cyclelogistics – moving Europe forward

D3.4 Guideline for chamber of commerce and business associations: encouraging take up of cargo cycles for small businesses
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Introduction and project outlines

With a consortium consisting of partners from across eight European countries, the main objective of the EU funded CycleLogistics project was to achieve a reduction in energy used in urban freight transport. The project encouraged the use of bikes rather than motorised vehicles for delivery of goods, showcased best practice, and supported private business and individuals to transport goods by bike. The specific target area was the urban environment and in particular, focussed on sensitive areas like inner cities, home to some of the most congested and polluted areas.

The aim of this document is to provide Chambers of Commerce and business networks with all the necessary information to help encourage take up of CycleLogistics amongst the businesses they work with.

CycleLogistics focused specifically on the many motorised trips that are made with only a small load of light goods that are especially inefficient. In this way, CycleLogistics not only contributed to an increase in the efficiency of the entire system, but also to reduction in unnecessary trips done with half empty vehicles.

We expected the project to have the following impacts:

- Less energy consumption and CO₂ emissions
- Freeing up of urban space
- A reduction in noise and pollution

This had a positive impact on the quality of urban life, increasing the value of public space and providing an overall improvement of the quality in living conditions.

The CycleLogistics project also enabled delivery by bike to evolve from a niche market into a widely-accepted viable alternative for urban goods transport.

1. Project activities

The CycleLogistics project was expected to have an impact on the general use of bicycles to transport goods in three separate areas:

- Goods delivery – business to business (B2B) and business to customer deliveries (B2C)
- Municipal services & small service providers (e.g. parks maintenance, litter picking, handyman)
- Private goods transport (e.g. shopping, transporting leisure equipment)

  a. Goods delivery

  - Initiated cargo bike and bicycle trailer use for existing delivery companies
  - Improved and professionalised existing services and increased the awareness level among potential customers
  - Raised the image of CycleLogistics as a modern way of transporting goods that contributed to creating more liveable cities
  - Collected practical experiences from new users within the framework of test trials
  - Encouraged intermodal transport solutions between rail services and professional delivery services by bike

  b. Municipal Services

  - In towns and cities, we aimed to create favourable frame conditions for CycleLogistics to thrive by encouraging restrictions on motorised deliveries, and offering incentives for green transport initiatives
  - A second goal was to encourage municipalities to analyse their own communal services, looking at the possibility of shifting some of these services to bikes

  c. Small service providers

  - What is true for municipalities is also true for service providers. We also encouraged businesses to use cargo bikes to transport materials or tools

  d. Private goods transport

  - Within the sector of private goods transport, CycleLogistics persuaded private individuals to transport various goods by bike. Shopping trips are the most common goods transported by private individuals, but this also affected other trips associated with transport of goods and equipment, such as sports equipment
  - A further aim was to encourage retailers to provide customers wishing to arrive by bike with the necessary infrastructure and to provide motivating offers
  - The final aim was to provide end users with good quality information about the CycleLogistics project and some of the equipment
available to make private goods transport by bike a viable alternative

2. Target Groups

a. Goods delivery companies & small service providers

This target group consisted of companies that currently use motorised vehicles for their work but were open to integrating bikes into their existing fleet, as well as delivery companies already using bikes looking to extend their fleet. We included in this group traditional bicycle courier services that were looking to extend their operational area to heavier goods. Also included were service providers such as craftsmen and small trade services that might potentially use a bike for transporting equipment.

Benefits for this target group were a shift from motorised vehicles to cycles for provision of services, resulting in more business opportunities, reduced costs, and a more efficient service. This will lead to the creation of new sustainable business solutions for urban areas in the future, helping create more liveable cities.

