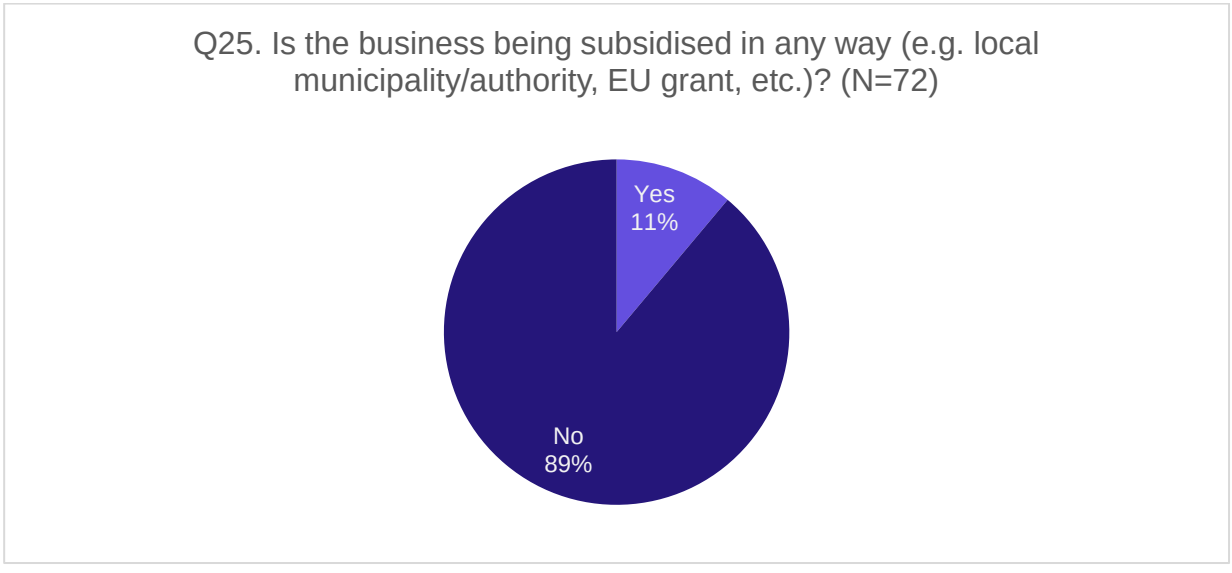
Category	Example
Shortcoming in software/hardware	*"Software bugs / fixing them manually."*
In need of one solution for diversity of services	*"Use the same application for different logistics companies."*
Costs	*"Can't find cheap enough system for low volumes."*
Order capture	*"Creating a cooperative online solution for ordering, tracking and manage deliveries."*
Tracking	*"Precise system of time optimization for routing and delivery."*
Complexity	*"Complicated technology."*
Scalability	*"Managing a growing workload."*
Website development	*"New website."*
Accounting	*"A precise system for accounting."*
Invoicing	*"Lots of copy/paste in my invoicing, could result in mistakes."*

9. Analysis Part A: Financial

For this and each following graph concerning Q24: 'current financial year' is 2016.







