



Managing urban freight more effectively: A guide to getting started and planning actions

Freight TAILS Final Report
April 2018



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Introduction

This report is targeted at city authorities and other freight stakeholders who are interested in developing a set of actions that reduce the negative impacts of urban freight transport.

The report answers the central question ‘How can I make freight transport more effective in my city’, based on the experiences of the 10 cities involved in the Freight TAILS project, who asked themselves the exact same question in 2015.

The first section outlines ‘Getting Started’ tasks. The second section outlines ‘Taking Action’ tasks. Each task is introduced, experiences from different Freight TAILS cities reported, and top tips shared. Freight TAILS added value links are made throughout the report to the key Freight TAILS outputs: case studies highlighting specific experiences from the Freight TAILS cities, thematic reports on urban freight transport and six key themes and the Freight TAILS partners’ action plans.

Finally, a set of recommended freight actions are provided for cities to implement in order to achieve more effective urban freight transport.



Delivery on Avenue Louise, Brussels, Belgium.

Executive summary

Freight TAILS

The Freight TAILS project 2015-18 has been discovering Tailored and Innovative Logistics Solutions (TAILS) for the successful management of freight.

Pro-active urban freight management can shape almost every aspect of our urban lives, contributing to the air we breathe, noise we hear, traffic we experience, productiveness of our cities' businesses, quality of our surroundings, and liveability of our neighbourhoods.

This report helps city authorities answer the question: 'How can I make freight transport more effective in my city?', by undertaking two sets of tasks :

1. Getting Started Tasks
2. Planning Action Tasks

1. Getting Started Tasks

Take an integrated approach: Integrating urban freight transport means taking the economy, environment, society, politics and local culture into account when making decisions; and addressing urban freight transport across a wide range of available cross-sectoral city strategies and policies.

Work with stakeholders: Identifying and working with a wide range of urban freight transport and other stakeholders is essential in designing effective urban freight management actions.

Identify your local freight challenges: Use face-to-face, questionnaire, or observational surveys to gather new data; and use existing data to identify the challenges that urban freight transport contributes to in your city.

Set your objectives and freight goals: Based on your freight challenges, define a series of objectives and freight goals to provide a clear framework to develop your actions.

Establish your plan, finance and resources: Identify your key milestones, available and likely finance and resources to inform your action framework.

2. Planning Action Tasks

Define your freight actions: Develop a mixture of different types of freight actions to help achieve your goals and objectives including: voluntary behaviour change, regulation & enforcement, procurement and infrastructure-related actions.

Measure and monitor: Set a measurement framework of realistic and collectable indicators to monitor progress towards achieving your freight goals.

Think about future freight: The future is here! Consider how your city will respond to rapidly changing technology that is changing urban freight transport, including delivery drones, autonomous vehicles, and Smart City initiatives.

Freight TAILS recommended city action table provides examples of specific actions that can be planned for your city as a result of undertaking all the tasks above.

Further Information

This report, the tasks and recommended city actions are based on the experiences of the Freight TAILS network of 10 European cities, led by Cross River Partnership (on behalf of Westminster City Council), London, UK. Freight TAILS is co-funded by European Regional Development Fund, through the URBACT III Action Planning Network programme. For further information please see [here](#).

Executive summary

Freight TAILS recommended city actions

Time	Freight TAILS recommended city action	Partner planning Freight TAILS action	Cost
	1. Set up and maintain local freight group representing all key stakeholders	La Rochelle, Parma, Split, Umeå	
	2. Involve, educate and raise awareness of freight for all stakeholders: colleagues, businesses, operators and citizens	Gdynia, La Rochelle, London, Parma, Suceava, Umeå	
	3. Introduce internal and external processes to consider freight and waste management when developing detailed plans and building permits	Umeå	
	4. Develop and implement eco-driving programme, and introduce private sector Air Quality Champions	London, Split, Suceava	
	5. Promote re-timing of deliveries with businesses	London	
	6. Develop and implement IT solutions e.g. to communicate to stakeholders, e.g. measure of urban freight transport	London, Split, Suceava, Umeå	
	7. Incentivise cycle logistics for the last mile	Maastricht, Parma	
	8. Develop accreditation system for heavy goods vehicles with low noise and environmental impact	Parma	
	9. Encourage collaborative logistics and collaborative procurement	Brussels, London, Parma, Split	
	10. Promote 'cleaner vehicles' to private sector, and procure 'cleaner vehicles' by city authorities	London, Suceava, Tallinn, Umeå	
	11. Account for road safety, freight access and waste management in planning process	Umeå	
	12. Develop and introduce new road signage to provide clear guidance about delivery regulations	Gdynia, Suceava	
	13. Develop, review and update local regulations	Gdynia, Parma, La Rochelle, Split, Suceava, Tallinn	
	14. Develop, review and update effective enforcement of regulations	Brussels, Gdynia, La Rochelle, Parma	
	15. Develop, amend environmental zone	Umeå	
	16. Develop fiscal and legislative incentives to 'encourage' clean vehicles	Suceava	
	17. Harmonise freight regulations across the territory	La Rochelle	
	18. Develop, review and refine operation of delivery bays / loading locations and produce guidelines for loading locations	Brussels, Gdynia, La Rochelle, Parma, Split, Umeå	
	19. Develop clean vehicle infrastructure such as electric vehicle charging points, and natural gas filling stations	Split, Suceava	
	20. Improve logistic infrastructure and freight management	La Rochelle, Split, Tallinn	
	21. Improve road infrastructure with new layouts and systems, quiet road surface, shared surface	Split, Suceava	