For all these business the use of the bicycle for goods transport was promoted and implemented through the following tasks:

- Provision of cargo bikes and bicycle trailers for trial usage by existing logistics companies
- Improvement and professionalization of existing services and an increase in awareness among potential customers
- Raising the image of CycleLogistics as a modern and viable way of transporting goods
- Collection of practical experiences for new users and creation of a portfolio of best practice
- Encouraged inter-modal transport solutions between rail services and delivery services by bike
- Motivated businesses such as newspaper and advertising distributors and food deliverers to use bikes by providing them with free of charge bikes for trial use
- Raised customer awareness of bicycle delivery services
- Local project dissemination and communication along with marketing, reporting and documentation of case studies

Among relevant stakeholders, priority in co-operation was given to:

a. Municipalities, councils & local authorities – to create frame conditions that supported bikes as delivery vehicles. For example, policies that favoured their use over motorised vehicles
b. Delivery businesses & delivery business associations – this group was invited to awareness raising focus groups and encouraged to test, and implement the use of cargo bikes in existing logistics and service delivery companies, as well as supporting the creation of new CycleLogistics companies
c. Economic Associations & Chambers of Commerce – creating a strong economic argument for delivery by bike, to help companies purchase cargo bikes and to help create conditions to create innovative CycleLogistics companies

3. Current trends for goods transportation in European cities

Almost all goods transport within cities is done by combustion driven vehicles. Vehicles range from cars and small vans to light and heavy goods vehicles. The growing demand for delivery of goods increases the problems of traffic congestion, noise and air pollution which in turn decreases the quality of life in European cities.

There is a huge potential for CycleLogistics to shift goods transport away from motorized vehicles towards sustainable solutions. 57% of all inner-city trips are related to goods transportation in some way. This includes the delivery of goods as well as the transport of materials and tools for the provision of a service. Almost 100% of these trips within cities are done by motorized vehicles, and often light goods are transported by heavy vehicles for short distances. Currently, 15% of trips in an average European city are for transportation of goods by professional carriers, and these trips are responsible for 30% of transport energy consumption.

4. Reasons for freight transport by bike

With increasing demands for frequent and just-in-time delivery on one hand, and the restrictions of limited road space and environmental demands on the other, future solutions for achieving sustainable goods transport should be sought through consolidation. The purpose of consolidation is to improve the utilization of the transport system to generate economies of scale, thereby reducing vehicle trips, increasing efficiency and decreasing financial and environmental costs of transport.

Many local authorities and city councils recognize the negative effects of goods transport in and around their cities. Furthermore, there is a growing tension between conflicting objectives of freight operators and their customers and the general community.

Generally, it is agreed on that goods distribution is of significant importance for the social, economical and commercial operation of our cities. Also widely recognized is the fact that city logistics is growing quickly, whilst reduction of the negative environmental effects is not reducing proportionately.

Due to EU air quality directives, but also to maintain quality of life in their cities, local authorities try to regulate and influence the negative effects of growing freight traffic. In many European cities there are regulations for trucks entering the cities. Measures vary from time windows where trucks are allowed to deliver their goods, to strict rules on size and type of engines for lorries. Furthermore, tax regulations and environmental zones are implemented to avoid having too much freight traffic in the city. However, in spite of these measures, freight
traffic in cities and its associated negative effects are still increasing.

Another widely acknowledged fact is that appeal of cities is related to the quality of public space. A tendency for some cities to create car free shopping zones indicates that the liveability of cities is related to space to meet and greet. These changes to city areas also have implications for shopping areas and their accessibility. City planners and local governments have a growing awareness about the importance of city centres and the consequences transport policies have: creating favourable conditions for public transport, cycling and pedestrians is paramount to keep cities attractive, functional and economically vibrant.

5. Statistics about urban freight transport

High quality statistics are available for long-distance freight transport and passenger transport. For the transportation of goods over a shorter distance, little data is available. Regarding the share of urban good trips as part of overall trips, conflicting data exists. This may also be caused by the different definitions of cargo transport. Table 1 below offers a breakdown of the composition of trips in European cities. Should you require further detail, please refer to CycleLogistics deliverable 7.1, ‘A set of updated IEE Common performance indicators including their baseline and assumptions for extrapolation’, which is available on the CycleLogistics website.

<table>
<thead>
<tr>
<th>Cargo &amp; service trips</th>
<th>Personal trips</th>
</tr>
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<tbody>
<tr>
<td>15%</td>
<td>85%</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Cargo &amp; service trips</th>
<th>Personal motorised trips</th>
<th>Personal eco-friendly trips</th>
</tr>
</thead>
<tbody>
<tr>
<td>15%</td>
<td>45%</td>
<td>40%</td>
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</table>

<table>
<thead>
<tr>
<th>Motorised trips</th>
<th>Personal eco-friendly trips</th>
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</thead>
<tbody>
<tr>
<td>60%</td>
<td>40%</td>
</tr>
</tbody>
</table>

Table 1 Share of trips by mode

6. Different kinds of urban goods transport and the potential for CycleLogistics

In this section we consider the potential for CycleLogistics in the area of urban goods transport. We begin by describing CycleLogistics and the current situation, before considering which trips are not suitable for CycleLogistics due to weight, trip lengths, and more complex trip chains.