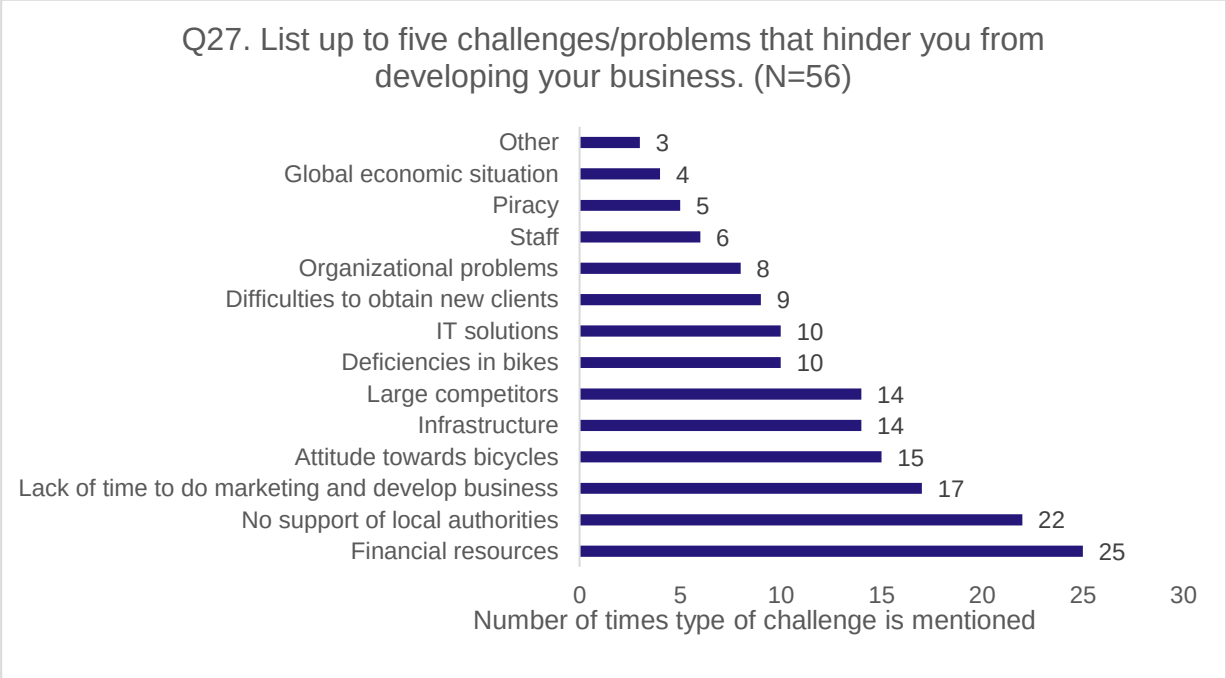
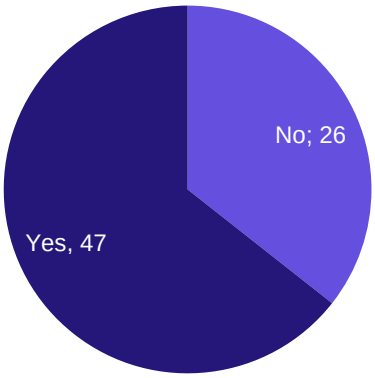


Table 9 Annex Q27

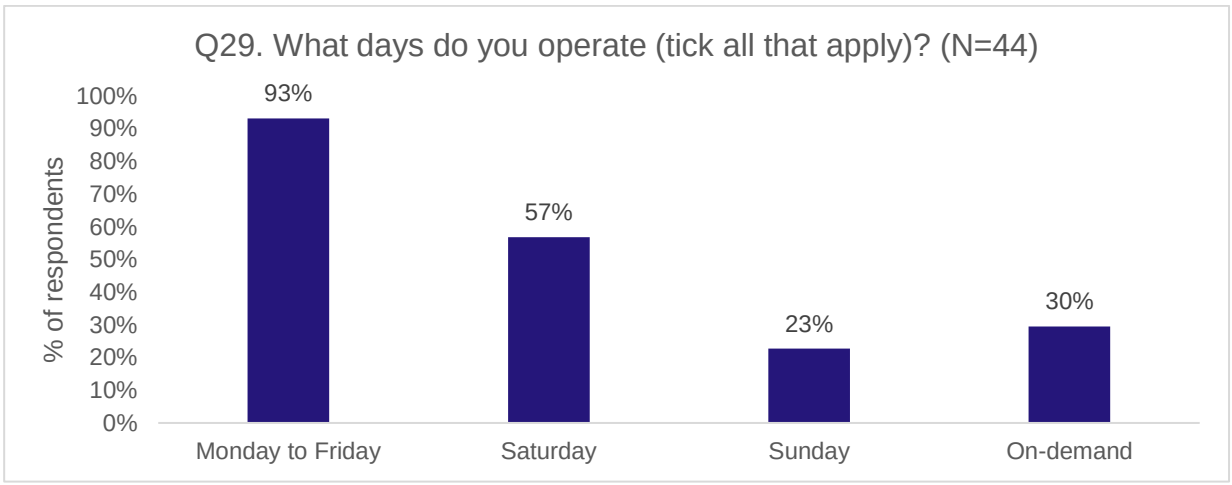
Category	First example	Second example
Financial resources	*"Save money to buy a cargo bike."*	*"Covering start-up costs."*
No support of local authorities	*"Lack of support (financial, competences development) from local authorities or European institutions."*	*"The restrictions in order to make a sustainable delivery."*
Lack of time to do marketing and develop business	*"Split time between operations and development."*	*"Communication - being known as a reliable logistic solution."*
Attitude towards bicycles	*"Sad to say, some people can't take bikes seriously."*	*"Traditional logistics companies are reluctant to try something new."*
Infrastructure	*"Distance in between the different quarters without having a hub at my disposal."*	*"No bicycle lanes."*
Large competitors	*"Our biggest competitor is strongly subsidized which creates market distortion."*	*"The impenetrable institutionalisation of some regular motorised logistics companies."*
Deficiencies in bikes	*"Unreliable cargo bike constructions."*	*"Safety in the delivery."*
IT solutions	*"To improve data exchange with traditional logistics."*	*"Find good IT solutions to improve efficiency and integrate big suppliers chain."*
Difficulties to obtain new clients	*"Getting a good level of consistent work."*	*"More parcels (last miles)."*

