

C-LIEGE - Clean Last mile transport and logistics management for smart and efficient local Governments in Europe

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1. Introduction

This document is part of the C-LIEGE project, whose overall goals are to develop, test and transfer experiences of successful soft measures and tools in the area of urban freight transport (UFT) with the aim of reducing the volume of urban freight traffic, with related savings in respect of energy use and pollutant emissions. In support of these goals, Work Package 5 is responsible for planning, developing and implementing innovative soft measures at the seven pilot sites.

Task 5.2 is concerned with the actual implementation of the pilot measures that have been selected and designed under task 5.1. This is the second periodic report setting out the progress on implementation of these measures. Since the first report, produced in January 2013, the selection of pilot measures has been deepened and expanded and further progress has taken place in the development of Local Freight Development Plans (covered separately in Deliverable 5.2), the introduction of Freight Quality Partnerships (covered in separately in Deliverable 5.3) and the designation of City Logistics Managers.

1.1 Guided Soft Measure Selection and Implementation

An important task of the C-LIEGE pilot implementation is the selection of urban freight transport demand-oriented measures that can qualify as pilot measures. Using the goal-ordered list of measures and the C-LIEGE supporting tools (e.g. toolbox, push-and-pull measures database, etc.), the second and third Round Table meetings and further deliberations by the local Authorities in the pilot cities/regions, we have identified an expanded list of measures that are being implemented during the C-LIEGE pilot phase. Table 1 thus represents the final list of selected measures for implementation in the C-LIEGE pilot phase with a brief description of the status of the measures planning and implementation.

Table 1: Final list of selected measures for implementation at C-LIEGE pilot sites

Pilot Site	Selected Measures
Montana (Bulgaria)	<ul style="list-style-type: none"> - Introduction of differentiated fees for loading / unloading - Enactment of access “time windows” as well as time window restrictions <p>The above two measures are intended to reduce the negative effects of goods distribution in the city centre (such as pollutant emissions). There is stakeholder support and funding has been made available in the 2013 budget. Following approval by the municipal administration, implementation has taken place between March and May 2013.</p> <p>The local parliament adopted new ordinances in March 2013 making these measures long-term legal tools instead of just trials. For loading/unloading, a significant charging scheme has been adopted (up to 500% increase compared with the previous municipal practice). The fees are calculated in accordance with the vehicle category, the year of engine production (deliveries/collection with vehicles older than year 2000 (first registration) are charged with 500% of the initial fee), the final destination (kilometres travelled), and the day and time of delivery/collection. Significant reductions in the number of requested permissions can already be reported since the introduction of the scheme and an increase in the number of newer delivery vehicles is expected. Improvements with regard to the level of air pollution are measurable (ex-ante and ex-post analysis). Impacts will be assessed in terms of the number of freight vehicles accessing the city centre, operational costs and air pollution.</p>

With regard to the access time windows, the measure is under implementation in the city centre and bans access to the city centre by vehicles of 3.5 tonnes or higher. Improvements with regard to the level of air pollution are measurable (ex-ante and ex-post analysis) This is also connected with the future municipal plans for a freight consolidation centre and the proposal to use smaller vehicles for last-mile deliveries which are subject to further improvements under measure 1. In addition, Heavy Goods Vehicles (HGVs) supplying the municipal territory and the region as well as HGV transit traffic have been re-routed to bypass the city, in order to reduce urban pollution and congestion and increase safety.

- **Freight map for appropriate routes and vehicular restrictions**

The aim of the freight map is to achieve a 10% decrease in the average daily number of freight vehicles entering Montana city, with a 500 km per month reduction in the distance travelled by freight vehicles in Montana city. The map will be transferred from the newly introduced paper version, currently printed on the flip-side of the municipal access permission cards, to a web version. The concepts applied in Newcastle (online routing information) and Leicester (mobile application) will be examined. The idea is to also integrate the contents of the C-LIEGE freight map into application maps of major NAVI app providers (the implementation shall be based on user-generated content supplied to app developers). Newcastle have supplied mapping information and contact details to Montana.

- **Local Freight Development Plan and Freight Quality Partnership**

The Fourth Round Table to establish the FQP was held at the end of May. The LFDP will be integrated with the new Municipal Development Plan 2014-2020.

