



INSTITUTE *of* COURIERS



TRAILBLAZER APPRENTICESHIP ST0753



Module 0: ST0753 Express Delivery Sortation Hub Operative

Introduction and Training Plan

V2.5

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Introduction and Training Plan

Express Logistics

Express logistics, final mile, last mile occupations have been transformed by the dramatic growth of internet shopping. During the COVID-19 crisis, express delivery was recognised as a 'key worker' industry and critical infrastructure. Getting delivery to the door, keeping people safe.

Home delivery has become the new normal. Driver team at door is supported by sortation team in the depot. Sortation teams use world-class sorting equipment and software, routing both inbound collections and outbound deliveries. Sorting for routes locally, regionally, and nationally on networks. Goods of every type, mail, packages, and parcels that may contain work papers, gifts, electronic goods, food and every type of shopping.

All express goods are delivered urgently, they are not stored in a warehouse or sat on a pallet, express is a fast-moving sortation, goods arrive via chutes, often sorted to postcode by belt systems, they will rarely be in a sort depot for more than a few hours.

Sortation is a job role in the new normal of delivery the door, it's a job role for the future.

Express Delivery Sortation Hub Operative L2 Apprenticeship

Introduction to the text book, training plan and units

The Institute of Couriers (IOC) has created an end-to-end textbook supporting the level two apprenticeship Express delivery sortation hub operative. This module zero booklet is an introduction to the text book, the chapters, the training plan and the units of the standard' You will find a glossary of terms and a chapter to explain the three assessments.

Finding your way around the unit index. The IOC was instrumental in indexing the apprenticeship standard and forming a training plan order. Learning material draws on input from a wide range of operators.

In every chapter of the text book you are asked to contribute interpretation notes from the units you are learning. There are signposts for the best notes to write down. There are top tips from operators listed in blue lozenges to keep you focused on real work learning.

Each chapter stands alone and can be completed individually. In every chapter, each new unit starts on a right facing page and each unit has a page space for further notes.

Introduction to L2 Express sortation operative role

This occupation is found in the logistics sector and provides the centralised support that enables the rapid distribution of goods in transit to and from couriers and postal services. Employers in this sector provide the vital link between those sending and receiving a very wide range of letters, parcels, packets, and other packages. Organisations are found in the private sector.

The majority of sortation hubs rely on the national road network for distribution. The work is always highly organised and often uses the latest technological solutions, as sortation hubs can process millions of items each day. Sortation hub operatives often work for employers that have national coverage, though some are smaller and more specialist and could focus on certain types of goods.

The broad purpose of the occupation is to contribute to the successful processing of items within the expected timeframe. Sortation hub operatives receive, assess, and sort goods by destination. These goods are then collected for "final mile" delivery. Goods are typically small enough for manual handling, and could be almost anything, from online shopping orders intended for home delivery through to business-to-business sales. Sortation hub operatives are vital therefore in ensuring the smooth running of these complex, often automated operations.

Sortation hubs do not store or deliver goods. Instead, they provide an express service, turning around the distribution of these goods to couriers/postal services and other road transport operators at great speed, often within a few hours of receipt.

Sortation hub operatives can expect to work indoors and at a fixed site. They usually work shifts, which quite



Chapter One, 'The Express Delivery Landscape'

Chapter One consists of one behaviour unit and two knowledge units extracted from the apprenticeship standard and makes an excellent introduction for any candidate considering this sector as a future career.

K1: Last mile and the different types of express delivery business models.

The trunked and linehaul national networks compared to regional rural and urban density models. Represented in the IOC triangle diamonds.

The express streams of mail, parcel, food and meal delivery, 40 billion units delivered in the 2020 lockdown year as the sector became recognised as key worker, critical infrastructure final mile to door.

K2: The range of different job roles across express delivery, from supplier through to sortation hub and final mile services.

Job roles in sortation vary by geographic location on the networks, Depot, station and hub roles, super hubs to city depot sortation, both rural and urban.