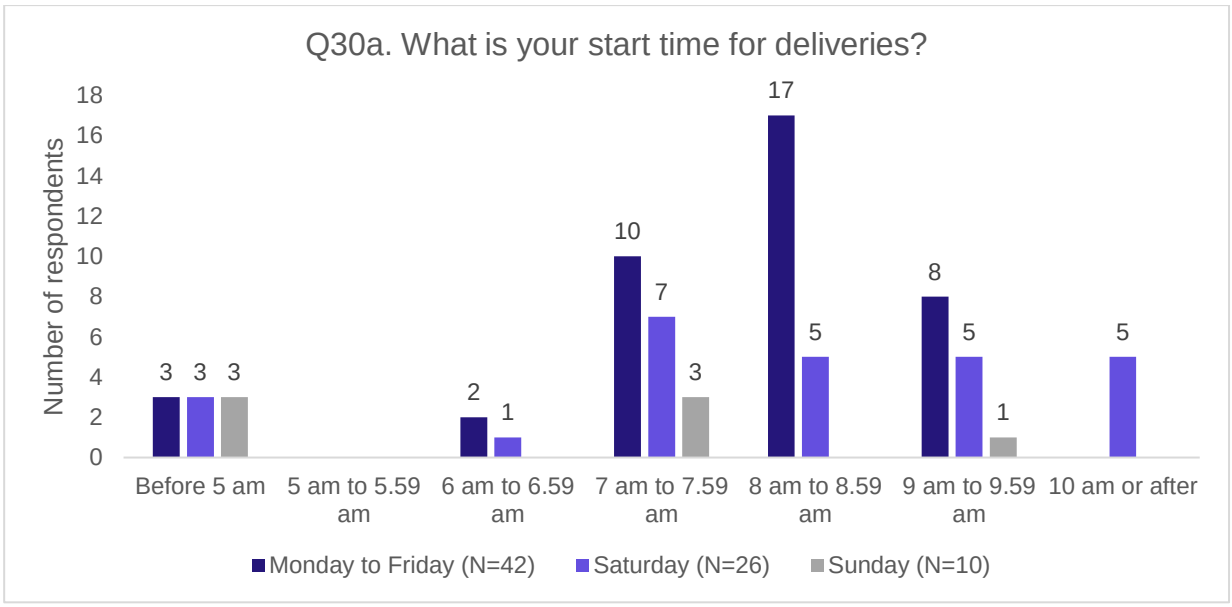
Organizational problems	*"Limited knowledge of managing logistics."*	*"Challenging to bring in traditional logistics firms due to lack of contact info."*
Staff	*"Not yet reached enough turnover to pay healthy salaries -hard to keep good staff in the long run."*	*"Lacking staff with proper competences -not enough income to pay them adequately."*
Piracy	*"Piracy in the messenger/delivery sector, lack of inspections."*	*"Copy cat style of larger greenwashing competitors."*
Global economic situation	*"Shrinking market."*	*"Small economy."*
Other	*"Low co-operation between local stakeholders."*	*"Lack of familiarity of this type of thing working elsewhere."*