The field of moving goods by bicycle is related to professional activities as well as to transport activities by private individuals. The CycleLogistics project deals with trips in urban areas; in this environment, the bicycle has many advantages over a car or lorry:

- It can use more of the road network e.g. one-way roads in both directions, bus lanes, cycle lanes, etc.
- It needs less parking space and there are fewer access restrictions e.g. the ability to deliver in pedestrian zones
- It is faster and more reliable over short distances routes (up to 4 km), particularly during peak hours

For these reasons CycleLogistics is mainly concerned with urban trips rather than long-distance trips. Long-distance trips are only considered if they are part of an inter-modal trip, where trips may be undertaken by train and only the first and last mile by bicycle. A second definition of CycleLogistics concerns the weight and volume of the transported goods. The weight of transported goods is defined through the maximum payload load transportable by bikes. For commercial bikes (cargo bikes) it amounts to 80 – 200 kg, in exceptional cases up to 250 kg. But the weight also is an important factor with regard to determining whether a bike is a suitable means of transport, especially on hillier terrain. As highlighted in the previous section, 15% of trips in European cities are related to goods transport undertaken by professional carriers, 85% are related to passenger transport. But it is important to note that leisure and commuter trips may also include a share of light goods transport.

To analyse the potential of CycleLogistics there is a need to know how many trips are related to light goods transport. The first column in the table below highlights the share of trips involving light goods transport. The next step of the analysis looks at those trips that are short enough to be done by bicycles, and which do not involve complex trip chains. Finally the table looks only at trips which are currently undertaken by motorised transport (e.g. lorry, van, car and moped, motor cycle). Taking these restrictions into account, we estimate that a 25% of all urban trips could potentially be shifted to bikes.

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1 Source: CycleLogistics European Project, D7.1 A set of updated IEE Common performance indicators including their baseline and assumptions for extrapolation. www.cyclelogistics.eu
<table>
<thead>
<tr>
<th>Type</th>
<th>Share of trips</th>
<th>Share of trips involving light goods transport</th>
<th>Potential for CycleLogistics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>With trip lengths and trip chains restrictions</td>
</tr>
<tr>
<td>Business transport</td>
<td>8%</td>
<td>7%</td>
<td>4%</td>
</tr>
<tr>
<td>Shopping transport</td>
<td>24%</td>
<td>23%</td>
<td>19%</td>
</tr>
<tr>
<td>Leisure time transport</td>
<td>27%</td>
<td>14%</td>
<td>7%</td>
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<tr>
<td>Commuter transport</td>
<td>26%</td>
<td>10%</td>
<td>5%</td>
</tr>
<tr>
<td>Total passenger transport</td>
<td>85%</td>
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<td>35%</td>
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<tr>
<td>Heavy goods transport</td>
<td>5%</td>
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<td>0%</td>
</tr>
<tr>
<td>Light goods transport</td>
<td>5%</td>
<td>1%</td>
<td>1%</td>
</tr>
<tr>
<td>Very light goods transport</td>
<td>5%</td>
<td>5%</td>
<td>4%</td>
</tr>
<tr>
<td>Total freight/goods transport</td>
<td>15%</td>
<td>6%</td>
<td>5%</td>
</tr>
<tr>
<td>All trips</td>
<td>100%</td>
<td>60%</td>
<td>40%</td>
</tr>
</tbody>
</table>

Table 2: Potential for CycleLogistics

7. Best practice examples

**Cargo bike delivery company: medium size city**

*Outspoken Delivery, Cambridge, UK*

http://www.outspokendelivery.co.uk/

Outspoken Delivery was established in 2005 as cycle courier based in the historic university City of Cambridge, UK.

In 2010, in conjunction with moving into new premises, the company developed a range of same day and next day delivery services using a fleet of specially designed cargo bikes and trikes to deliver small and medium sized packages to 200+ customers located across the city, an area that spans approximately 7km long by 5km wide.