Line management from shifts to depot and region and the shifts within the roles. Those supporting from sub contract to franchise and in house, flexible working practice and worker status roles model in express.

Taking a look at services from mail, parcel, food and meal, next day, same day, oversize to letter, national and international services in sortation.

B1: Takes ownership of work.

The behaviour of working practice and taking responsibility to achieve first time every time for the brand.

In the text book, there is a knowledge checker at the end of each chapter and test questions at the end of the book.

In the text book there are a small number of external references for further reading such as 'Brief History of Express Courier' (IOC). Some movies are mentioned that focus on brand and values in express such as 'The Postman' 'Castaway' & 'Courier' that you may wish to watch in your own time.

The apprenticeship is delivered on the job and takes a around a year, successful candidates can then apply to the Institute of Couriers for member status.

This Apprenticeship is supported by the Institute of Couriers (IOC) and apprentices who pass will automatically be eligible for Associate Membership of this industry professional body as the programme will provide sufficient knowledge and sector experience to satisfy the requirements for IOC entry.

commonly includes some unsociable hours.

In their daily work, an employee in this occupation interacts with other sortation hub operatives within their own team, together with the supervisor or manager who they report to. They may need to contact a specialist team following a major problem, for instance with their IT systems or mechanical equipment. Sortation hub operatives may also be expected to liaise on occasion with the organisation who is either sending, delivering, or collecting items, including retailers, wholesalers, manufacturers, courier companies, and postal companies.

An employee in this occupation will be responsible for completing their own work to specification, with minimal supervision, ensuring they meet set deadlines. Sortation hub operatives are responsible for maintaining their own workspace, and responsible for operating highly technical, specialist equipment. Depending on the type of employer this could involve loading/unloading goods using booms (that reach for parcels in trucks) or cages, operating multi-level belt sorters, automated chutes, and using sophisticated IT systems.

They are responsible for meeting quality requirements and working compliantly to their own organisation's procedures. They must also work in accordance with health and safety considerations. They will typically maintain and clean machinery and fix minor jams. They will respond to incidents and emergencies, such as damage to parcels, but will escalate more significant issues that are beyond their own responsibility. Sortation hub operatives tend to work in teams where everyone has a specialist task and all work together to complete their shared goals.

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0. Introduction
1. Text book & Training Plan
2. Text book page example
3. Case study from chapter five irregular sort
4. Index of Units
5. The End point Assessment
6. Glossary





The Inst of Couriers has worked with operators and the Inst for apprenticeships & technical education, IFATE to create a training plan outline. Below is the structure of the text book which supports training delivery.

The Text Book

The text book complements the training plan.

Fourteen chapters, approx. sixty thousand words.

Written and edited by Inst of Couriers. Lead input from Carl Lomas and Tracey Worth

Key operator input reinforces case studies.

The text book is written in context of level two words, it has word art, top tip sections, case studies and candidate interaction blocks.

THE CHAPTERS

Chapter One

The Express Delivery Landscape

- K1: Last mile and the different types of express delivery business models.
- K2: The range of different job roles across express delivery, from supplier through to sortation hub and final mile services.
- B1: Takes ownership of work.

Chapter Two

Postal Regulations

K16: UK postal regulations and universal service obligation.

A short extract of the headline learning for Unt K16

In the UK the mail and postal market was opened by Regulator Postcomm under the Postcode services act 2000 and whose duties were transferred to Ofcom in 2012 with the Postal Services Act 2012. Legislation is due for review in 2022.

Alistair Cochrane uses a case study to explain how Whistl built a thriving market on the back of European Legislation

Whistl has the 1997 European Postal Services Directive to thank for opening up the Postal Market to competition. As a result, the minimum delivery service was defined as delivering letters and parcels to every home and business 5 days a week, a national regulatory authority was established, and sector was fully open to competition.