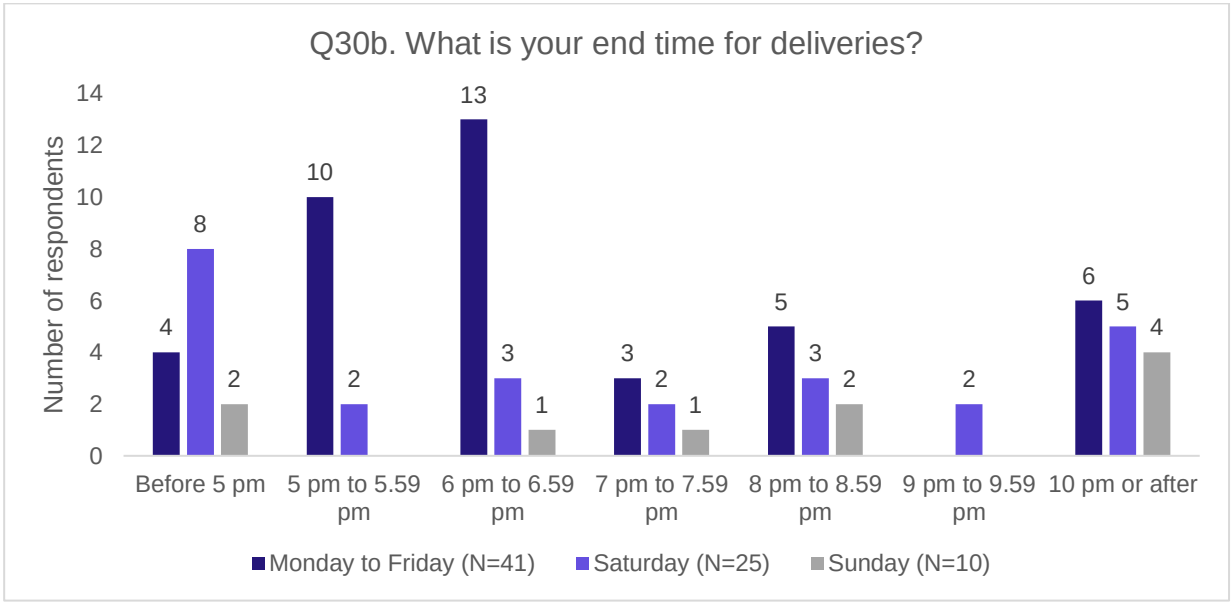
Q28. Would you like to complete part B of the survey?
(N=73)