The cargo bikes are extremely flexible, light and fast, and are capable of carrying up to 60kg. They are no wider than a normal bicycle and they may be used on the extensive cycle path network allowing Outspoken to reach locations quicker than motorised vehicles. The cargo bikes are used predominately for small multi-drop items but also have the capacity to easily switch to larger loads.
The cargo tricycles are capable of carrying up to 250kg and are used to deliver to parts of Cambridge City centre which vans and lorries cannot easily access due to traffic restrictions. They form the backbone of Outspoken’s last mile delivery operations where national carriers deliver loads to the company’s depot on the outskirts of town, with couriers then delivering packages to their final destination using the tricycles.

The cargo delivered includes printed material, payslips, legal documents via the DX network, anti-bodies which are transferred in test-tubes in chilled containers, conference catering items, human organs for transplant and flowers.

With better access to the city centre, Outspoken offer a more flexible and reliable delivery service and this contributes to a less polluted, less congested and more liveable city. For customers, charges are significantly lower than their competitors' with the added advantages of improved service.

**Electrically assisted logistics company; large urban areas**

Gnewt Cargo Ltd, London, UK

http://gnewtcargo.co.uk/

Gnewt Cargo was established in London in 2009 with the goal of offering a reliable and green last-mile delivery service in the heart of London, in one of the most congested areas of the city.

The environmental background of the founders helped create a delivery company that is able to offer clients deliveries using 100% emission-free vehicles. Gnewt’s fleet is composed of electric scooters, cargo cycles and electric mini-vans which offer a solution that combines the traffic beating agility and flexibility of a bike with capacity comparable to that of a small van. The speed and efficiency of Gnewt’s deliveries are assured by the organisation thanks to a network of micro-consolidation hubs in central London. The green image and CO2 emission savings is appreciated by their clients, which includes mainstream logistic companies, large retailers and environmentally responsible companies that often hire vehicles sides to advertise their name and products, offering a further revenue stream for the company.

Gnewt have been the recipient of many awards for social innovation, green business and sustainable transport. However, they also apply social responsibility when it comes to recruiting employees, giving a preferential access to longer-term unemployed candidates.

**Bicycle Delivery Company / Large and medium urban areas**

**UBM, Urban Bike Messengers, Milan and Bologna, Italy**

http://www.urbanbm.it/

UBM was created in Milan by a bicycle loving journalist in 2008. It was the first courier company in Italy to occupy the unexplored business area of light, express and green delivery services.

The UBm experience in Milan proved to be successful and the company was awarded the 2011 Chamber of Commerce Innovative Business Award, and in 2010 registered its first franchising twinned company in Bologna. A combination of the renewed appeal of the bike, rising unemployment and the increase in the cost of fuel, there are now a dozen bicycle courier companies working in Italian cities.

UBM’s philosophy focuses on sustainable development, and this is implemented not only with an environmentally friendly fleet of vehicles, but also with a strong sense of social responsibility towards its couriers, all of whom are carefully insured. Furthermore, the company always looks to work with clients with a corporate social responsibility plan. Features of UBM’s mission are speed, guaranteed and customized services, punctuality (bikes generally being the quickest vehicles in Italian cities) and city-friendly corporate image.

Starting out with 3 cyclists, UBM Milan now employs 15 couriers with more than 1,000 reserves, and delivers 7 days a week (averaging about 25 deliveries and 60km per day). Their bags have a maximum weight of 10kg and fit packages of many different shapes and sizes. If booking a day in advance, a client may ask for delivery of loads of up to 50 kg thanks to the cargo bike recently added to the fleet. UBM covers the cities and suburbs of Milan and Bologna.

Most frequent items delivered are printed documents, medicines, DVDs and CDs, spare parts, presents, clothes, and more recently, food products have been added. A courier’s work is organized on a pick-and-deliver basis. This differs from a cargo bike company; UBM does not need a logistics compound, only a web & mobile phone management system, though UBM Milan has recently opened an office in a green co-working space.