Opening the market

Postcomm enabled competition to develop by establishing a licencing regime which allowed potential entrants to carry mail for all or part of the journey and creating a framework called Downstream Access (DSA) which allowed competitors to ask for access to Royal Mails network. Operators can collect mail from businesses sort the mail and trunk it, in Royal Mail's case to their Inward Mail centre for final walk sequence sorting, distribution to delivery office and final mile delivery.

Chapter Three

The Sortation Hub

- K3: The importance of the sortation hub in completing a successful express delivery service.
- B4: Committed to keeping up to date with industry best practice.

Chapter Four

Parcel volume, weight and service

- K9: Techniques to match service cost to size, weight and volume.
- S8: Match item cost to delivery service and respond to irregularities. (For example, identifying a large envelope with a regular stamp).

Chapter Five

Parcel Arrival

- K5: Manual handling and mechanical handling techniques for different types of goods. The principles for selecting the safest option applicable to the circumstances.
- S2: Matches items for sortation with the correct manual, mechanical, or automated handling technique.

Chapter Six

Identifying Goods

- K8: Range of labels and the instructions for use in sortation.
- S7: Assess and update labelling where required to support smooth transition through sortation to delivery.
- K15: The European agreement concerning the international carriage of dangerous goods (ADR). Techniques to apply this legislation within own area of responsibility when working with dangerous goods.
- S14: Identify and handle dangerous goods correctly in accordance with legislative requirements.

Chapter Seven

Load to belt

- K4: Machinery operating procedures including sortation belts, chutes, York roll containers, drop bags, mail bags, mail cages, and boom loaders.
- S1: Unload and load items using the correct equipment. For example this may involve cages, bags or booms.

Chapter Eight

Sort and Priority

- K7: Terminology and procedures that apply when using dedicated sortation IT equipment and automated sortation systems.
- S3: Prepares and operates sortation equipment in line with operating instructions.
- K6: Procedures for collections and returns.
- S4: Responds to deliveries, collections and returns priority in accordance with own organisations procedures and any relevant contractual arrangements.

Chapter Nine

Maintenance

- K10: Cleaning and maintenance protocols.
- S9: Monitor and maintain sortation equipment to the required functionality. For example, the minor adjusting of belts and chutes during a typical shift.
- K11: Sortation equipment cycles.
- S6: Respond to data to support the correct flow of automated sortation.

Chapter Ten

Faults and reporting

- K12: Fault finding principles.
- S10: Identify and remedy basic faults in sortation equipment.
- B5: Sources solutions and seeks to continuously improve and develop.
- K13: Reporting and escalation procedures.
- S11: Create reports on sortation performance, within limits of own role.
- S12: Identify problems beyond own responsibility and escalate to the relevant person.

Chapter Eleven

Contingency plans

- K14: Contingency plans.
- S13: Follow the contingency procedures that relate to incidents and emergencies. For example, damaged parcels or breakages.
- B6: Calm under pressure.

Chapter Twelve

Health and Safety

- K18: Health and safety legislation and how this applies to sortation.
- S17: Work compliantly by following relevant health and safety legislation.
- B2: Puts safety and security first for themselves and others.
- S5: Adapts own method of communication to the circumstances, using correct sortation terminology.



Chapter Thirteen

Working in Teams

- K20: Principles of working with others in shift patterns.
- S15: Coordinate own work with that of others in the team to provide the required sortation tasks.
- K22: Own organisations equality and diversity requirements.
- S19: Support others by following own organisations equality and diversity requirements.
- B3: Team-focused and works effectively with colleagues and others.
- K19: Methods of communication.

Chapter Fourteen

Security and Data protection

Input from IOC security group chair, Andy Magromallis Rico logistics. 'Threat and theft to parcels'

- K21: Techniques for maintaining the integrity of mail, packages, packets and parcels.
- S18: Maintain the integrity and security of items in line with procedures.
- B7: Acts with integrity, following own organisations required standards.
- K17: Data protection legislation and how this applies to sortation.
- S16: Store and share data only when it is permitted to do so, in line with data protection legislation.