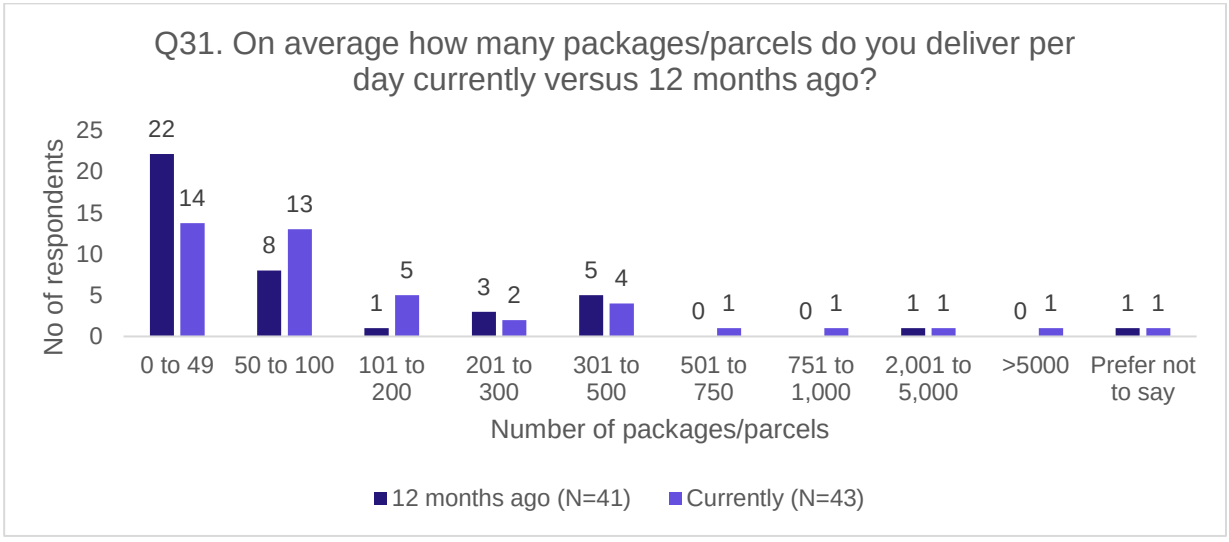
10. Analysis Part B: Operational Data

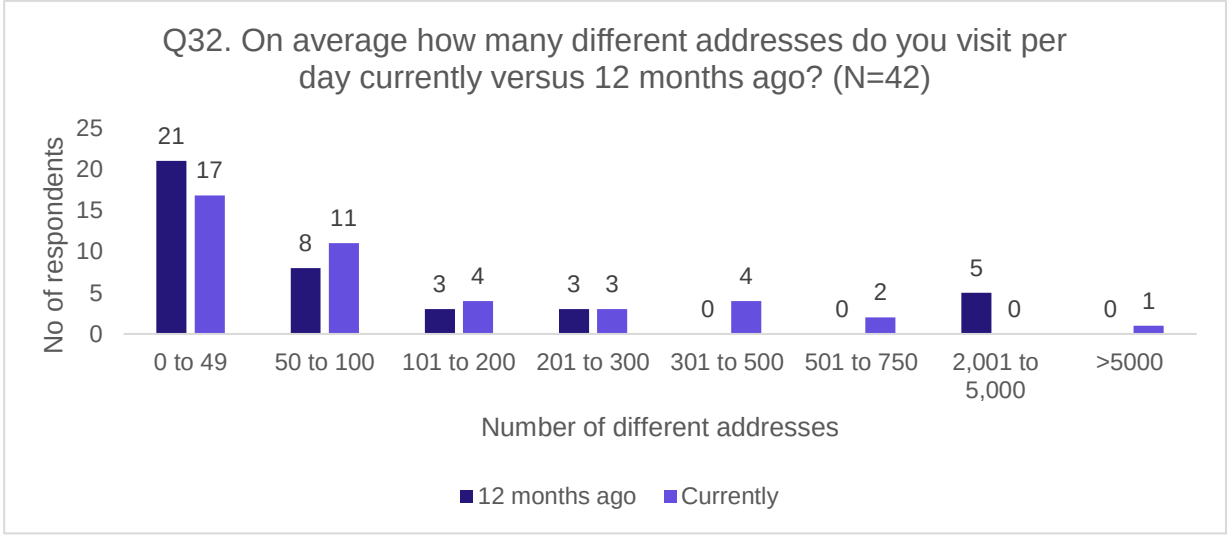


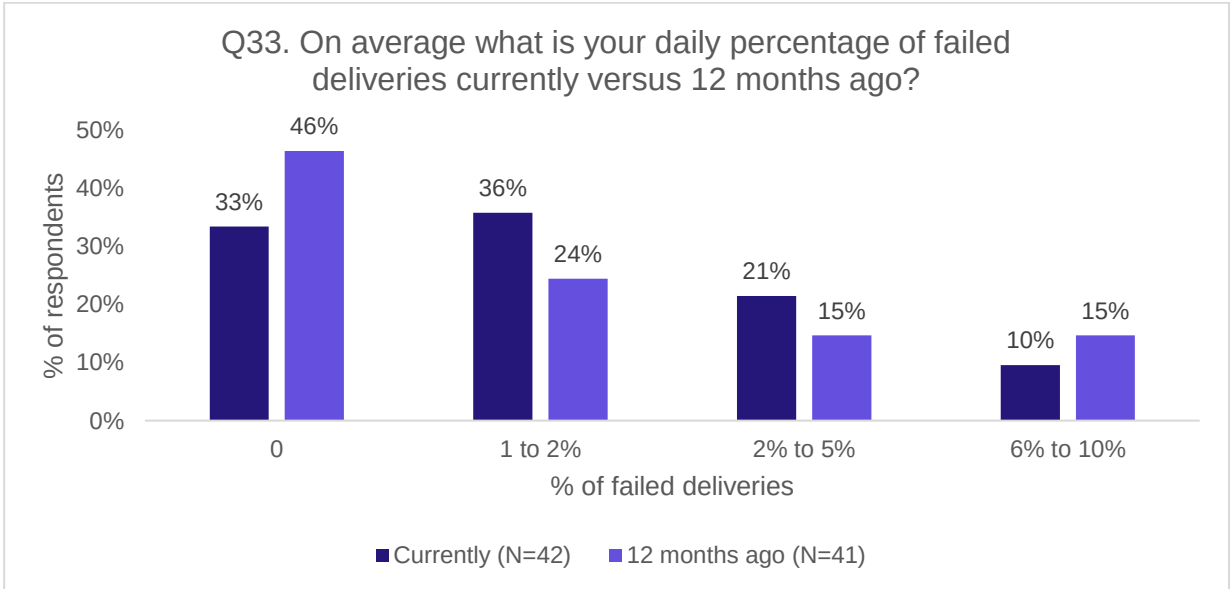


