

Digital Transformation in Waste Management and Street Cleansing

How environmental service teams can make the most of digital technologies and meet the challenges of austerity



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Introduction

Digital transformation has been around in local government for a number of years now. But what does it mean for waste and street cleansing teams and how can they make the most of digital technologies in serving their communities?

Local authorities have recognised the potential of digital technology

To meet the challenges of austerity, local authorities know they need to make their processes more efficient and effective. They need processes that are less reliant on paper forms, spreadsheets and phone calls. And they need to make better use of information so that they can improve performance and reduce costs without reducing the quality of service. This recognition has led to investment in digital transformation and ongoing programmes at many councils.

Environmental services need the same focus as other services

These digital transformation programmes have introduced new technologies in order to allow service teams to connect more efficiently and effectively with citizens. Yet for many waste and street cleansing teams this is limited to customer contact forms on the website. In many cases, the back office is still run using spreadsheets and emails.

As one of the most high-profile services delivered by the council and a major source of demand on the call centre, it is critical that the same focus on channel shift, process automation and performance management is applied to environmental services as the rest of the business, and that technology is used to tackle the areas of real cost and the sources of key issues.

More for less is still the mantra

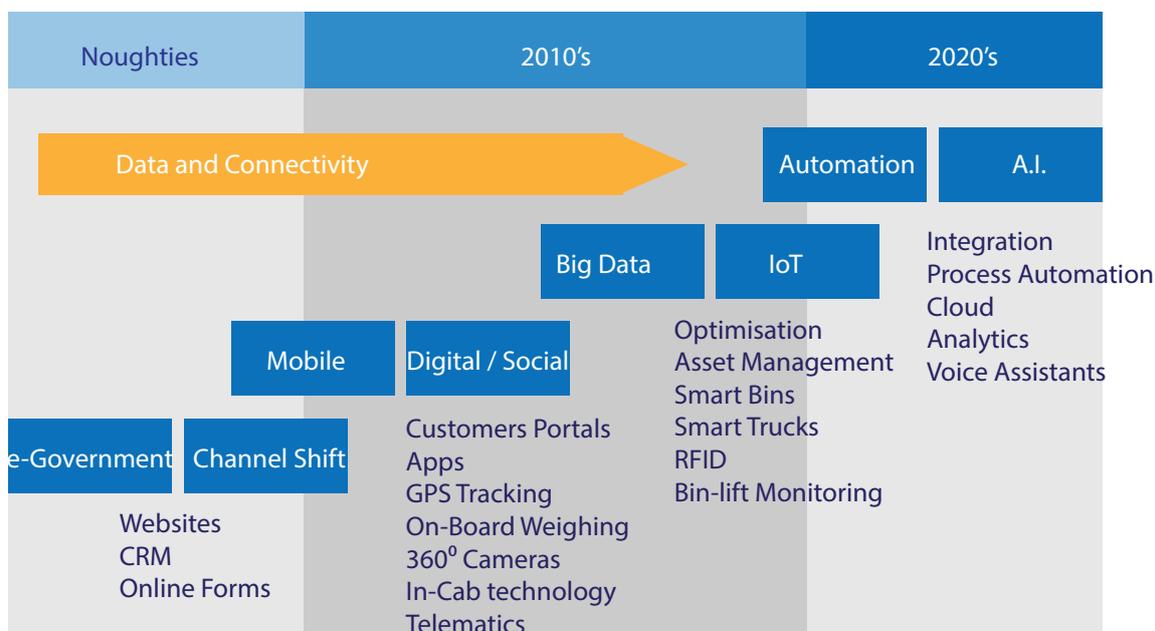
With the average council getting 15,000 calls about waste and recycling every year and the Government pledging to build another 300,000 new homes a year, every service manager will recognise the growing demand being placed on their service. But funding remains tight and will be for the foreseeable future; indeed a recent survey by the Association for Public Service Excellence (APSE) showed 37.5% of councils expect to be working with fewer staff in the waste team next year. The focus of digital transformation remains the ability to do more for less – that is, to provide better services to more citizens with better value.

The current state of digital transformation

Like the rest of society, local authorities have implemented digital solutions with the aim of improving services and delivering better value for the public. From web forms and channel shift, through the introduction of mobile and social technologies, to the more recent uses of data and smart assets, the focus has often been on citizen engagement and the efficient use of resources.

While this is all well and good, going forward, as we move into the 2020s and local government digital transformation programmes mature, there will need to be a focus on joining up some of these technologies into more connected platforms that work across entire environmental service processes.

Figure 1: Timeline of technology adoption in local government environmental services



Those technologies that deliver the greatest impact will be brought to the fore, while there will be a reducing emphasis on those technologies that although appearing initially innovative have failed to deliver real business value when applied to environmental service delivery at scale.

Digital technologies are now going deeper into environmental service processes, such as missed bin returns, chargeable garden waste services, and street cleansing inspection scheduling, and moving from customer contact and information dissemination through to business process automation, performance management and best practice coaching.

Challenges to achieving the benefits of transformation

While a report by the consultancy PWC last year highlighted that most local authorities expect digital technologies to reduce costs (63%) and improve service delivery (80%), we believe that within waste management and street cleansing services there are a number of challenges that still remain in achieving the wider benefits of digital transformation.

Indeed, a different survey by the Welsh Audit Office in 2016 suggested that around 50% of local authorities expect more savings to come from service reductions than efficiency. If service reductions are to be minimised it is crucial that digital technology delivers greater efficiency and performance.

