

Tech Your Pick

Delivering clean streets isn't just about man power; and it isn't even just about equipment – sweepers, pressure washers and the like. Technology has a big part to play in the modern streetscene strategy, as **Mark Jenkins** of the Egbert Taylor Group explains...

During my two decades with Egbert Taylor Group the social value of the bin has considerably increased, and the way in which it interacts with the public has irrevocably changed. It has transitioned from being a humble container to an integral component in increasing recycling rates and shaping urban environments.

For some, bins have now become multi-faceted communications devices, monitoring instruments and vehicles in which to boost the sustainability credentials of an area. For others, they've become tools to help reduce waste collection-related traffic. Crucially, however, bins have come to represent ways in which local authorities can become more resource efficient, improve their waste collection strategies and deliver cleaner streets.

What exactly has changed? Technology. For many, technology in an environmental context is associated with the Teslas of this world, the wind power firms and the hydropower companies; those that are undoubtedly trailblazers and paving the way for a sustainable future, yet who may be perceived as being cost-prohibitive and slightly ahead of their time. Alternatively, it could be those that demonstrate substantial sustainable benefits, but that require substantial, arguably prohibitive, investment in order for them to be realised.

Technology now available to local authorities is not cost

prohibitive. Nor is technology that is new to market, ahead of its time, or expected to become mainstream five to 10 years from now. The technology presented here is accessible, inexpensive and adding significant value to local authorities up and down the UK, right now. And its inclusion within local authorities' waste collection strategies could not be timelier.

A recently published report by the Association for Public Service Excellence revealed how spending on neighbourhood services in England fell £3.1bn – or 13 percent – between 2010/11 and 2015/16.

Likewise, a Local Government Association report entitled "Evaluation of the Waste and Recycling Programme" highlights how funding from central government to councils is reported to have been cut by 40 percent during the era of the coalition government. It also raises the issue around how budgets are shrinking in tandem with the wider legislative context, the by-product of which is placing increasing pressure on local authorities to send less to landfill and become greener.

The same report points out that UK councils spend around £853m per year on waste collection; a figure that is not only sobering, but one that quickly makes clear how minor percentage improvements could translate to huge financial savings for local government. And this is where the complementary relationship between tech and the bin has flourished...



Take Bigbelly, for instance, which contains in-built solar-powered compaction technology that increases the unit's capacity from 606 litres to 800 litres when full, and provides collection operatives with an "up-to-the-minute" overview of their entire collection route. If a Bigbelly smart station is only 10 percent full, there is little point in a waste collection team allocating the time required to empty it. As a result, vehicle movements are minimised, making an area safer and cleaner, and the local authority's cost of waste collection is reduced.

At the other end of the spectrum, any bin nearing 85 percent fill capacity communicates directly with the collection teams responsible for emptying it through the system's technology platform, alerting them to its fill status and requesting, in real time, for it to be emptied.

If we compare where we are now with where we were as little as a decade ago, then the level of flexibility afforded by technology is groundbreaking. It is also proving to help UK local authorities through the provision of valuable data relating to each unit, which enables them to tailor waste collection strategies per fleet, or even as specific as per bin.

Cutting Collections

RUGBY BOROUGH Council, for example, replaced 56 traditional bins, each of which had traditionally received between two and three collections per day, with 23 Bigbelly smart stations. In only 12 months of using them, Rugby Borough Council reduced manual waste collections from 51,100 per year to only 1,509 per year – a saving of 49,591 collections. In the context of the £853m spent on waste collection, technology such as this could surely make a notable contribution towards reducing the overall bill.

Yet rather than solely focusing on collection frequency and the associated cost, it is also important to consider the indirect benefits of the technology, too.

In Rugby Borough Council's case, litter picking on the main trunk roads into Rugby town centre would often get neglected as a result of the time and cost required to send a crew out to address any issues. Now, savings made through the new bins are reinvested in this element of street cleansing.

Likewise, Bigbelly has helped eliminate overfull bins in Rugby's public spaces and children's play areas without having to commit crews to make ad hoc and unplanned weekend collection trips. The system's compaction technology buys time until the beginning of the working week by increasing the units' capacity when full.

This isn't an isolated case, either. In Cheshire West and Chester Council a total of 60 Bigbelly smart stations replaced 72 traditional bins at several locations throughout the borough during the summer of 2015. Since their installation the Council has reduced its annual collections from 209,160 across 72 bins to 12,801 collections across 60 Bigbelly smart stations. The City of Bradford Metropolitan District Council has also decided to extend Bigbelly's on-street presence to 47 smart stations across Keighley, Bingley and areas within Bradford City Centre.

Of course, Bigbelly represents an ideal solution for delivering clean streets in public spaces or in areas with high footfall. Equally, a like for like replacement of existing container fleets with fleets of Bigbellies would, in many cases, not always be the most economical solution.



However, with the advancement of fill level technology sensors, which can be installed in any bin and render each and every container an intelligent container, there are now multiple routes for local authorities to achieve clean streets in parallel with becoming more agile and much leaner.

One of Egbert Taylor Group's own solutions – netBin – is a web-based application that enables its users to develop efficient waste collection routes and base resource decisions on data created through its inexpensive sensor technology.

From individual containers' fill level and location to their temperature and usage statistics, netBin provides users with full visibility over an entire fleet, regardless of the bin, container type or size. It can also play a key role in preventing misuse, reducing risks such as fires and ensuring that traditional bins never become overfull and are only emptied when full, increasing the efficiency of waste handling fleets.

Clean streets should never be lost, compromised or become something that we have to fight for. It is a basic right and one that is akin to unhindered access to clean water and energy. This pressure, however, should not necessarily fall solely on the shoulders of the UK's local authorities, and nor does it have to.

Local authorities are now expected to achieve more for less, however the ability of a bin to contribute towards increasing operational efficiency and allow savings to be reinvested into frontline services, all for a cost with a short payback period, is hugely compelling and something that will become a valuable tool over the coming months and years.

Technology, if used correctly, really can equate to clean streets. And, as local authorities are being forced to be more creative with their budgets, suppliers and manufacturers are thankfully becoming more creative with their solutions, too. Not only will this ensure that our streets continue to be clean, but also reinforce the increasingly important role that the bin now has in modern society. ■



Mark began his career at Egbert Taylor Group 20 years ago as a welder, quickly progressing to the role of area business manager before being appointed to the role of sales director in 2015. Mark is responsible for a team of seven area managers covering the UK and Ireland, developing new markets for the products and solutions offered by the Egbert Taylor Group.