The Freight TAILS added value

Freight TAILS

Pro-active urban freight management can shape almost every aspect of our cities, contributing to the air we breathe, noise we hear, traffic we experience, productiveness of our urban lives businesses, quality of our surroundings, and liveability of our neighbourhoods.

Recognising this, 10 European cities¹ formed Freight TAILS² to address the impact of their urban freight transport. The cities have a variety of freight experience, some tackling freight for the first time, some with plans and actions already in place. Freight TAILS operated at two levels:

Local level

Each partner city worked locally with a multi-stakeholder group (URBACT local group – ULG) to develop a set of freight actions, and to produce a Freight TAILS Integrated Action Plan (IAP).

These groups of local freight stakeholders (including retailers, freight operators, city authorities and residents) were integral to the discussions on local issues and in examining how the topics raised in the network meetings were applicable to solving local issues.

Network level

The network, led by [Cross River Partnership](#) (CRP) a public-private regeneration delivery agency based in London (UK), had city partners from across Europe.

Quarterly network meetings enabled partners to share their own experiences in freight management initiatives including;

- Low Emission Zones (London)
- Developing a Freight Plan (Brussels)
- Running local logistics centres / consolidation centres (La Rochelle, Maastricht, Parma)
- Electric Vehicles (Suceava).

The network worked with project and technical experts to consider the applicability of different freight management initiatives to local situations.

The network focused on six key themes of urban freight transport and stakeholders, data, integration, regulation & enforcement, voluntary behaviour change, and procurement.



Freight TAILS local meeting, Maastricht, The Netherlands.



Freight TAILS network meeting, La Rochelle, France.

How to manage urban freight transport more effectively

The task overview



I want to manage freight transport more effectively in my city but where do I start, and what freight actions can I take?

First get started by sorting out the why, how and who; then plan actions and work out what you're going to do.



Getting Started Tasks

- Take an integrated approach →
- Work with stakeholders →
- Identify your freight challenge →
- Set your objectives and freight goals →
- Establish your plan, finance and resources →

Planning Action Tasks

- Define your freight actions →
- Measure and monitor →
- Think about future freight →

Managing freight transport more effectively

Getting Started Tasks

Municipality of Parma takes an integrated view of freight

In Parma, Italy urban freight transport initiatives align with the cities' Sustainable Urban Mobility Plan (SUMP) approved by the City Council March 2017. Parma was the first Italian SUMP to be finalised in combination with a Strategic Environmental Assessment (SEA), thereby ensuring that environmental and other sustainability aspects are integrated into the plan. The Integrated Action Plan for Urban Logistics in Parma is also closely aligned with Parma's Smart City vision to accelerate the city's sustainability and innovation, and with the wider regional planning for air quality.



Take an integrated approach

Integrating urban freight transport means taking the economy, environment, society and local culture into account when making decisions.

Urban freight measures should achieve positive impacts such as improving air quality, traffic conditions, road safety and the attractiveness of city streets.

Cities should seek to integrate the views and participation of as wide a range of stakeholders as possible into the development of urban freight measures to ensure maximum success.

Authorities should address urban freight transport across city strategy and policy documents including transport, urban planning, economic, environment, air quality, health, and procurement.

[Read more](#) about why it is important to integrate urban freight alongside wider considerations, and how to do it.

Managing freight transport more effectively

Getting Started Tasks

Work with stakeholders

There are a wide variety of stakeholders involved in urban freight transport, from both the public and private stakeholders including local, regional and national governments, police authorities, vehicle manufacturers, purchasing businesses, fleet operators, logistics operators, environmental healthcare professionals, professional bodies, businesses, residents and citizens³.

Involving all these players in the design and development of urban freight strategy, policy, regulations and measures is important to achieve sustainable change.

The position and influence of individuals and organisations, their availability, level of interest and capacity to contribute are all important factors when planning to work with stakeholders.