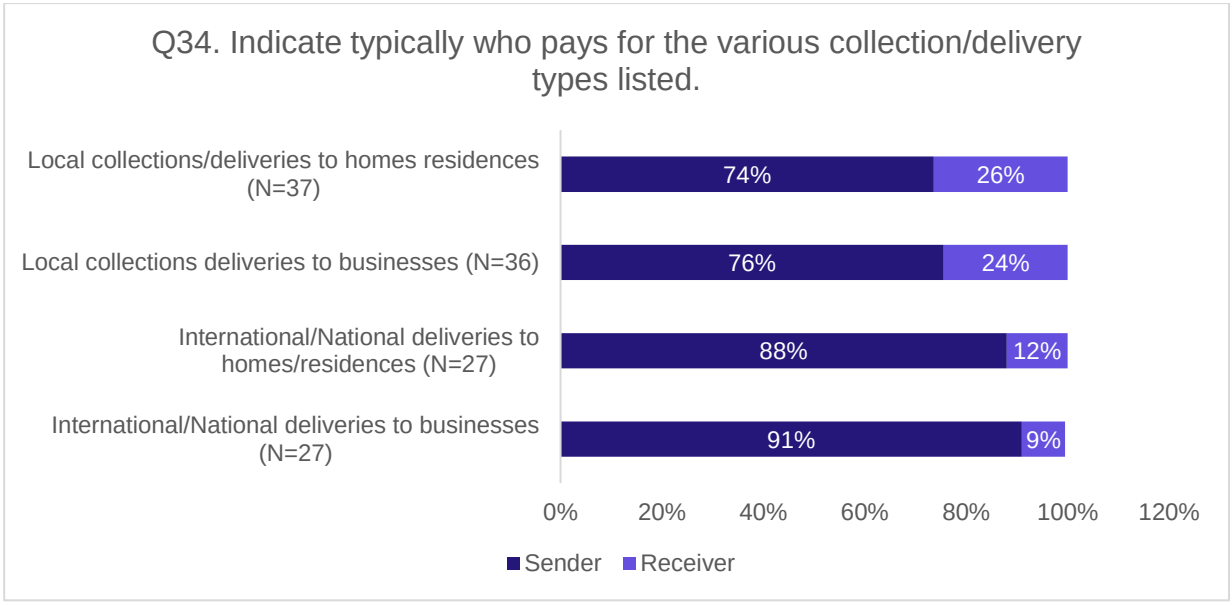


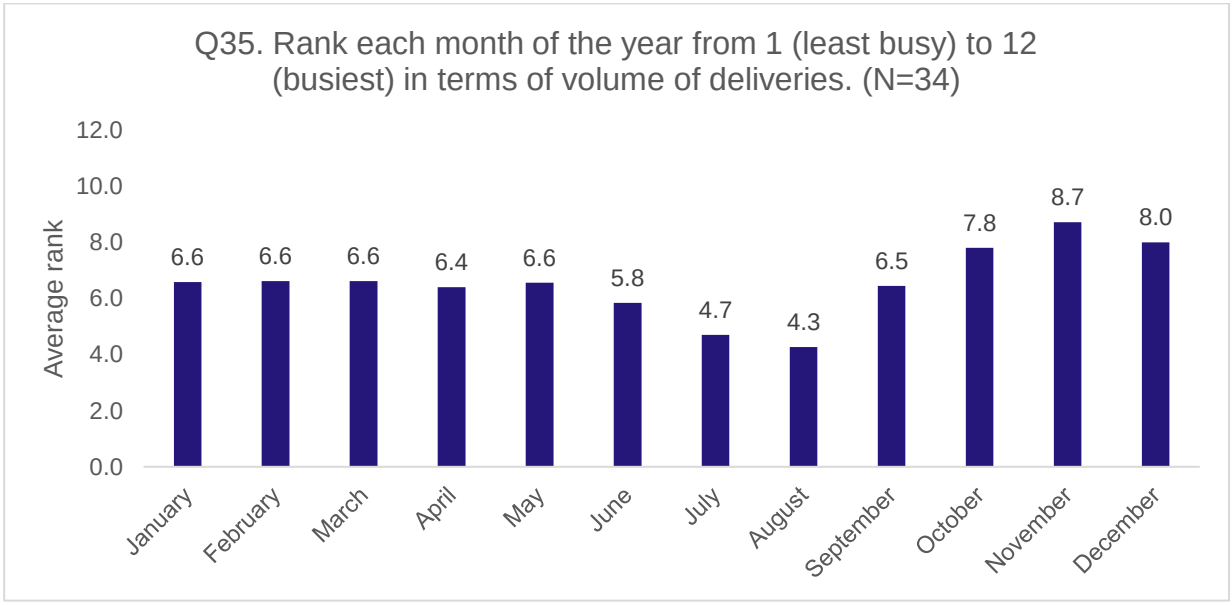
For graphs concerning Q31, Q32 and Q33: 'currently' is April 2016.