UBM’s services are offered to everyone, but private individuals, shops, companies, professionals, offices, public administrations are their natural clients, especially if they share UBM’s vision of environmental respect. Comfortable service supports the future of UBM but there are some problems that affect the operation of the couriers. Cycling facilities are normally very poor in most Italian cities and this is made worse by suspect Italian car driver behaviour. UBM were invited to cooperate with the City of Milan to advise on the BICIPLAN design; they recommended more bike lanes, improved education of car drivers, more bicycle racks, larger
pedestrian areas, car restricted areas and 30km speed limit streets.

**Small business service providers**

*Bicycle window cleaner, Vienna, Austria*

www.fahrradfensterputzer.at/en/bicycle/

Since 2001, Mr Kellermayer has worked as a window cleaner. Due to financial constraints he was originally not able to afford a car for his business so he bought himself a bicycle trailer to transport the necessary tools. 12 years later he has two staff members and still only uses a bicycle trailer for his work.

The company was established in Vienna, is now very well known and specializes in the cleaning of difficult windows. In his view good intentions and idealism are not enough in a free market to enforce a more sustainable economy. A business has to be profitable from the beginning to survive and expand. For him the use of the bicycle and trailer as a means of transport for his entire window cleaning equipment has made it possible to combine these contrasting needs.

**Emission-free pizza delivery, Germany**

One sector of light goods delivery which involves mainly short distances is food delivery services. Food is often delivered by car and motorcycle, contributing to air pollution and traffic congestion in urban areas. As the majority of food deliveries are made within a short distance of the distribution centres, there is great potential for shifting the delivery of foods to cargo bikes.

In Germany, the pizza delivery service, Joey's Pizza, has been using cargo bikes for the past 10 years. The amount of pizzas delivered by bike depends on the distance the pizzas have to travel and the territory. In cities, Joey’s has noted significant benefits of using specially designed cargo bikes: they are faster, more flexible and the delivery personnel are not required to have a driving licence. Additionally, the employees involved were much more enthusiastic about their work and the franchise group were able to reduce expenditure.

The model of bike used for the pizza deliveries was developed by the cargo bike manufacturer GobaX and is called G1. The G1 bicycle is a fairly new product with a number of noteworthy features. The luggage carrier, which made from stainless steel, is the basis for various transport systems. The 24“ wheel and the two legged kickstand are indispensable when transporting heavier goods. Promoting their bicycle not only as a green and sustainable mode of transport but also as way of maximising a company’s profit, GobaX is a real pioneer. GobaX, in cooperation with the franchise Joey’s Pizza, calculated how much money can actually be saved by using a bicycle instead of a car. The results underline every argument in favour of the bicycle: within a year, over €6000 can be saved. The data included the initial cost, maintenance, wear of parts, energy consumption, depreciation and insurance.

**Cargo bicycles to collect waste paper, Bucharest, Romania**

‘Attention, we recycle!, this is the slogan of RECICLETA, a project that finds environmentally sound answers to social problems. The objective of the project is to encourage paper recycling in Bucharest in a sustainable way. The project helps small companies get their waste paper recycled and offers long-lasting, ecological jobs for disadvantaged individuals living in Bucharest.

The collection of waste paper is done with the help of cargo-cycles, a relatively new concept in Romania. In a city with more than 1 million cars moving on infrastructure built for only 20,000, RECICLETA wants to make a statement, raising awareness of ecological, social and economic issues that the EU is currently facing. One major focus of the project lies in the fact that unemployment has increased in Romania and there are fewer chances for unqualified people to find work. The riders are currently unemployed people, who are part of the ‘Guidance and Reinforcement of the Family Programme’, developed by SOS Children Villages Romania, a partner organisation. The second important aspect of the project is the environment. The bikers collect waste paper from companies, a monthly minimum of 25kg up to a maximum of 200kg. Each pick-up costs €1.15, and this covers employee remuneration as well as bicycle maintenance, safety equipment and other operational costs. Recently the programme has also been expanded to include private housing areas. To encourage active involvement of companies in the project, the organisation offers free-of-charge paper bins for exactly 25kg of paper and communication materials with instructions for selective waste management.

With a maximum load, the cargo-bike weighs 300kg. It operates without electrical assistance. All collected waste paper is brought to a 2-tonne capacity truck that does the final delivery to the storehouse or recycling agent. To compensate for the carbon released by the truck trees are planted in cooperation with the “Adopt a tree” project, with reduction of CO₂ emissions being the major focus of the project.