<p>Szczecin (Poland)</p>	<ul style="list-style-type: none"> - Development of loading / unloading slots <p>The aim of this measure is to implement loading/unloading slots dedicated to small retailers and home deliveries, in order to reduce unnecessary vehicle mileage, congestion and pollution. This is an experimental measure with only one or two slots initially designated and further work is needed to effectively plan the location of additional bays and the needs of drivers using the bays.</p> <ul style="list-style-type: none"> - Promotion campaigns for sustainable freight transport (including eco-driving promotion and assumptions for FORS) <p>This is a combination of three measures with an overall goal of increasing knowledge and understanding of environmental friendly freight transport in the city. Quantified impacts should be identified by defining the participants/receivers of the different campaigns. A printed and online eco-driving guide for the city will be produced and promotion activities will be carried out. A website www.eco-szczecin.pl has already been created with a Facebook profile “Eco Freight Transport for Szczecin”.</p> <ul style="list-style-type: none"> - Development of alternative delivery systems – analysis of usability and relocation of pack stations <p>The aim of this measure is to re-locate pack stations to more convenient locations, reducing wasted journeys and unnecessary lorry miles attempting to deliver goods to residents who are not at home. Local data will be provided by InPost (number of users, pack-station features, ecommerce, etc.) and a survey of city residents will be carried out with the aim of assessing better locations, to enable pack stations to be re-located where appropriate.</p>
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- **ITS application for re-routing**

A smart and dynamic application for drivers relating to the two main downtown bridges was introduced in January 2013.

- **Synergies between C-LIEGE and GRASS projects**

GRASS is a new Polish-Norwegian scientific project arising as the result of C-LIEGE Round Table meetings. The main idea of GRASS is to continue the activities begun in Szczecin under C-LIEGE, such as the FQP management and soft measures applications (freight map, web service for freight drivers (as per Newcastle). A new project will also help to analyse ex-post (using the surveys) the results of joint activities in Szczecin. The basis of the activities under GRASS will be the results of C-LIEGE. This synergy will add value to C-LIEGE provided that the new project integrates the C-LIEGE pull measure with some push measures. The GRASS Project started on 1st June 2013 and will last 35 months.

- **Local Freight Development Plan**

The LFDP will be integrated into the city council's Sustainable Urban Mobility Plan.

- **Freight Quality Partnership**

Letters of intent for the FQP were signed in November 2012 and the Partnership will be established within the duration of the C-LIEGE project.

<p>Newcastle (United Kingdom)</p>	<p style="text-align: center;">- Rail Freight Partner Group</p> <p>The objective of the Rail Partner Group is to bring together all interested parties with a goal of encouraging modal shift from road to rail to examine the barriers to this process.</p> <p>The Group is in place and the last meeting was held on 24th June 2013. If the objectives of the group are successful, then greater use of railfreight should produce reductions in lorry numbers. It is, however, extremely difficult to quantify this since it depends on decisions taken by a number of private sector actors, taking into account the cost of transferring goods from road to rail, any investment needed to deliver this, and wider economic issues. This is a long-term measure, unlikely to produce demonstrable results before May 2013, but which could produce useful benefits by 2020.</p> <p>At the last meeting, it was reported that, over the next few years, the number of freight paths into the Port of Blyth is likely to increase from 3 trains per day to 15 trains per day. This should make a valuable contribution to the long-term objectives of the project.</p> <p style="text-align: center;">- Multi-Modal Carbon Calculator</p> <p>The “Multi-Modal Carbon Calculator” is an innovative online resource that contains a database of hundreds of port and rail freight terminals around Great Britain. For any given journey, the online tool will calculate the length of the journey by road, rail or sea modes. Adding in details of cargo tonnages to be shipped enables the tool to then calculate the carbon emissions associated with a particular mode. The tool provides a valuable resource that enables shippers to identify the most “carbon-friendly” mode of transport for a particular load and route, encouraging transfer of goods to modes that offer lower energy consumption and less impact on the environment. The tool is already in use and can be found at</p>
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<http://tyneandwear.ccccalculator.com/>

For 2013/14, the database of ports and terminals will be checked and updated as necessary. In addition, further development work was proposed to add indicative costings to the tool's functionality, enabling carbon impacts to be compared with actual delivery costs. Following discussion with the industry, it has been concluded (due to wide fluctuations in costs between operators and differing loads) it is not possible to estimate indicative costings. Any figures produced would have such a wide margin of error as to be valueless.

This is an information resource only and whether it produces a reduction in energy consumption for freight transport in the pilot city depends on how many shippers access the tool and whether it leads them to make choices in favour of more using other modes, such as rail and sea. At present, usage of the tool is relatively low and we are seeking to raise awareness of it.

We consider it an exciting product with considerable potential but, due to present low usage, it is unlikely to produce any demonstrable impact in the short-term.