The way stakeholders are involved will differ according to the desired outcome and the stage of planning or delivery of freight measures. Examples from Freight TAILS partners:

- Parma co-designed survey questions with their local freight stakeholders in local meetings
- Gdynia discussed the positioning of new delivery locations with their local shopkeepers at local meetings and through paper leaflets,
- Umeå formally consulted all city residents on their Freight Action Plan.

Freight TAILS partners have found the development of multi-stakeholder groups a successful way to develop freight actions. [Read more](#) about why, how and when to engage stakeholders.

Stakeholder involvement in Suceava

Throughout Freight TAILS local stakeholders in Suceava, Romania, were constantly encouraged to:

- Formulate ideas for project activities at multi-stakeholder (ULG) meetings and between meetings;
- Participate in network activities and learn from other Freight TAILS partners in order to identify ideas that could be replicated in Suceava;
- Liaise with external experts about proposed freight actions;
- Use their professional skills together with the 'citizenship spirit' according to project's outputs and objectives;

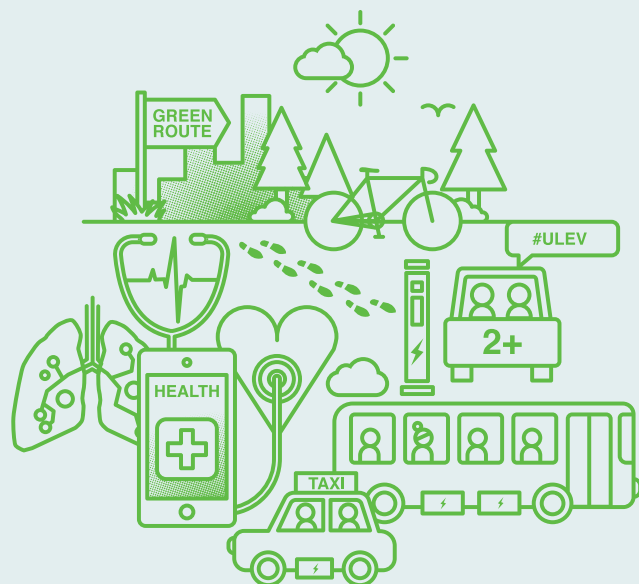
This resulted in at least nine ideas for freight actions 100% designed and proposed by stakeholders including local regulations for freight deliveries, and training sessions for drivers.

Top tip:

Keep stakeholders informed of both progress and delays to encourage them to remain engaged. Engage with your biggest critics – if you can get them on board they will be a great advocate for your plans. Don't forget to inform your colleagues.

Managing freight transport more effectively

Getting Started Tasks



Top tip:

Consider the quality and relevance of available and desired data, as this is more important than the amount of data collected. Think about your objectives and freight goals, and concentrate on what data is needed.

Identify your local freight challenges

Urban freight transport typically contributes to a number of challenges within the city including: traffic congestion, poor air quality resulting from vehicle emissions, road safety concerns, lack of parking for loading/unloading, lack of space for logistics & logistics sprawl, noise, and poor liveability.

Gathering data on urban freight transport is important to:

- help identify the challenges urban freight transport contributes to,
- describe trends,
- help understand stakeholder behaviour,
- test assumptions
- validate estimates.

There is a wide range of both quantitative and qualitative data that can be gathered under

each of these relevant headings: analysis of logistics rules, delivery profile, receiver profiles (shops and residents), stakeholder analysis, transport profile, externalities. It is important to recognise that some data gathered will be subjective, based on stakeholders' opinions, rather than on objective facts.

Cities may find that data already exists that can help define local freight challenges such as road safety statistics, but many cities will face gaps in their knowledge, and they will need to gather additional data. Data gathering methods include surveys (of establishments, suppliers, shippers, drivers, parking), vehicle observations, interviews, and use of GNSS data. From base data, modelling is also possible (and used by Freight TAILS partner La Rochelle) using existing systems such as FRETURB.

[Read more](#) about why, how and what data to collect.

Managing freight transport more effectively

Getting Started Tasks

Freight TAILS survey experiences

Undertaking surveys to gather data is a good way to demonstrate the baseline of freight activity in the local area. Several Freight TAILS partners undertook surveys, and their experiences are summarised opposite.

Gathering data can lead to surprising and unexpected results, such as these Freight TAILS examples:

- after undertaking observational surveys Gdynia discovered that 29% of deliveries required double parking and 25% of deliveries took place on the pavement
- after undertaking observational surveys Tallinn discovered that up to 30 vehicles an hour were breaking the rules, making deliveries in the historic centre outside the permitted delivery time of 06:00 – 10:00.

Top tip:

Freight TAILS partner Parma conducted surveys using hand-held devices and answers were entered directly into Survey Monkey, saving time and money on data analysis.