(www.elits.org/index.php?id=13&lang=en&study_id=3010)

**Alternative cargo bike uses, Graz, Austria**

A company that distributes medication and medical supplies to all pharmacies in Graz is now using a bicycle courier company with cargo bicycles to deliver medication several times a day.

A carpenter delivers almost all of his manufactured pieces with his bicycle and a trailer. He cycles at least 100km per month whether for a first meeting with a customer, or for the delivery and instalment of his pieces. (http://minutillo.at/wer)
The bakery chain “Sorger” now has a cargo bike that pedals through the parks in Graz and sells ice cream.

Several restaurant chains in inner-city Graz have now decided to switch from car to a cargo bike. This allows them to travel back and forth between locations during times when vehicular access to the city is restricted. According to their reports they save a lot of money on parking tickets, as well fuel.

The Austrian insurance company GRAWE has recently acquired a cargo bicycle for delivering mail to the post office several times a day. The post office is only a few hundred meters away from their main building in the inner city of Graz. Nevertheless by car – due to the one-way system - it takes them a very long time to get to the post office. Since they acquired the cargo bike, the time this takes is reduced to just a few minutes since they are not dependent on temporal access restrictions for motorized vehicles.

8. Role of chambers of commerce and business associations: How can you help increase take up of CycleLogistics?

Chambers of commerce exist to serve the interests of a business community in a particular area. They enable local businesses to meet and to form a business network in which to share ideas and to support one another. Whilst they are an independent body with no direct role in the writing of laws and regulations affecting business, they do have a strong campaigning voice for the interests of business and are able to use this to lobby government. As such, the CycleLogistics consortium is keen for chambers to promote this alternative way of conducting business to its members, and furthermore, to use its influence to help lobby for changes in frame conditions, in order to help create an environment for CycleLogistics to thrive.

In cities like where bike usage in business is non-existent, we would like chambers of commerce to advocate a general endorsement to the sustainability policies of the town. This is very relevant, as in many cases cycling is a key topic of these policies. In cities where more favourable regulations exist, cycle delivery companies and businesses wishing to use bikes for delivery of a service may be able to take advantage of the conditions but may be limited in terms of investment, support and motivation. We hope that chambers will use this document to support these individuals and start-up companies and reward sustainable innovation.

For CycleLogistics, more options become available when a City creates a central area that has a restriction on motorised vehicular access, here the implementation of innovative logistics solutions may be run with chambers and member businesses. This could include supporting the introduction or the purchase of cargo bikes, or to offer training on innovative logistics solutions. Further effort can be made to support existing logistic companies, encouraging them to introduce cargo bikes into their fleet to provide last-mile deliveries. Moreover, financial support to purchase cargo bikes could be offered to small business (craftsmen, trades, service providers) operating in the city centre.

Chambers of Commerce can act in a diversified manner to support CycleLogistics:

- Looking at current practices, disseminating information specific to a locality and eventually publishing manuals or guidelines to promote similar businesses
- To reward innovative businesses in the city
- To organize events, expositions and training focused on innovative logistics solutions restricted or not, to young entrepreneurs, unemployed people, non-profit organisation, etc
- To set up founding schemes to help logistic or service companies to introduce cargo bike in their fleet or services
- To organize entrepreneurial schemes to help people or groups to set up a new CycleLogistics company

9. Pros and Cons of using Cycle Freight

**Pros:**
- The capital cost of cycles is a lot lower than the motorised alternative.
- The running costs associated with bikes are considerably lower than a car or van. Fixed costs such as insurance and depreciation are typically a quarter of the cost and costs such as vehicle excise duty are usually non-existent.
- Cargo bikes aren’t subject to parking costs or congestion charges (assuming they stay within the legal definition laid out by the EU). Cycles can be parked almost anywhere, and this offers considerable advantage in terms efficiency
- Bikes are much more reliable in congested towns and cities. They are less susceptible to traffic and therefore can provide a more dependable service when compared to the motorised alternative
- There is no legal driver training requirement for people to use bikes (although some training would probably be recommended)
- The low environmental impact of bikes creates both a favourable green image for organisations that are using them, and in the case of councils providing services by bike, sets an example to private companies
- Using bikes may improve the health of those staff involved
- Will help towns and cities meet EU air quality directive levels