- **Fleet Operators Recognition Scheme (FORS)**

The Fleet Operators Recognition Scheme is based on a successful initiative already underway in London and aims to raise standards amongst local operators in both the public and private sectors. Experience in London has already demonstrated encouraging success in reducing parking notices and accidents and (especially for C-LIEGE purposes) increasing the energy efficiency of fleet operations. The scheme is already in place and new members are actively being recruited. Currently, almost 2,200 freight vehicles are covered by the scheme.

- **Mapping**

Newcastle has developed a range of online mapping tools enabling the user to zoom in or out and view the maps in road, aerial or bird's eye format.

Key freight destinations are listed on the right-hand side of the Partnership's website. 25 of these are highlighted and have interactive mapping data available. You can print off a PDF map of the site, businesses on it and recommended entry/access points.

For the interactive element, by clicking on "[Company Route Finder Map](#)", you have access to a map of the site and a list of businesses (drop-down box on the right). By selecting a business and then hovering the cursor over it, you have the ability to input an origin postcode, and are provided with a map and detailed routing information from your origin to the business destination. Again, you can zoom in to view the route in more detail.

The 'i' symbols on the map denote points where there is a height/weight restriction – hover over these and it will give details of the restriction. These maps are already in place and have attracted considerable positive feedback.

Urban Traffic Management Control (UTMC) Centre

The Tyne and Wear UTMC Centre, based at the University of Newcastle, provides real-time traffic and travel data covering Newcastle and the rest of Tyne and Wear, helping freight operators (and other road users) plan their journeys more efficiently, particularly at times when traffic is disrupted. The Centre has a live Twitter feed with 3,500 followers, one of which is BBC Radio Newcastle who use it to broadcast traffic information to over 10,000 listeners in

	<p>the morning peak.</p> <ul style="list-style-type: none"> - Reducing risks to vulnerable road users <p>An information/education campaign is to be carried out to reduce the potential dangers posed to vulnerable road users (especially cyclists) by heavy goods vehicles – taking into account the fact that Newcastle has ambitious targets for increasing levels of cycling.</p> <p>Quite apart from the social and human costs of serious accidents, any accident involving a goods vehicle causes significant costs to the operator (whether or not they were culpable for the accident) – the vehicle and driver are taken off the road and there are considerable extra administration costs and probably higher insurance charges. This campaign therefore will not only benefit pedestrians and cyclists but will also have economic benefits to the freight sector.</p> <ul style="list-style-type: none"> - Local Freight Development Plan <p>The Plan for 2013/14 was approved by senior officers in March 2013.</p> <ul style="list-style-type: none"> - Freight Quality Partnership <p>Already in place.</p>
Stuttgart region (Germany)	<ul style="list-style-type: none"> - Electric goods delivery by shared van, likely to include truck conversion <p>The aim is to reduce pollution and noise. However, with just</p>

	<p>one van, the main goal of this pilot measure is to establish the business model and the concept, and also to promote electric vehicles. This measure will be tested in the city of Ludwigsburg (Stuttgart).</p> <p style="text-align: center;">- Ad-hoc-routes for commercial traffic</p> <p>The aim of this measure is to establish a system that helps with regional route planning for commercial vehicles, with special regard to traffic jams and disruptions. Following detailed discussions with local traffic authorities and with Stuttgart's newly-elected Mayor (who assumed the post in January 2013), the task is under negotiation for the 2014 municipal budget.</p> <p style="text-align: center;">- Location analysis to identify suitable site for new fuelling station for goods vehicles</p> <p>This measure was developed during the preparation of Ludwigsburg's freight transport plan.</p> <p>A fuelling station for goods vehicles was found to be in a location that caused significant detours as well as illegal traffic through residential areas. An additional fuelling station closer to the logistics hubs in neighbouring Kornwestheim would solve the problem.</p> <p>Since Kornwestheim was re-planning their commercial and logistics area, it was negotiated by KLOK that the new plan for Kornwestheim would allow for a fuelling station to serve goods vehicles in a convenient location, which they would be passing anyway. This should reduce the number of Km travelled by goods vehicles by 3 km for each vehicle to and from the commercial area (i.e. 200 vehicles/day corresponding to 15.000 km/month saved). The planning process for building the station is nearing completion and KLOK are continuing to liaise closely with the local</p>
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	<p>administration in Kornwestheim.</p> <ul style="list-style-type: none"> - Local Freight Development Plan <p>The LFDP is close to completion and is being discussed with the administration of Ludwigsburg (Stuttgart). A more public debate on the preliminary content of the LFDP will take place at the 4th Round Table.</p> <ul style="list-style-type: none"> - Freight Quality Partnership <p>The freight transport officer of the Stuttgart Region Chamber of Commerce was present at the first two C-LIEGE Round Tables. Afterwards, the Chamber set up a stakeholder round table on their own.</p> <p>In practice, this is a great step forward, because it means that the topic will be permanently addressed by a strong organization in Stuttgart Region.</p> <p>However, there is the question of overlap and duplication, and the question of minimum requirements for a sustainable Freight Quality Partnership. Within C-LIEGE, KLOK will therefore make sure that the activities of the Chamber of Commerce and KLOK in any case will deal with a joint and ambitious agenda, including the topics identified under C-LIEGE.</p>
Hal Tarxien (Malta)	<ul style="list-style-type: none"> - Re-routing of private vehicles during loading/unloading periods <p>During periods when freight vehicles are loading/unloading goods, the main road will be closed to private vehicles (excluding residents). This is currently awaiting approval by Transport Malta.</p>