Type	Pros	Cons	Reduce costs & improve responses
Face-to-Face	Improves quality of data	Time consuming (several cities used additional resources to complete)	Input results directly online to save time data inputting
Questionnaire	Cheap, can ask more questions	Usually a very poor response rate	Use simple questions Incentivise responses
Observational	Provides information on what actually happens, not what respondents think happens	Can be expensive, depending on how long survey is conducted	Target your obs. area to focus on highest priority street/s.

Managing freight transport more effectively

Getting Started Tasks

Gdynia's first detailed city freight survey

In 2017, a freight survey was conducted on three streets in Gdynia City Centre (Poland). The main objective was to assess freight vehicles activity in a measurable way and identify real problems, such as on street double parking and pavement intrusion.

Two survey methods increased the quality of responses: observation of the delivery process at premises and detailed face-to-face interviews with retailers. There was a high response rate from direct interviews – 66% of a total of 506 retailers participated in the survey across the three selected streets. The results of this survey informed the plans to introduce dedicated delivery zones in Gdynia city centre.



Business survey in Brussels

Brussels Mobility organised a survey to find out the current delivery situation and business needs more fully in the target area. 74 shops and offices (40%) agreed to take part. The target audience and culture was important; branches of international brands and small family-owned shops presented different challenges to get responses.

Université Libre de Bruxelles carried out the survey, and coming under the banner of a university helped to get more responses. Atrium (the regional agency in charge of commerce) provided data useful in survey preparation. They then benefited from actualized data and survey results.

This was the second stage of a broader survey targeting the whole city centre. Despite a different commercial environment, answers from interviewees were broadly similar.



Managing freight transport more effectively

Getting Started Tasks

La Rochelle defines freight plan goals

As a local Public Transport Authority, La Rochelle Urban Community has, for a long time, developed an integrated and sustainable mobility policy, aiming at favouring soft / clean and innovative modes. Including the electric deliveries of urban goods. Working with local freight stakeholders, La Rochelle, has developed four specific freight objectives to be delivered by their Freight TAILS plan:

1. Improve air quality and reduce the impact of urban freight on congestion in La Rochelle City Centre
2. Design a coherent and well-accepted urban freight regulation
3. Propose performing and innovative logistics services to boost the economic dynamics of the territory
4. Inform stakeholders and co-construct plan in order to create synergies.



Set your objectives and freight goals

Establishing the ambitions of your freight activities by setting objectives and freight goals will provide a clear framework in which freight actions can be developed.

Objectives:

The objectives will be determined by the wider challenges faced within a city, and outlined in city plans and strategies. Freight TAILS partners identify one or more of the following objectives for their freight activities:

To improve air quality

To reduce traffic congestion

To improve road safety

To maintain and improve cities' economic competitiveness

To improve shared urban space

Managing freight transport more effectively

Getting Started Tasks

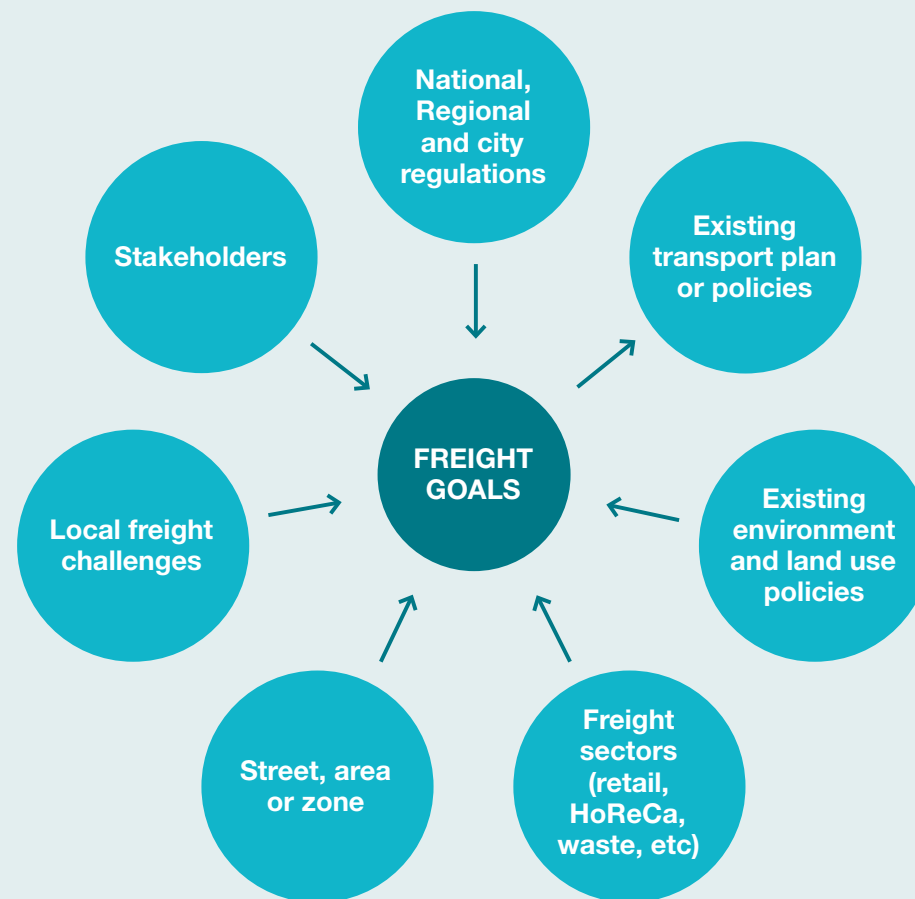
Freight Goals:

Freight goals outline your ambitions more directly linked to freight activities and will typically include:

- Consolidate the number of road freight vehicles
- Use land use planning to control future activity
- Ensure the delivery /collection time suits recipients, road network and citizens
- Ensure the delivery /collection location suits recipients, road network and citizens
- Ensure the delivery /collection route suits the road network and other road users
- Maximise the use of cleaner, low emission vehicles

These can be developed in multi-stakeholder groups, although developing them together may generate a lot of discussion both with internal and external stakeholders.

Objectives and local freight goals will be informed by numerous internal and external factors – as shown on the diagram opposite.



Top tip:

Think about quantifying what success looks like, so you know when you have achieved it.

Managing freight transport more effectively

Getting Started Tasks

Establish your plan, finance and resources

Planning

Detailed planning of your freight activities will help you work out what is possible, by when, within your available budget. Planning your activities over future years will allow you to identify key milestones and review points.

Finance

Given the type of city objectives that freight actions are typically designed to address (improving air quality, reducing traffic congestion, improving road safety and so on), there are a number of sources of funding that may be accessible to cities including European funding from ERDF and / or ESF programmes and other urban initiatives; national and regional stakeholders; and local public and private sector stakeholders.

Many of these city objectives stem from freight traffic being in the wrong place at the wrong time. Sharing city objectives with the freight industry, and understanding how and why the industry behave as they do, can lead to voluntary changes

in behaviour, meaning that city solutions to urban freight management don't need to be expensive.

Weighing up the amount of change required and the likely budget, means that there is a trade-off to be made between the amount of funding committed to a solution and the amount of change delivered. With any limited budget it is imperative that the focus is on achieving the best result.

Ensure you save money by working closely with local influencers and media who will be able to communicate on your behalf.

Resources

In order to develop and implement freight initiatives city staff need to understand the freight industry; and there should be leaders (from the city or beyond) that are knowledgeable about the industry and the stakeholders, neutral and inspirational. Building partnerships between the public and private sector can provide a great resource for the development of freight initiatives.

Top tip: Planning

Build in relevant key dates e.g. city elections, revisions to city strategy and policy documents, introduction of new regional, national or European legislation and regulation.

Top tip: Finance

Work with academics and industry (CSRF/Living Labs) to make your budget stretch further.

Top tip: Resources

When seeking to engage stakeholders talk to one to influence many and build partnerships for delivery.

Managing freight transport more effectively

Planning Action Tasks

Define your freight actions

There are a range of well documented⁴ ‘usual’ freight solutions that can be used to reduce the impact of urban freight transport including safe vehicles, electric vehicle charging points, consolidation centres, cargo bikes etc.

Each of the freight solutions can be categorised according to whether it is an infrastructure action, voluntary behaviour change action, regulation & enforcement action, or procurement action. Each type of action has a different set of typical characteristics as described on the next page.

Costs and benefits need to be considered for all options. For example, producing case studies and communicating with the freight industry is comparatively cheap but may only deliver small change over a long period. Alternatively, a new regulation could deliver more change in a shorter timescale, but new road signs may be required, and staff or technology will be needed to enforce it.

[Read more](#) about voluntary behaviour change, [more](#) about regulation & enforcement, and [more](#) about procurement.

Top tip:

Write in language for external stakeholders not your city authority!