**Cons:**
- The cost of providing staff for a service is often greater than any capital cost, and in some cases more staff are needed to carry out services by bike than by van; in some cases additional staffing is simply a fear.
- Fears over security of equipment need to be addressed if we are to move cargo cycling from niche to mainstream. Municipalities use expensive equipment and will want guarantees of security
- There is a perception that bikes have a limited payload and range, and whilst this is true to an extent, many people underestimate this and overestimate how much they move around.
- Limited storage space: cargo bikes generally need to be stored indoors and this is not always possible where space is at a premium.
Vehicles powered by humans are subject to driver fatigue; this could lead to a less efficient service being provided or staff resistance to actually using bikes.

- Bikes are more susceptible to the weather, which may limit the seasons when bikes can be used or lead to staff resistance.

10. Cargo Bikes - the economic argument

Table 3 provides a summary of the set up and running costs of operating a delivery/courier service using a cargo bike versus a traditional fossil fuelled van. The indicated amounts are all based on real costs.

<table>
<thead>
<tr>
<th>Cargo Bike (8Freight)</th>
<th>Van (VW Caddy 1.6 Diesel)</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Payload 60kg</td>
<td>- Payload 700kg</td>
</tr>
<tr>
<td>- Volume just over 0.5 cubic metre</td>
<td>- Volume 3.2 cubic metres</td>
</tr>
</tbody>
</table>

Tangible Costs

**Set Up Costs:**
- Purchase Cost: £1,900
- £2,880 per annum (3 yr contract hire, 10,000 miles pa)

**Running Costs:**
- Annual maintenance: £150
- Included in contract hire cost
- Fuel: Zero
- £1,128 pa (10,000 miles per year, 56 mpg/12.32 mpl)
- Vehicle Excise Duty: Zero
- £165 pa
- Vehicle Insurance: £120 pa
- £500 pa

**Rider/Driver costs:**
- Hourly pay rate: £7.50
- Usually self employed paid by delivery eg £2.00 per delivery

**Service Insurance:**
- Goods In Transit Insurance: Difficult to organise
- £145 for £10,000 of cover (example from forum COD)

Intangible Costs

- Emissions Contribution: Zero
- 152g/km CO₂
- Congestion Contribution: Minimal impact
- Another vehicle on the road contributing to congestion
- Noise: None
- Diesel Clatter
- Average speed in City: 12 mph
- 12 mph
- Parking: Not a problem
- Restricted (risk of parking ticket)
- Flexibility: Access to pedestrianised areas and cycle paths
- Restricted to the road network
- Range: 50 miles per day
- Unlimited
- Contribution to rider/driver health: Rigorous daily workout
- Sedentary

**Example Delivery Costs (Cambridge)**

<table>
<thead>
<tr>
<th>Example Delivery 1:</th>
<th>Cambridge Van Courier 1</th>
<th>Cambridge Van Courier 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>- A4 Box</td>
<td>£7.95+VAT (£9.54)</td>
<td>£8.50+VAT (£10.20)</td>
</tr>
<tr>
<td>- Collect by 10am, deliver by 5pm</td>
<td>Cambridge Van Courier 1</td>
<td>£7.95+VAT (£9.54)</td>
</tr>
<tr>
<td>- From CB30AY to CB40AY (2 miles)</td>
<td>Cambridge Van Courier 2</td>
<td></td>
</tr>
<tr>
<td>£2.95+VAT (£3.54)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Example Delivery 2:
- 3 x A4 Boxes
- Collect by 10am, deliver by 5pm
- From CB30AY to CB40AY (2 miles)

<table>
<thead>
<tr>
<th>Cost</th>
<th>Delivery Company</th>
</tr>
</thead>
<tbody>
<tr>
<td>£4.95+VAT (£5.94)</td>
<td>Cambridge Van Courier 1</td>
</tr>
<tr>
<td>£4.95+VAT (£5.94)</td>
<td>Cambridge Van Courier 2</td>
</tr>
</tbody>
</table>

Example Delivery 3:
- 6 x A4 Boxes
- Collect by 10am, deliver by 5pm
- From CB30AY to CB40AY (2 miles)