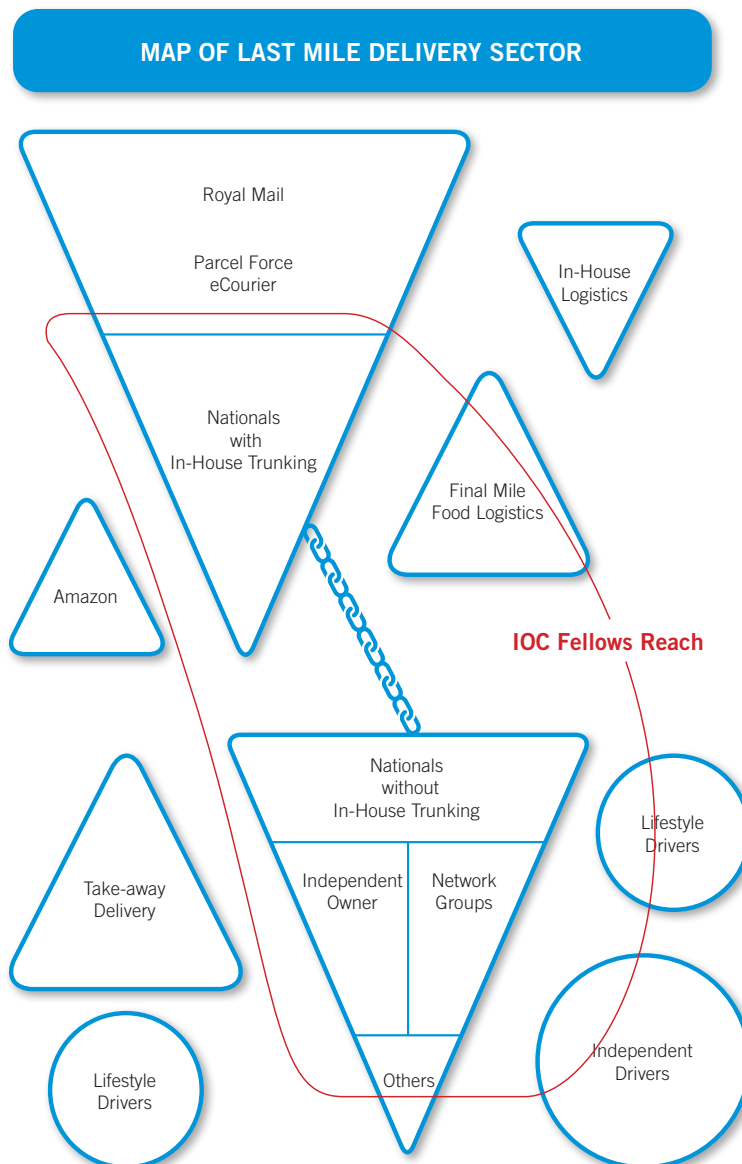
CHAPTER ONE K1

K 1.0 - The business models of express delivery services, employed and self-employed couriers, and the different types of contract and payment processes used.

K 1.1 - The business models of express delivery services

Take a look at the map of the last mile delivery sector below. Its business models are split between freight, food final mile, meal final mile and in-house express delivery. They are separated into national players who have their own trunking delivery routes and regional companies without trunking ability. All types of business model are shown on the sector map. You will learn in the text ahead how they sort in different ways.

Types of companies that are part of the IOC map of the express delivery sector are shown in the red lozenge.



K 1.6 Who are the express parcel sortation companies?

K 1.2.6 Word graphic of express courier company names.



Find and name three local express depots; such as parcel hub, food DC and a local Royal Mail sortation centre.

A large rectangular area with a blue border and horizontal dotted lines for writing.

Yodel unveils 'Merlin2'

A revolutionary automated sortation system for irregulars

Dealing with large parcels in sortation. With more consumers switching to online shopping, parcel carriers are having to handle increasing volumes of irregular shaped items. By implementing the Merlin two system in a second sort centre, Yodel can support the sorting of a larger volume of parcels every day.