Road charging signage, Belgium



Limited Traffic Zone, Parma, Italy



CRP's Click. Collect. Clean Air. video

Managing freight transport more effectively

Planning Action Tasks

Types of Freight Actions

	Voluntary behaviour change	Procurement	Regulation & enforcement	Infrastructure
Examples	<ul style="list-style-type: none"> • Advice, information • Case studies /good practice • Facilitate pilots • Media campaign 	<ul style="list-style-type: none"> • Consolidate suppliers • Consolidate orders • Specify clean vehicles 	<ul style="list-style-type: none"> • Low emission zones • Controlled parking zones, timed delivery locations • Congestion charging 	<ul style="list-style-type: none"> • New road • EV recharging points • Click and collect points • Quiet road surfaces • Physical access barriers (e.g. bollards)
Pros	<ul style="list-style-type: none"> • Simple • Not expensive (relatively) • Can be targeted at a particular area/issue • Can achieve better levels of individual performance 	<ul style="list-style-type: none"> • Costs can be controlled as part of overall contract • More flexible / local intervention • Stakeholder can help in 'designing' the incentives, leading to higher levels of commitment 	<ul style="list-style-type: none"> • Easy for politician • Sets one agreed 'standard' and ensure change occurs • Targeted at a particular area/issue 	<ul style="list-style-type: none"> • Can achieve long lasting change • Small scale physical access controls can be cheap and easy to implement
Cons	<ul style="list-style-type: none"> • Needs a willing audience, with time to read and comprehend, or search for information • Pilots need a long-term business case, or willingness for continued public funding • Limited impact in the short term 	<ul style="list-style-type: none"> • Small scale not 'big bang' • Needs to be part of an integrated approach or risk being ignored • Can be slower to deliver • Requires leadership • Need engaged procurement colleagues who want to support change 	<ul style="list-style-type: none"> • Based on one issue, may have unintended consequences • Standard will be to the 'lowest common denominator' – achievable and lawful • Can be costly, especially to enforce 	<ul style="list-style-type: none"> • Can take along time to implement • Can be very costly • Technology can make changes out of date quickly

Managing freight transport more effectively

Planning Action Tasks

Successful e-cargo bike pilot undertaken in Maastricht

In 2017 Maastricht Bereikbaar launched a 6 month electric cargo bike pilot, as part of a co-ordinated response to the planned closure of Maastricht's Noorderbrug Bridge to traffic. Four trials were undertaken.

The pilot demonstrated that e-cargo bikes are emission-free and silent; great for distribution companies, shop owners who want to collect and deliver their own products, and service technicians; a cheap, and quick mode of inner-city transport (you don't have to pay parking charges); and don't have to follow one-way streets and routes with restricted vehicle access. But e-cargo bikes are not allowed in the pedestrian zone after 11 am. Maastricht Bereikbaar are currently trying to define a pilot case for a realistic e-cargo bike access model.



CRP's deliverBEST uses procurement to influence freight transport in London

Freight TAILS lead partner, Cross River Partnership (representing City of Westminster, UK) has targeted nearly 300 central London businesses, recommending actions for them to take to influence urban freight movements that they generate using an online tool.

Many actions recommend businesses use their purchasing power, for example to consolidate their own suppliers and orders, request suppliers to quote for use of clean vehicles, and join neighbouring businesses in group 'preferred supplier schemes' to achieve cost savings through bulk purchasing goods and services.

Access to businesses to explain and promote the actions is critical to the success of this type of initiative. Gathering data on current suppliers and deliveries and clear impact statements will help convince businesses to take action.



Managing freight transport more effectively

Planning Action Tasks

Measure and monitor

Measure the impact of your actions to demonstrate the benefits of active freight management.

Tell stakeholders how your freight actions are making a difference to improving air quality, reducing road traffic accidents, making the area more liveable, encouraging more footfall in retail areas. In order to do this, develop indicators for your freight goals. Possible indicators are shown on the next page.

Several Freight TAILS cities have undertaken surveys as part of setting their freight goals, and propose to re-survey to understand the impact

of their freight actions. Others have developed sets of indicators that, combined with programme milestones, will allow for review and adjustment.

In order to quantify the proposed and realised benefits that active freight management has delivered, Cross River Partnership has developed measureBest. MeasureBest quantifies emissions reduced and cost savings associated with actions proposed and then taken by businesses.

Assess indicators achieved and benefits delivered, and amend or re-prioritise actions to ensure success in achieving your freight goals.

Urban freight indicators developed by Umeå

Umeå Municipality has developed a set of four urban freight indicators to track progress towards achieving their freight goals; ensure politicians understand progress; and provide a tool for internal and external communication. These indicators can be measured and baselined through existing methods and with existing resources:

1. Resident, customer and business views on freight traffic
2. Number of delivery vehicles in selected streets compared to residential population
3. Number of people killed or seriously injured by freight vehicles
4. Proportion of heavy vehicles that enter, but do not comply with environmental zone regulations

Starting with a realistic and achievable number of indicators, Umeå will work towards developing measures that are more accurate in the future.

Top tips:

Select indicators within your control, that are cheap to measure, that will demonstrate progress towards achieving your freight goals. Understand the difference between perception and reality. Use indicators already being collected.