<table>
<thead>
<tr>
<th>Cost</th>
<th>Delivery Company</th>
</tr>
</thead>
<tbody>
<tr>
<td>£6.95+VAT (£8.34)</td>
<td>Cambridge Van Courier 1</td>
</tr>
<tr>
<td>£6.95+VAT (£8.34)</td>
<td>Cambridge Van Courier 2</td>
</tr>
</tbody>
</table>

Table 3: Summary of costs (source: Outspoken Delivery, Cambridge)

11. Conclusions

Countries of the EU are currently facing considerable challenges when it comes to sustainable transport in towns and cities and valuable resources are being used in an irrational manner. The CycleLogistics Project provides solutions for the transport of goods and people to help meet these challenges, and the project will also assist with local policies that address sustainability, air quality, quality of life, energy saving, traffic management, and the health of the people. CycleLogistics can also potentially bring a wave of innovation to the business environment; the opportunity to run a delivery company or service providing a more efficient business in terms of energy, time and costs.

As the key to the business community, the project hopes that chambers of commerce and business associations will promote the idea of using bikes as an innovative tool for delivering business services, and its ability to meet the demands of an urban organisation. We also hope that chambers of commerce will actively raise awareness of the CycleLogistics project and will use our support to help lobby for improved frame conditions, so that sustainable transport solutions are able to thrive with a competitive advantage.
### 12. Annex 1

**Example for a call for cycle logistics project or activity in the City of Graz (Austria)**

<table>
<thead>
<tr>
<th>Directive for the funding of the purchase of cargo bicycles</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>§ 1. General Provision</strong></td>
</tr>
<tr>
<td>(1) The City of Graz grants a non-refundable subsidy to businesses and institutions (schools, universities, cooperatives, etc.) for the purchase of cargo bicycles.</td>
</tr>
<tr>
<td>(2) This subsidy serves to reduce motorised traffic by promoting the use of bicycles within economy and everyday life.</td>
</tr>
<tr>
<td>(3) The present subsidy is a De-minimis aid for companies according to the regulation 1998/2006 of the European Commission.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>§ 2. Cargo Bicycles</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) A transport bicycle (cargo bike) is designed to move bigger and heavier loads with pedal power. Apart from single-lane variations it also includes tricycles. Depending on task, purpose and field of application there exist different constructions that might include various cargo boxes. Therefore, it is strongly recommended to purchase these bicycles at specialist shops. The environmental agency will check the eligibility on the basis of a statement of the department of traffic planning.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>§ 3. Amount of subsidy and legal claim</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) 50% of the purchasing costs of cargo bicycles are subsidized, up to a maximal amount of €1000 per bicycle.</td>
</tr>
<tr>
<td>(2) Per company or institution one cargo bicycle is eligible for subsidy.</td>
</tr>
<tr>
<td>(3) The entire subsidy scheme is limited to €5000 (this will be increased should the measure prove successful).</td>
</tr>
<tr>
<td>(4) There is no legal right for subsidy.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>§ 4. Subsidy applicants</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) The subsidy is intended for businesses and institutions (schools, universities, cooperatives, etc.) located in Graz.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>§ 5. Duration of subsidy scheme</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) The subsidy scheme was first limited to one year, but was prolonged after a positive evaluation.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>§ 6. Application</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) An application for the subsidy should be made at the Environmental Agency in Graz, Kaiserfeldgasse 1, 4th floor, during opening hours (Tuesday till Friday from 8:00 to 12:00).</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>§ 7. Proof and payment arrangements</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) Purchasing costs for the cargo bicycle have to be verified with an invoice.</td>
</tr>
<tr>
<td>(2) The original invoice needs to be attached to the written application.</td>
</tr>
<tr>
<td>(3) Businesses also need to provide an excerpt from the Commercial Register, a trading licence or similar.</td>
</tr>
<tr>
<td>(4) Once the above documents have been provided the subsidy will be disbursed.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>§ 8. Reclamation of subsidy</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) The subsidy may be reclaimed up to 5 years after receipt.</td>
</tr>
<tr>
<td>(2) Applicants are obliged to pay back the subsidy, should they have claimed the subsidy deliberately and negligently by providing incorrect information or if the cargo bicycle should not belong to them any more within the above mentioned period.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>§ 9. Place of Jurisdiction</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) The place of jurisdiction for all legal disputes regarding the above subsidy is Graz.</td>
</tr>
</tbody>
</table>