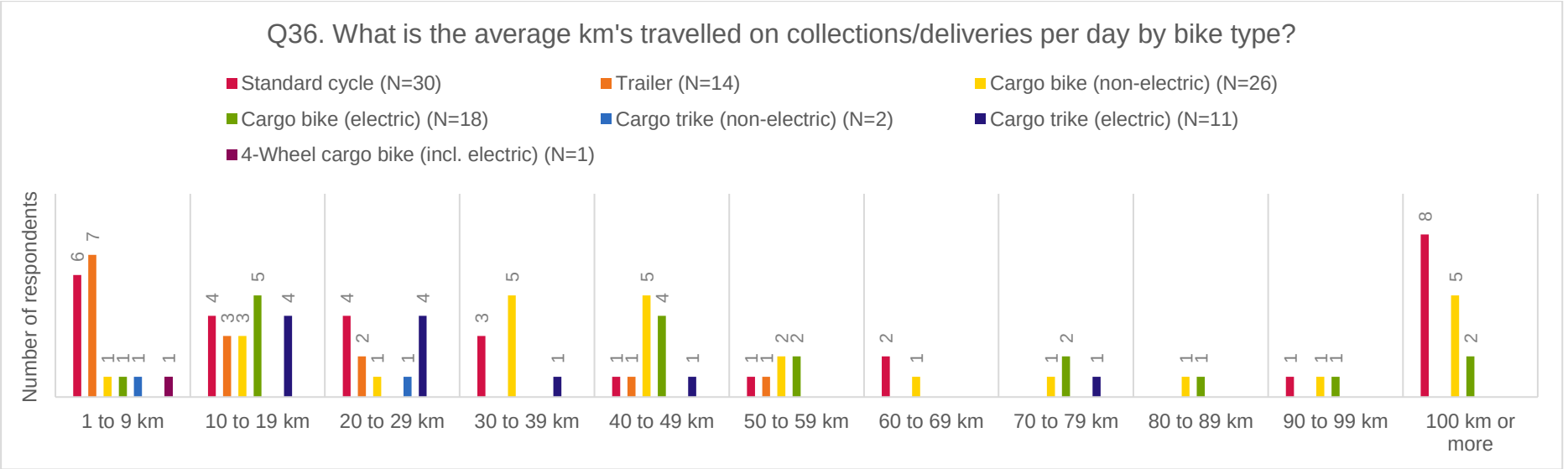


Table 10 Annex to Q36

Bike type	Responses	Median kms travelled on collections/deliveries per day
Standard cycle	30	30 to 39 km
Trailer	14	10 to 19 km
Cargo bike (non-electric)	26	40 to 49 km
Cargo bike (electric)	18	40 to 49 km
Cargo trike (non-electric)	2	10 to 19 km
Cargo trike (electric)	11	20 to 29 km
4-Wheel cargo bike (incl. electric)	1	1 to 9 km