	<ul style="list-style-type: none"> - Allocation of designated loading/unloading bays <p>Designated loading/unloading bays will be identified, with a time-window for freight vehicles. This is currently awaiting approval by Transport Malta.</p> <ul style="list-style-type: none"> - Access restrictions <p>An access restriction will be introduced for Heavy Goods Vehicles crossing the main road. This is currently awaiting approval by Transport Malta.</p> <ul style="list-style-type: none"> - Local Freight Development Plan <p>The LFDP should be complete in July.</p> <ul style="list-style-type: none"> - Freight Quality Partnership <p>The FQP was officially established on 1st March 2013. There is presently no budget allocated for the Partnership.</p>
Leicester (United Kingdom)	<ul style="list-style-type: none"> - Freight Map for appropriate routes and vehicular restrictions <p>A free map that can be downloaded to any mobile phone has been introduced with the aid of funding from the European Regional Development Fund, in order to improve routing, reduce wasted lorry miles and curtail accidents due to over-reliance on unsuitable sat-nav systems.</p>

	<p>The map is based on Ordnance Survey maps and GPRS technology. It shows the best routes in and out of the city and the driver can find a tailored route by entering in the vehicle weight and height. The map also shows rest stops. It is in pilot stage at the moment and an official launch will take place in summer 2013. It has already been added to the City Council's website.</p> <p style="text-align: center;">- Sign posting</p> <p>The aim of this measure is to provide improved signage to Faircharm and Bursom industrial estates, which vehicles unfamiliar with the area often find hard to access. This is a designated measure under the Local Transport Plan and has been approved and allocated budget by the City Mayor. The work will be completed by the end of the year once the bus corridor works along the A426 are completed.</p> <p style="text-align: center;">- Access restrictions for polluting vehicles</p> <p>The aim of this measure is to carry out a feasibility study into a Low Emission Zone for Leicester, to address concerns about air quality and air/noise pollution. Funding has been secured from the UK government for a 12-month study and a consultant has been hired to run the programme. A workshop was held in May 2013 to discuss the business case for such a zone with the relevant stakeholders. Internal consultation has been completed and the external consultation will begin in mid-July. The feasibility study will be completed by the end of the financial year (March 2014) in conjunction with Hillingdon Borough Council in London. Political leaders will then decide how to take this forward.</p> <p style="text-align: center;">- Local Freight Development Plan</p> <p>Leicester's LFDP is in fact the Local Transport Plan, which was approved in April 2011 and is a political document that</p>
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	<p>has links to funding and political recognition, setting out a work programme and priorities for all modes of transport (including freight).</p> <ul style="list-style-type: none"> - Freight Quality Partnership <p>Leicester's current FQP has been successfully re-launched as part of the C-LIEGE project and is attracting good attendance at meetings from public and private sector stakeholders.</p> <ul style="list-style-type: none"> - Web Promotion of Sustainable City Logistics <p>The FQP has set up a web page on the Leicester City Council webpage with links from the Leicestershire County Council web page. The site is updated regularly with information on minutes, newsletters, etc. FQP resources have been made available online for maximum access. The web promotion not only promotes the FQP and its work but also the resources on offer to freight operators.</p>
Emilia-Romagna (Italy)	<ul style="list-style-type: none"> - Time window / access restrictions for polluting freight vehicles <p>These measures are being introduced jointly and a key element of this project is to harmonize these restrictions across all the main Municipalities of Emilia-Romagna.</p> <p>C-LIEGE will outline the basis for this exercise.</p> <p>The expected impacts resulting from the implementation of the above measures will be more energy-efficient urban freight traffic, greater use of cleaner energy sources for goods deliveries, a reduction in road freight volumes and better utilisation of freight vehicles. The impact evaluation will be carried out largely by estimation/simulation based on real local data from other Regional cities (e.g. Bologna). The application area is the LTZ of the city and vehicles in the Euro 4 (3,5 tonnes) category: will be covered.</p>