During end of year Peak, Nov 2022, Yodel invested over £1m in a state-of-the-art new sortation system that is specially designed to handle delicate and irregular shaped parcels. The investment follows a record year of growth for the business, with it scaling up capability to handle a broad range of specialist items.

The new system, called 'Merlin2', will be located at Yodel's Shaw sorting centre and is the business' second automated 'out of gauge' sortation facility, following the success of the original Merlin which was introduced in Wednesbury in 2019.



The system, created by Yodel's engineers in response to needs of the booming online retail sector, is capable of processing up to 2,900 one-metre-long items per hour and will work alongside the larger fully automated sort at Shaw. Merlin2 is capable of handling items up to 1.8m long and 0.9m wide and will significantly increase the speed and efficiency of the 'out of gauge' parcel sorting process.

Merlin2's automation will also ensure that clients and customers benefit from greater visibility and traceability of their parcels throughout the network. By linking directly with Yodel's billing systems, the system also provides greater speed and accuracy for invoice processing. Items that previously had to be manually sorted will now be automatically scanned, weighed, volumised and photographed.

Inst of couriers fellow, Carl Moore, COO, Yodel explained: "Increasing visibility across our sorting process reduces opportunities for parcels to be misplaced and means packages can travel from our clients and to consumers much faster, meeting the greater demand for a more seamless service. The system's design also makes for a safer work environment for our colleagues by reducing the physical demands of the work at our sort centres and reducing the risk of strain and injury."

Shaw is one of Yodel's three central sort centres, packages are sorted at Shaw before being sent on to one of Yodel's depots around the UK, where they are passed on to final mile drivers for delivery to customers.



Knowledge Units	
K1	Last mile and the different types of express delivery business models.
K2	The range of different job roles across express delivery, from supplier through to sortation hub and final mile services.
K3	The importance of the sortation hub in completing a successful express delivery service.
K4	Machinery operating procedures including sortation belts, chutes, York roll containers, drop bags, mail bags, mail cages, and boom loaders.
K5	Manual handling and mechanical handling techniques for different types of goods. The principles for selecting the safest option applicable to the circumstances.
K6	Procedures for collections and returns.
K7	Terminology and procedures that apply when using dedicated sortation IT equipment and automated sortation systems.
K8	Range of labels and the instructions for use in sortation.
K9	Techniques to match service cost to size weight and volume.
K10	Cleaning and maintenance protocols.
K11	Sortation equipment cycles.
K12	Fault finding principles.
K13	Reporting and escalation procedures.



K14	Contingency plans.
K15	The European agreement concerning the International carriage of dangerous goods (ADR). Techniques to apply this legislation within own area of responsibility when working with dangerous goods.
K16	UK postal regulations and universal service obligation.
K17	Data protection legislation and how this applies to sortation.
K18	Health and safety legislation and how this applies to sortation.
K19	Methods of communication.
K20	Principles of working with others in shift patterns.
K21	Techniques for maintaining the integrity of mail, packages, packets and parcels.
K22	Own organisations equality and diversity requirements.

Skills units	
S1	Unload and load items using the correct equipment. For example this may involve cages, bags or booms.
S2	Matches items for sortation with the correct manual, mechanical, or automated handling technique.
S3	Prepares and operates sortation equipment in line with operating instructions.
S4	Responds to deliveries, collections and returns in accordance with own organisation procedures and any relevant contractual arrangements.
S5	Adapts own method of communication to the circumstances, using correct sortation terminology.
S6	Respond to data to support the correct flow of automated sortation.
S7	Assess and update labelling where required to support smooth transition through sortation to delivery.
S8	Match item cost to delivery service and respond to irregularities. (For example, identifying a large envelope with a regular stamp).
S9	Monitor and maintain sortation equipment to the required functionality. For example, the minor adjusting of belts and chutes during a typical shift.
S10	Identify and remedy basic faults in sortation equipment.
S11	Create reports on sortation performance, within limits of own role.
S12	Identify problems beyond own responsibility and escalate to the relevant person.
S13	Follow the contingency procedures that relate to incidents and emergencies. For example, damaged parcels or breakages.