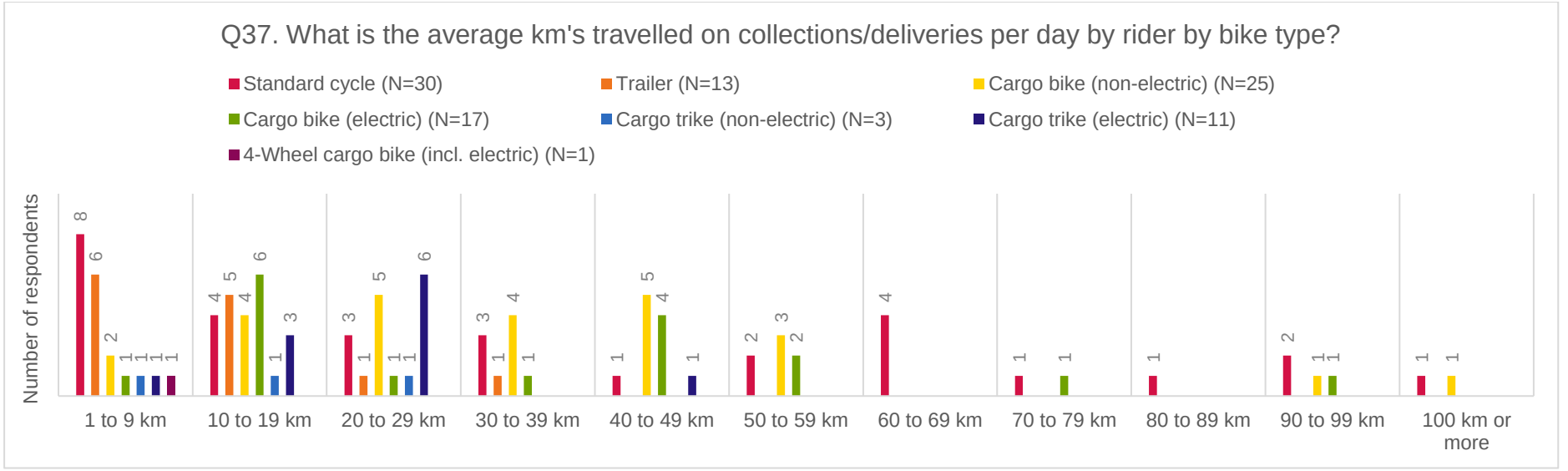


Table 11 Annex to Q37

Bike type	Responses	Median km's travelled on collections/deliveries per rider per day
Standard cycle	30	20 to 29 km
Trailer	13	10 to 19 km
Cargo bike (non-electric)	25	30 to 39 km
Cargo bike (electric)	17	30 to 39 km
Cargo trike (non-electric)	3	10 to 19 km
Cargo trike (electric)	11	20 to 29 km
4-Wheel cargo bike (incl.electric)	1	1 to 9 km

4-Wheel cargo bike is excluded from Q38, for N=0.

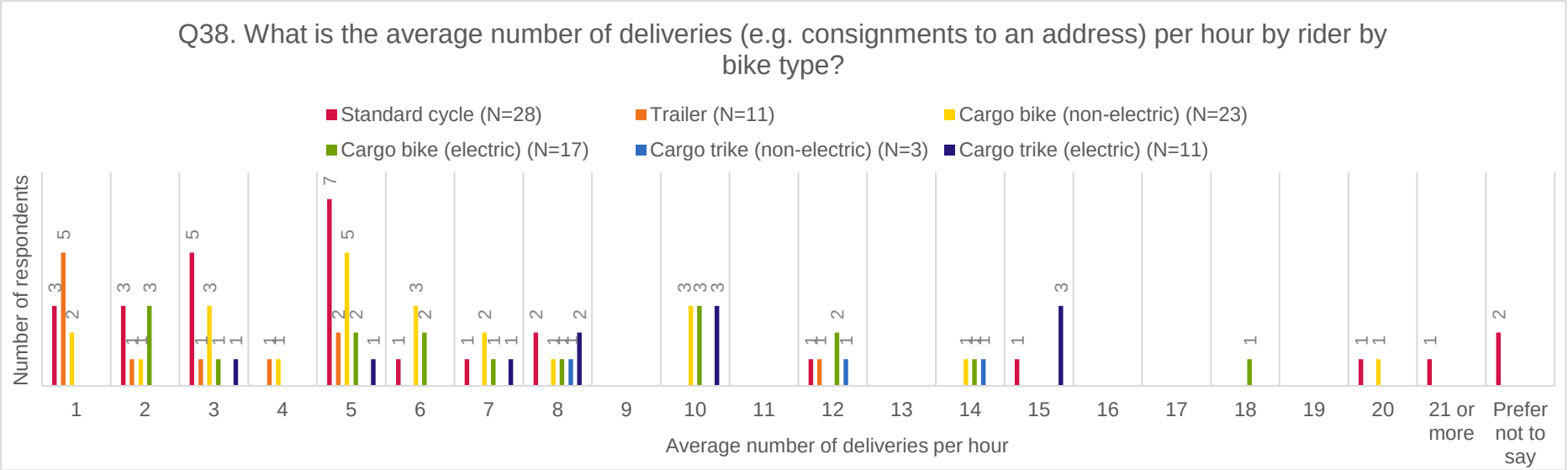


Table 12 Annex to Q38

Bike type	Responses	Median number of deliveries per rider per hour
Standard cycle	28	5
Trailer	11	2
Cargo bike (non-electric)	23	5
Cargo bike (electric)	17	7
Cargo trike (non-electric)	3	12
Cargo trike (electric)	11	10