

## The use of ICT in delivering waste management services

### Workshop 20/07/16 London Councils

A workshop was held with representatives from 15 London boroughs to share information on the use of ICT in delivering waste management services. The objective was to give an overview on the technologies available, along with a case study of them in use and to allow time for a general discussion to share experiences.

The following write up contains notes from the workshop and should be read in conjunction with the presentations – available on the Resource London website. Please note, all presenters were giving an independent view and the workshop was not attended by any external companies.

#### Bin weighing technology

Additional notes to over view presentation	<ul style="list-style-type: none"> <li>• Very useful for running trade collections</li> <li>• In some cases cost of vehicle cheaper than cost of bin weighing kit</li> </ul>
Additional notes to case study presentation	<ul style="list-style-type: none"> <li>• Purchased bin weighing to see an increase in recycling.</li> <li>• Measuring 500 bins in 58 estates. Can see how much they have recycled and then if it's increased, will award the estate some money</li> <li>• Handheld devices for reading RFID chips not very easy to get hold of. Not as many people making them as they thought there would be.</li> </ul>
Group discussion	<ul style="list-style-type: none"> <li>• Some have found it hasn't worked well, particularly where retrofitted. Difficulty with retrofitting – bin lift not right for the technology or vehicle. In most cases felt to be better to do it when you purchase a new fleet or new bin lifts.</li> <li>• Weighing works – reasonably consistent. Real problem in defining geofences (could be operational practices i.e. parking round the corner to service 2 sites at once) or technical– vehicle parked in the middle of the block which is not possible.</li> <li>• Some officers are of the opinion that geofence technology may have come to the market before it's ready. Officers have had to iron out a lot of issues themselves. Urge caution for anyone using for dense household areas – easier for commercial or blocks of flats, not kerbside.</li> <li>• A lot of companies are now offering bin weighing as a standard feature.</li> <li>• Get a sample first – trial the kit from different companies to see what works best for your vehicles/borough.</li> <li>• It is probably not worth investing in bin weighing technology just for kerbside services. It is mainly useful for trade waste and for data on household services that the private sector</li> </ul>

	<p>uses to bid back.</p> <ul style="list-style-type: none"> <li>• RFID chips are sometimes difficult to fit to bins, particularly Chamberlains. In some cases the bin needs inverting to fit the chip.</li> <li>• The private sector has been investing heavily in bin weighing technology. Often this is retrofitted onto older post contract vehicles.</li> </ul>
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### Route and Fleet optimisation

Additional notes to case study presentation	<ul style="list-style-type: none"> <li>• Took two administrators 14 weeks to gather the data and a further four weeks to deal with the oddities – to build the property database.</li> <li>• WebAspx identified efficiencies that could be pursued.</li> </ul>
Group discussion	<ul style="list-style-type: none"> <li>• Ensure you have a few people trained up and ready to use. Better to use training days when actually needed.</li> <li>• Polishing section you need to do after the optimisation – real life scenarios; local knowledge. Try and do the polishing before you implement the rounds as you could end up with difficulties (six weeks of missed bins in one borough)</li> <li>• Webaspx can't start with a blank sheet of paper and only optimises what is already there</li> </ul>

### Real time tracking and reporting

Additional notes to case study presentation	<ul style="list-style-type: none"> <li>• The tracking data itself is often used for looking at missed collections, to address insurance claims and for general data purposes</li> <li>• Another example was working out queueing times in transfer station – to model future changes</li> <li>• Knowing where the vehicle has been for residents complaining about missed collections</li> </ul>
General discussion	<ul style="list-style-type: none"> <li>• Working with in-cab technology:             <ul style="list-style-type: none"> <li>○ Can close off jobs in real time</li> <li>○ Should be able to let a resident know they have contaminated for example</li> <li>○ Integration is a crucial part</li> <li>○ Moved to self service so residents</li> <li>○ Visualisations and hotspots on a dashboard for Members</li> </ul> </li> <li>• One local authority invested in it alongside vehicle cameras which reduced the amount of unregulated waste collected. The discussion went on to in cab technology which allows the operatives to collect data on improperly set out bins, ensure specific bins are collected and prompt for assisted collections. Although many boroughs have these systems there is a feeling that some boroughs are not using them to their full potential.</li> </ul>

### Bin fill rate sensors

Additional notes to case study presentation	<ul style="list-style-type: none"><li>• Used to visit all sites at least weekly and have managed to reduce frequency.</li><li>• Some sites it was evident they were not going often enough. May have been overflowing?</li><li>• Can adapt optimum fill level.</li><li>• Less complaints from residents about overflowing bins</li></ul>
Discussion	<ul style="list-style-type: none"><li>• Using sensors for communal residual – can see where caretakers are not exchanging bins.</li><li>• Need to be careful when utilising bins fed by chutes as the system can become sheared off.</li></ul>