S14	Identify and handle dangerous goods correctly in accordance with legislative requirements.
S15	Coordinate own work with that of others in the team to provide the required sortation tasks.
S16	Store and share data only when it is permitted to do so, in line with data protection legislation.
S17	Work compliantly by following relevant health and safety legislation.
S18	Maintain the integrity and security of items in line with procedures.
S19	Support others by following own organisations equality and diversity requirements.

Behaviours	
B1	Takes ownership of work.
B2	Puts safety and security first for themselves and others.
B3	Team-focused and works effectively with colleagues and others.
B4	Committed to keeping up to date with industry best practice.
B5	Sources solutions and seeks to continuously improve and develop.
B6	Calm under pressure.
B7	Acts with integrity, following own organisations required standards.



THE END POINT ASSESSMENT

End-point assessment (EPA) is the assessment of the knowledge, skills and behaviours that an apprentice has learned throughout their apprenticeship. It confirms that they are occupationally competent. Assessments have been designed by employers in the sector and are conducted by independent bodies known as end-point assessment organisations (EPAOs). An apprentice is given their apprenticeship certificate after they have passed all the elements of their EPA.

The end-point assessment created for the Express Delivery Sortation Hub Operative apprenticeship has three methods:

1: MULTIPLE CHOICE TEST

This checks that the apprentice knows the technical terms used in the job and has the technical knowledge they need. The test consists of 25 multiple-choice questions, each has four options of which one is correct. The apprentice cannot refer to reference books or materials. Apprentices have 45 minutes to complete the test.

The test must be taken in a quiet space, free of distractions and influence in the presence of an invigilator, or on-line.

2: OBSERVATION WITH QUESTIONS

This checks that the apprentice works to the standard set out in the apprenticeship. The independent assessor observes an apprentice undertaking work as part of their normal duties in their usual workplace and also asks at least 5 questions. The observation must be of an apprentice completing their usual work under normal working conditions and simulation is not permitted. The independent assessor will ask questions in relation to KSBs that have not been observed although these should be kept to a minimum. The observation with questions will take 90 minutes.

The following activities must be observed during the observation:

- Loading or unloading of goods to/from the sortation hub.
- Transfer goods to sortation equipment.
- Operate sortation equipment to process goods
- Follow all safety and security and compliance procedures
- Collaborate with workers in the team in order to complete the sortation tasks.

3: INTERVIEW

The interview tests responses to questions where there are a range of potential answers and so cannot be tested through a multiple-choice test and also enables assessment of any knowledge, skills, and behaviours that weren't demonstrated during the observation.

The interview must take place in a quiet room, free from distractions and influence. It consists of an independent assessor asking an apprentice a series of questions to assess their competence against the KSBs. The independent assessor's role is restricted to asking set questions, and it is not a two-way discussion. The interview must last for 60 minutes and has a minimum of 12 questions.

The purpose of the questions will be to assess the following topics:

- Sortation Hub landscape
- Best practice
- Operational performance
- Maintenance, emergencies and incidents

4: A STEP TO RECOGNITION WITH THE INSTITUTE OF COURIERS

An overall pass or distinction grade in this occupational apprenticeship provides for eligibility with the Institute of Couriers – Associate level membership.