Managing freight transport more effectively

Planning Action Tasks

Indicators and Data Sources to Measure and Monitor Achieving Freight Goals

Freight Goal	Indicator	Data source	Outcome / Benefit
Encourage 'clean' vehicles	Number of clean vehicles used by target stakeholders. Number of clean vehicle trips taken.	'Clean' vehicle registrations, exceptions for 'clean' vehicles from local regulations. Survey of local users.	Reduced harmful emissions, improved air quality
Involve, educate and raise awareness of urban freight with stakeholders	Number of stakeholders engaged in freight actions. Number of website hits. Number of twitter followers. Number of media articles issued. Number of stakeholder meetings held	Survey of local users. Online/social media analysis.	Improved take up of beneficial freight management initiatives.
Improve road infrastructure.	Number of delivery vehicles in city. KMs quieter road surface. Number of noise complaints received.	Traffic counts. Data from road charging technology. Data from city authority roads & environmental health departments.	Improved liveability in city
Improve logistics infrastructure.	Number of deliveries using consolidation centre / click and collect / pick up – drop off points. Number of trips avoided.	Data from logistics provider. Data from suppliers. Survey data from users	Reduced harmful emissions, improved air quality in city centre. Improved liveability in city
Improve safety of urban freight transport	Number of accidents involving delivery vehicles. Satisfaction of vulnerable road users	Agency collecting road traffic accident stats. Survey of vulnerable road users.	Improved liveability in city
Improve efficiency of urban freight transport	Number of enforcement actions taken for non-compliance of regulations	Data from organisation enforcing regulation e.g. Municipal Police	Reduced harmful emissions, improved air quality in city centre. Improved liveability in city

Managing freight transport more effectively

Planning Action Tasks

Think about future freight

Technology is part of all our daily lives. We can order deliveries and track their arrival time through apps on our smart phone. Recently:

- trials have proved drones cost effective and practical in rural and suburban areas for [UPS](#) and [DHL](#)
- delivery robots have proved effective where there are wide, uncongested pavements, as they are able to navigate without having to constantly stop for pedestrians or cyclists.
- research suggests the benefits of using autonomous vehicles for deliveries and servicing include increased efficiency of logistics operations, reduced emissions and improved road safety. Barriers include the lack of existing policy, the cost of investing in the technology and contested road space.

As this technology develops, goods still need to move, vehicles need to 'park', load and unload, and

at the moment humans still need to be involved. Our acceptability and interaction with these new technologies will continue to change, and our regulations and behaviours will need to adapt accordingly.

Cities need to plan for the movement of both people and goods together and consider appropriate regulations for connected and autonomous vehicles. This will enable the delivery of maximum benefits for both residents and businesses, increasing air quality and safety and reducing congestion.

It is likely that the 'fragmentation of freight' will continue meaning more and more small parcels will need to be delivered in a multitude of locations. How goods move is also likely to need to respond to changing security requirements in our cities. We will therefore need to harness new technology to ensure benefits for the citizens.

Tallinn demonstrates delivery robots and autonomous vehicles

As the population of Tallinn (Estonia) grows, there is increasing demand on the City's road network through more cars and larger and heavier freight vehicles. Tallinn is looking to the future to understand how innovative solutions can be implemented using connected and autonomous vehicles (CAV) for both passengers and goods.

The city has been involved in specific trials of delivery robots and autonomous buses, providing useful insights into these options that may be available in urban areas in the near future. CAV trials are enabling stakeholders to address the operations issues that need to be considered in future regulation.

Based on Tallinn's trials, there appears to be a clear role for technology in reducing the impacts of future freight movements.



Freight TAILS recommended city actions

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	3. Introduce internal and external processes to consider freight and waste management when developing detailed plans and building permits	Umeå	
	4. Develop and implement eco-driving programme, and introduce private sector Air Quality Champions	London, Split, Suceava	
	5. Promote re-timing of deliveries with businesses	London	
	6. Develop and implement IT solutions e.g. to communicate to stakeholders, e.g. measure of urban freight transport	London, Split, Suceava, Umeå	
	7. Incentivise cycle logistics for the last mile	Maastricht, Parma	
	8. Develop accreditation system for heavy goods vehicles with low noise and environmental impact	Parma	
	9. Encourage collaborative logistics and collaborative procurement	Brussels, London, Parma, Split	
	10. Promote 'cleaner vehicles' to private sector, and procure 'cleaner vehicles' by city authorities	London, Suceava, Tallinn, Umeå	
	11. Account for road safety, freight access and waste management in planning process	Umeå	
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	13. Develop, review and update local regulations	Gdynia, Parma, La Rochelle, Split, Suceava, Tallinn	
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	17. Harmonise freight regulations across the territory	La Rochelle	
	18. Develop, review and refine operation of delivery bays / loading locations and produce guidelines for loading locations	Brussels, Gdynia, La Rochelle, Parma, Split, Umeå	
	19. Develop clean vehicle infrastructure such as electric vehicle charging points, and natural gas filling stations	Split, Suceava	
	20. Improve logistic infrastructure and freight management	La Rochelle, Split, Tallinn	
	21. Improve road infrastructure with new layouts and systems, quiet road surface, shared surface	Split, Suceava	

Freight TAILS testimonials

Freight TAILS was a very good opportunity for transfer of best practice solution and know-how regarding freight distribution, providing the possibility to identify several measures for sustainable freight distribution in the city

Deputy Mayor, Suceava

It's nice that now we're using the e-cargo bike, our own van no longer has to go into the city every day, because the van contributes to pollution and traffic jam.

