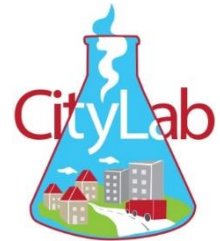


CITYLAB SOUTHAMPTON



The CITYLAB implementation in Southampton centred around promoting the use of the 'Southampton Sustainable Distribution Centre', re-organising deliveries to the Universities' halls of residence, Southampton General Hospital and the Isle of Wight Hospital Trust from there



Context

A policy objective of the City of Southampton is to improve air quality. Data indicated that the PM₁₀ levels in Southampton just exceeded the limit of 20 µg/m³ and NO₂ levels measured on the busiest roads were just above the standard of 40 µg/m³.

Southampton City Council (SCC) has been considering a range of complementary measures to tackle pollution, including freight transport. CITYLAB aimed to reduce freight vehicle movements and to use less-polluting vehicles for transport generated by large municipal organisations (LMOs).

From the project outset, CITYLAB focussed on large municipal organisations' role in reducing vehicle impacts by investigating incoming freight consolidation. SCC's approach promotes the use of the 'Southampton Sustainable Distribution Centre' (SSDC) lying outside the proposed Clean Air Zone.

The project undertook case studies with the Universities' residence halls, Southampton General Hospital and the Isle of Wight Hospital Trust to quantify the case for consolidation.

In action

Recognising the fact that there is no single 'solution' to the problem of air quality, the Southampton living lab has considered complementary approaches:

- Promoting and undertaking 'delivery and servicing plans' (DSPs) across various business and municipal organisations to review and rationalise their procurement processes and mitigate the negative impacts of freight and service vehicle movements.
- Using the SSDC for consolidation of incoming deliveries and off-site storage
- Using electric vehicles in large municipal fleets.



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While the concepts themselves are not necessarily innovative per se, the individual application areas are. Participants in the lab identified them as potential solutions to problems encountered:

- The consolidation centre traditionally serviced smaller, independent retailers, thus private companies use the SSDC already. Of interest is the broader application to LMOs and the freight generated by 9000 university students living in halls. Also, reducing freight movements into hospitals and how short-term off-site storage can aid ward-based infrastructure maintenance and refurbishment.
- Small electric vehicles are now commonplace in both passenger and light freight activity. Of interest here is to what extent they can serve the needs of larger-scale municipal fleets.

Results

The Living Lab approach has been instrumental in initially conceiving these concepts, undertaking evidence-based business cases to evaluate their potential benefits and promoting their wider adoption. Without such championing of the concepts and facilities it is likely that LMOs would remain unaware of the freight transport issues they cause and of the measures they can take to address them.

Due to the lack of any significant take-up of consolidation, to date, by the LMOs, the effects reported are based on **estimated** 'after' data, based on assumptions of anticipated effects.

Isle of Wight NHS Trust: The estimated after case indicated that combined delivery/collection vehicle visits made to St. Mary's hospital depot, pharmacy or catering would reduce by around 21%, if consolidation would not apply for timed deliveries and local supplies. It would come with a relatively small cost of £4,252 per annum for consolidation warehousing costs, partially offset by freeing up space at the hospital. Total delivery costs would likely increase due to consolidation as the introduction of costs charged by MGL for the consolidation service may not be offset by any reduced delivery costs charged for delivering to the SSDC rather than to the Isle of Wight (involving a one-hour ferry crossing). This extra cost has acted as a significant barrier to implementation.

University halls of residence: Goods-in surveys at four residence halls with a total of 5,050 students took place over six days (9 am to 5 pm), immediately following the 2015 Black Friday sales event date. These surveys were restricted to parcels and excluded deliveries of groceries and takeaway food, which are not suitable for consolidation. A total of 3,504 parcels were delivered in 275 visits (12.7 parcels/visit). Extrapolating these results, it was

estimated that around 128,000 packages per year (= 14 per student) are delivered. The cost of providing a consolidated delivery service to was estimated to be around £18 per student per year.

A significant benefit would be time savings of two hours per day for the hall receptionist from having to deal with multiple couriers to a system having a single pre-sorted delivery. It was estimated that consolidation could reduce the total number of delivery visits to halls by 35%. This was based on an assumption that urgent, timed deliveries would have to be excluded from consolidation.

Challenges, opportunities and transferability

Among the challenges realising outcomes were:

- The willingness of organisations to make operational changes to logistics practices in favour of sustainability when it inherently impacts customer/client experience.
- The willingness of local authorities to push policy measures to drive forward sustainable logistics practice.

Some lessons have been learned from the living lab process and the implementation actions:

- An understanding of contractual commitments between the LMO and suppliers that might be affected by any proposed changes is desirable
- A robust contractual commitment is required between the LMO and the consolidation centre operator to facilitate progress on both sides
- A highly flexible and non-prescriptive approach is required from the operator of a consolidation centre to suit individual customer needs
- Managers in LMOs need to be convinced that the tangible benefits will outweigh the costs
- A new consolidation centre may not be able to survive financially due to initial slow take-up and lack of volume; being part of an existing freight logistics business may ease the process

Although take-up to date has been rather slow, this is not unexpected for large municipal organisations where complexity and size of operations and numbers of people involved, do not lend themselves to quick decisions being made. Tight financial constraints and other considerations, also make progress difficult. In the meantime, the living lab members will continue to communicate with the LMOs for support and further promotion of the concept. Once one LMO takes the initial leap, it is expected that others will follow.

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