GLOSSARY OF KEY TERMS IN EXPRESS DELIVERY V2.1

AOG	Aircraft on Ground
B2B B2C	Business to business delivery – Business to client delivery (typically home delivery)
Black Friday	Key sales Friday before Peak
CAZ	Clean Air Zone
COA	Cancelled on arrival. Package collection cancelled
Client chain	From the term supply chain but client chain is driven by the client, if goods not available in one supply chain, the client will go elsewhere
Circuit	A group of couriers on a circuit ready for delivery
Customer promise	Timescale quoted for delivery
DAC	Dangerous Air Cargo
DC	Distribution centre for parcels
Empty	No packages onboard, courier waiting for a job
e-retail	Online shopping. This drives the majority of home delivery - B2C
Euro6	A clean air standard for diesel combustion engines
EV	Electric vehicle
Express Delivery	Express delivery is about urgent, timed delivery, from customer order to delivery at the required location
FSL	Forward Stock Location



Hub	Location for sorting parcels
Last mile	Last mile or final mile to the delivery, may not be an actual measurement
Lifestyle courier	Courier who fits the job in with other work, makes deliveries in the evening after a different working day
LEZ	Low Emission Zone
LSP	Logistics Service Provider. Express operator, courier or last mile delivery company
Multi drop	More than one delivery, typically a round of many deliveries
Open call	Courier controller calls all available jobs in a geographic area, the courier chooses to call for the job they want. Example; Addison Lee London
Peak	A peak period of delivery. The run up to Christmas from Black Friday, other peaks occur for Valentine's Day and Mother's Day
Plot circuit	Controller plots couriers and gives jobs they see, local to that courier
POB	Package on board, a package has been collected
POD	Proof of delivery
PUD	Pick up and delivery
Return – Reverse logistics	Taking the package back
RTA	Road Traffic Accident
SAFED	Safe and fuel efficient driving
SLA	Service level agreement
SQ	Service Quality

Sortation	Sorting the parcels at a hub or DC
Station	A different term for a depot
The customers promise	Each brand will have specific delivery or collection instructions that reflect the promises they have made to the customer
Trunking	Movement of parcels between depots
ULEZ	Ultra low emission zone for clean air vehicles
Waiting time	Billed time while waiting for a collection. Typically starts at fifteen minutes. May be part of a two-way job - collect deliver, then wait and return
Workstyle	Stood up, walking, cycling, sat down, mail post to van or truck driver, the work style you do
Wrap around	A street where numbers run odd and even in progression up the street and wrap around to return down the other side. Example Tottenham Court Road, London W1
Zero emission	A vehicle with no emission, no tailpipe, typically electric running on a battery
ZEZ	Zero Emission Zone



Institute of Couriers is the government stakeholder organisation, it is the voice for the Express delivery and courier sector. Providing a focus of knowledge and communication to the sector. Hosting four heads of industry events each year as well as the National Courier Awards and the Fellows gowning. Big agenda items include road safety, education and clean air for final mile, last mile delivery. Three hundred thousand words a year, there is a fellows Sunday email briefing for the week ahead and urgent news shots regarding items such as major road closure or alerts including JSS, Furlough, IR35 & Taylor answers on modern workforce status. Covid web bubble signposts everything from 'stay safe at the delivery door' to van security & good practice during lockdown deliveries.

There is a get ready for Brexit publication & knowledge bubble on the IOC web. A working vehicle gallery with images of over a thousand express delivery vans. Research by the Institute includes, 'Where does our express sector fit within supply?' 'Is the new e-retail explosion really a client chain?' 'Would consolidation solve final mile clean air & congestion?' Latest research is asking 'How do people value delivery speed in e-retail?' A five year longitudinal study of consumer value of time in final mile. Recent reports from National Logistics trade shows, IntralogisteX, CV and Multimodal and the largest transport conference in Europe, Microlise can all be found on the IoC web. IoC works with DfT, TfGM, Leeds and TfL with their LoCITY programme for alternative fuel final mile solutions.

Lobbying for cargo cycle parking and owner driver scrappage schemes to low emission vehicles. IOC facilitates the Trailblazer employer group for Express qualifications with DfE, IFA, mapping qualifications to delivery material in the sector and acting as the EQA for those qualifications. IOC is aligned with DWP & JCP for next generation workforce recruitment and IOC CEO Tracey Worth chairs the DfT, STAT Diversity and inclusion group.

**Becoming a member begins with a call to the IOC CEO Tracey Worth
07976 263745.**

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