	<p>On 2nd July 2013, the Regional Government of Emilia-Romagna approved the agreement on the harmonization of city logistics rules.</p> <ul style="list-style-type: none"> - Local Freight Development Plan <p>This will be delivered at a regional level as it is not possible to be implemented at a city level.</p> <ul style="list-style-type: none"> - Freight Quality Partnership <p>This will be delivered at a regional level as it is not possible to be implemented at a city level. Operators will be involved in the process. The strategic choice is to have a “public driven” approach, given the complexity of the logistics environment in Emilia-Romagna and the fact that the focus is on policy making.</p> <p>A pure bottom-up approach in which private stakeholders are involved from the beginning of the project would have risked introducing further complexity and limited the project results.</p>
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1.2 City Logistics Manager

The establishment of the City Logistics Manager (CLM) has been recognised by the C-LIEGE pilot cities/regions as a necessary step for effective and more integrated freight transport demand planning and management in urban areas. The pilot cities/regions are fully aware of the importance of this new figure in helping to achieve ‘greener’ and more energy-efficient last mile delivery; at the same time, in an environment of intense austerity, they are aware that securing dedicated funds for the establishment, *ex-novo*, of new personnel within city Administrations holding responsibility for CLM operations only is likely to be extremely difficult.

This potential barrier for the establishment and operation of the CLM in the C-LIEGE pilot cities/regions is being overcome by the identification as CLM of the most relevant/appropriate internal personnel (e.g. manager, officer, etc.) already employed in the Administration itself working in freight transport planning, passenger transport planning, traffic management and engineering.

Three examples from pilot sites demonstrate the effectiveness of this approach. In Leicester, the role of the CLM will be built into the role of the Chair of the FQP as the person concerned is a senior officer with access to political members and a budget available, making them well-placed to represent the interests of the freight sector. In Newcastle, the CLM is Project Manager of the city's UTMC Centre, with instant access to information about traffic movement. And in Stuttgart, it appears likely that the CLM will be integrated into the city's administration, subject to the outcome of municipal budget negotiations for 2013.

The designation of CLMs is well in hand across the other pilot sites also. In the case of Emilia-Romagna, this will be delivered at a regional level as it is not possible to be implemented at a city level.

The CLM is perceived as part of the overall urban mobility planning and management but focused on freight transport. They should analyse, plan and promote the implementation of measures and regulations needed for ensuring the necessary level of freight transport services within the urban area, whilst minimizing congestion, pollution and energy consumption as well as transport costs.

2. SUMMARY

As the above list of measures underlines, an impressively wide variety of proposals to encourage energy-efficient UFT have been planned and put in place across our C-LIEGE pilot sites. The range of measures under way and the varying sizes and characteristics of the pilot sites contribute to the transferability objective of the C-LIEGE programme. The main lesson learnt during the delivery phase of WP5 is that the process of securing political approval and budget allocations takes time, and these processes are often not coterminous with C-LIEGE timescales.

In a few cases, measures have had to be re-aligned or substituted, due to political or implementation difficulties with the original measure. This was to be expected as not every putative measure proves to be viable in terms of actual delivery. The fact that, in all cases, alternative measures have been identified demonstrates that the C-LIEGE pilot sites are laboratories of innovation and suggests that they will continue to bring forward dynamic ideas to improve urban freight movement beyond the lifetime of the project.

A second possible challenge – the difficulty in establishing new City Logistics Manager posts at a time of fiscal austerity and job-shedding in many municipal authorities – has been overcome by a pragmatic approach of identifying those managers who are presently, *de facto*, performing the CLM role and more clearly delineating their status as CLMs.

Finally, it is encouraging that pilot sites have already given consideration to the long-term status of implemented measures post C-LIEGE and appear confident of their continuation – this is particularly important in the case of Freight Quality Partnerships which require continuity of funding and municipal engagement to take forward coherent long-term strategies for UFT.

As Work Package leaders, Newcastle are impressed by the dynamic approach taken by pilot sites and their flexibility in overcoming difficulties. We feel that WP5 has fulfilled its goal of delivering a range of innovative and transferrable soft measures to reduce the adverse impacts of 'last-mile' deliveries.