

NexTrust Pilot 1.4.1 Summary Case Study:

“Cool Running in Urban Areas”: London Food Hub



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Introduction

The freight supply chains across Europe account for 25% of the CO2 and particulate emissions. In addition, the lack of collaboration in the use of motive and warehousing assets leads to high levels of inefficiency when looked at from a European perspective although for individual organisations their operations appear optimised particularly for Customer Service.

NexTrust, a EU grant funded Horizon 2020 project (Grant 635874), was setup to bring together like minded actors in the supply chain to raise asset utilisation levels and reduce Green House Gas emissions through collaborative pilots.

Up to now, actors in the supply chain, such as manufacturers, importers, retailers, exporters and logistics companies are generally reluctant to pilot or utilise new methodologies or new routes to market as there are many examples of costly implementation failure. In order to overcome actors’ hesitation to participate, the most important aspects for successful collaboration were identified prior to the elaboration of the pilots:

- Careful planning of the project
- An agreement to, transparently, share the savings generated net of any additional costs
- Agreements on the planning and administrative processes to be used
- Routes to deal with any disagreements
- Importantly the use of a Trustee to receive data, analyse the best matched routes and distribute back the plans. This would be a daily (at least) dynamic process. The Trustee also covered the confidentiality and anti-trust concerns about the pooling of data.

Pilot 1.4.1 focuses on LTL (Less than Truck Load) shipment optimisation in the chilled market in a major dense urban area: London. The pilot tests the use of an Electric vehicle over morning and afternoon shifts delivering palletised temperature controlled food products to a retail distribution centre and then reloading with temperature controlled food.

The examined sector:

We examined the Fresh and Chilled Food in London.

- Totally uncoordinated deliveries, operated by each supplier separately using their own fleet or subcontracting the deliveries.
- Chilled and fresh products loaded onto large articulated diesel vehicles (often only partially filled) before being delivered to retailers or other food service companies in London.
- High percentage of LTL deliveries and low truck fleet utilisation.
- Current situation: Two distinct models of delivery:
 - Morning delivery: Food Service Business

Customers - Retailers/ Catering: Food Service companies deliver to their customers in the morning.

- Afternoon delivery: Grocery supermarket DC- Volume Grocery Retail: Grocery chain DC’s generally require delivery of their goods in the afternoon.

The objectives:

- To consolidate fresh and chilled products.
- To consolidate less than truckload (LTL) deliveries into “right sized” electric delivery vehicles.
- Demonstrate the feasibility of delivering consolidated LTL loads on Electric Vehicles (EV) into the City of London.
- Improve efficiency and GHG emissions.

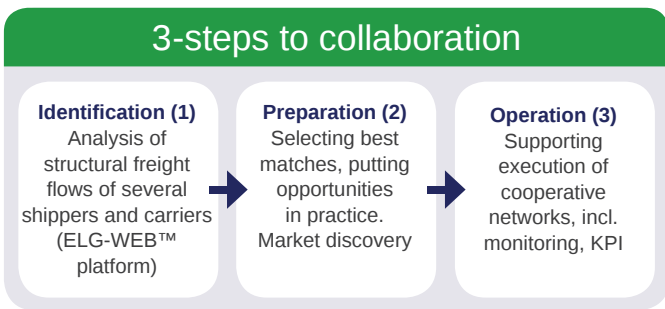
The concept:

- Operate an electric truck from a multi temperature food logistics consolidation centre, located in a strategic peripheral area to Central London (Thames gateway area), close to East London and South-East region.

The methodology

The methodology used across all the pilots was based on a 3 Step process:

- **Identification:** freight flows and potential partners
- **Preparation:** Selecting best matches, benefit sharing agreement, administration, contracts
- **Operation:** supporting execution, monitoring agreed KPIs



The pilot:

- Ran in London, UK for two periods, December 2017 - one week and January 2018 - 3 weeks.
- Involved companies: Solstor, Mars, Covent Garden Market Authority, Sainsbury’s, Sainsbury’s Thameside DC, Fresh Produce Market, Sainsbury Convenience Centre, ELUPEG, Giventis, Food Storage and Distribution Federation & Paneltex.
- Project and data management undertaken by ELUPEG supported by Giventis International.

The results:

- Viability of using electric vehicles for urban delivery was demonstrated
- Empty legs of backload trips on LEZ roads were reduced
- Less KM per delivery owe to improvement in routing and scheduling
- Reduction of low utilisation of articulated vehicles

- The project exceeded its deliverables with reductions in vehicle movements of 35-58% (depends on backload deliveries) and Co2e reduction of >90%
- The consortium companies have built a strong bond during the Pilot and have now submitted a grant application to Innovate UK to move to a full stage Feasibility study.

- We are also planning an extended pilot to increase vehicle numbers and consolidation centres in 2019 followed by a potential full roll-out in 2020.

Conclusions

Pilot 1.4.1 focused on LTL shipment optimisation in the chilled market in a major dense urban area, London. Initially, the viability of using electric vehicles for urban delivery was demonstrated.

Moreover, the attractiveness of the Pilot was explored- in case of success, various actors, i.e. food distribution operators, food service delivery providers, conventional wholesale markets and modern retailers are interested to participate in the future. Finally, the commercial participants and the legislative bodies involved in the pilot were very interested in the development of a framework towards the further enhancement of the Pilot’s objectives.