Maastricht business owner

Freight TAILS was very useful and has really helped me to be able to articulate both the problems presented by Micro Consolidation as well as some possible solutions.

London local authority transport officer

The Freight TAILS topics have been very helpful in shaping our freight programme.

London business association representative

As an individual, you have the opportunity to influence delivery already when purchasing / ordering. More need to take responsibility for these issues and see it from a larger scale.'

Private sector business member, Umeå ULG

Freight Tails gave us new methods and approaches within an area in which we don't have that much experience in.

Freight TAILS partner

Appendices

References

1. Lead Partner: Cross River Partnership on behalf of City of Westminster (UK).

Project Partners: Brussels Region (Belgium), City of Gdynia (Poland), La Rochelle Urban Community (France), City of Maastricht (Netherlands), Municipality of Parma (Italy), City of Split (Croatia), Municipality of Suceava (Romania), City of Tallinn (Estonia), Umeå Municipality (Sweden)

2. Freight TAILS operated between September 2015 – May 2018 and was co-funded by the European Regional Development Fund through the URBACT III programme.

3. Categorisation of key urban freight and logistics stakeholders Page 9. Engagement of stakeholders when implementing urban logistics policies. Non-binding guidance documents on urban logistics No. 3/6. December 2017. van den Bossche, M. and Maes, J. (Ecorys); Vanelander, T. (University of Antwerp); Marcário, R. and Reis, V. (University of Lisbon) https://ec.europa.eu/transport/themes/urban/studies_en

4. Study on Urban Logistics, December 2017. van den Bossche, M. and Maes, J. (Ecorys); Vanelander, T. (University of Antwerp); Marcário, R. and Reis, V. (University of Lisbon) https://ec.europa.eu/transport/themes/urban/studies_en

Novelog Toolkit: helps cities focus on the specific measures that would provide the greatest benefit to the city or to specific impact areas that are a city's priority. <http://noveolog.eu/toolkit/>

Glossary

CAV: connected and autonomous vehicles

CRP: Cross River Partnership, a public-private sector regeneration partnership operating in central London. The Freight TAILS lead partner, on behalf of Westminster City Council.

DHL: multinational logistics company

E-cargo bike: electric cargo bike

ERDF: European Regional Development Fund

ESF: European Social Fund

EV: electric vehicle

FRETURB: a software model allowing the simulation of urban freight transport for public and private sector decision-making.

GNSS: Global Navigation Satellite System

HoReCa: Hotels, restaurants and catering

IAP: Integrated Action Plans – each of the 10 Freight TAILS cities developed an Integrated Action Plan with a freight focus

Survey Monkey: a free online survey tool

UCC: urban consolidation centre

ULG: URBACT Local Group – a multi-stakeholder group that formed in each of the 10 Freight TAILS cities focussed on freight.

UPS: multinational package delivery company and a provider of supply chain management solutions.

Freight TAILS links

Freight TAILS Themes

Freight TAILS focussed on six key themes. These themes were chosen to be applicable across the different freight actions that may be considered by each partner locally.

The Freight TAILS experiences relating to each theme is available in a series of 'Focus on Urban Freight Transport and...' reports – linked below.

Thematic Reports:

[Focus on Urban Freight Transport and Stakeholders](#)

[Focus on Urban Freight Transport and Data](#)

[Focus on Urban Freight Transport and integration](#)

[Focus on Urban Freight Transport and Regulation & Enforcement](#)

[Focus on Urban Freight Transport and Voluntary Behaviour Change](#)

[Focus on Urban Freight Transport and Procurement](#)

Freight TAILS Case Studies

Freight TAILS partners each developed case studies focussed on useful and interesting urban freight transport initiatives. A total of 23 case studies are available [here](#).

Freight TAILS Partner Integrated Action Plans

Freight TAILS partners each wrote an Integrated Action Plan focussed on managing urban freight transport more effectively in their city.

English summaries available [here](#).

Managing Urban Freight More Effectively: A Guide to Getting Started and Planning Actions

Freight TAILS Final Report
April 2018



 @freight_tails
[Visit our website here.](#)



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La Sajette cargo-bike, Parma, Italy