Here are some of the challenges we believe that local authorities face in realising the potential of digital technologies to improve their services.

- **Service plans aren't joined to service delivery**

One of the biggest challenges we see to improving the efficiency of waste and street cleansing operations is that service plans don't reflect what actually happens on the ground. Where plans do exist, they often don't describe what crews actually do, and in many cases service managers don't even have a digital record of who does what work. Without that connection between planning and operations, it is near impossible to deliver change and performance improvement.

- **Staff spend too long entering data on different systems**

Another source of inefficiency is staff working with different systems that don't share information. To complete the entire business process, from the first customer contact to the delivery of service on the street, may require staff to share information by re-keying data, sharing information over email, typing data into spreadsheets, calling colleagues on the phone, and typing-up paper notes. This not only takes time and slows down the process, but also leads to errors as people make mistakes.

- **Colleagues in the depot and contact centre don't know what's happening on the ground**

To respond effectively to customer enquires environmental service teams need to have access to service information in real-time. Where this is unavailable it is impossible for contact centre staff to explain to residents why their bin may not have been collected and to give them

a clear explanation of what to do next. Likewise, where supervisors aren't able to see the progress of crews throughout the day, they are unable to react until later in the day which has a negative effect of both performance and cost.

- **Data in different systems isn't brought together to manage performance**

Without reliable information, managing and improving performance is very difficult. To properly coach staff and build best practice processes, service managers need accurate and timely information about how the service is performing. Even where this data does exist, it often sits across different systems and databases. To deliver data-driven decisions and evidence-based change, local authorities need a common set of data which can be brought together to inform plans and strategy.

- **It all costs too much and takes too long**

Budget is undoubtedly a challenge for local government transformation programmes. Where councils undertake enterprise-wide transformation projects that require large elements of development and integration for each department within the council, there is a real risk that cost and time over-runs will mean they fail to deliver business process benefits and that environmental service teams will be left with applications that are either not fit for purpose or that sit isolated from their existing business systems.

Key principles for delivering digital transformation

To overcome some of the challenges outlined previously and to deliver greater benefit from digital transformation, we believe there are some key principles that local authorities should apply.

The back-end process should connect seamlessly to the front office

We believe authorities should be looking to add the same level of efficiency at the back-end of their business processes as your customer experience platform delivers at the front-end. But where a local authority's digital transformation programme is primarily based around a new Customer Relationship Management (CRM) or Customer Experience (CX) platform there is a danger that efficiency breaks down as the process goes deeper into the waste and street cleansing domain.

Re-keying, auto-generated emails and printed forms remain a common workaround, even for councils that have ongoing transformation projects. But these business processes remain unreliable and resource intensive, which keeps costs high for the council and inefficient for citizens.

Local authorities need a joined-up system or systems that works across the entire business process from first customer contact to the delivery of services on the street for citizens. They should be looking to build the power of optimisation into their daily operations. They need to reduce demand by providing residents with access to service information and request forms online, and increase productivity by sharing information effectively between the depot and crews.

Figure 2: The joined-up environmental service management process. By connecting front-end customer processes and back-end service operations local authorities can deliver greater efficiency and savings.



Local Authority Example - Scarborough

Scarborough Borough Council is delivering over £250,000 in savings by digitising its bin collection service. As part of their corporate transformation programme, they have linked up the frontline service with the call centre in real time through the use of in-cab units. The flow of data from the bin lorries to back-office systems removes paperwork and administration related to service delivery. The in-cab tracking system allows Scarborough to create new, optimised rounds, enabling it to be far more responsive to issues as they arise, such as crew changes and the impactful seasonal demands of a tourism reliant borough, whilst maintaining current staffing levels.

Some notable successes from the programme include: a 26 per cent reduction in phone calls to the call centre; a 34 per cent reduction in missed bins that operators must return for; a 9 per cent increase in the number of calls resolved 'first time' by call centre advisors as relevant information is available to them; and a decrease of over 50 per cent in internal communications between Customer First, the back office and crews. You can see the full case study here: <https://www.local.gov.uk/transforming-and-digitising-refuse-and-recycling-service>



The focus needs to expand from planning to operations

The use of digital technology is now widespread in designing environmental services. Our data shows that 80% of local authorities now use route optimisation software within waste collection and street cleansing to assess scenarios and design rounds, delivering on average savings of 10-15% of service costs. The focus now needs to expand from planning to operations in order to deliver the same efficiency gains in day-to-day business processes and services on the street as have been achieved in service redesign.

With continued reductions in management and back office support (the Association for Public Service Excellence (APSE) suggests that 37.5% of councils expect to be working with fewer staff in the waste team next year) it is imperative that councils have efficient business processes, automated where possible, and accurate and up-to-date information and feedback to reduce costs and improve services.

Local Authority Example - Richmondshire

Richmondshire District Council use In-Cab units in each of their waste collection vehicles. As well as feeding real-time issues to the contact centre and the depot, the system is also helping drivers and crews to improve their efficiency, performance and safety. For example, highlighting recent changes to the round to drivers reduces the chance that something new will be missed, while generating reports on issues like damaged bins means they can be fed more efficiently to their bin service teams. In addition, the number of missed bin return visits has reduced as drivers no longer need to go back for any missed bin claims where a reason for non-collection has been logged (e.g. bin not out).

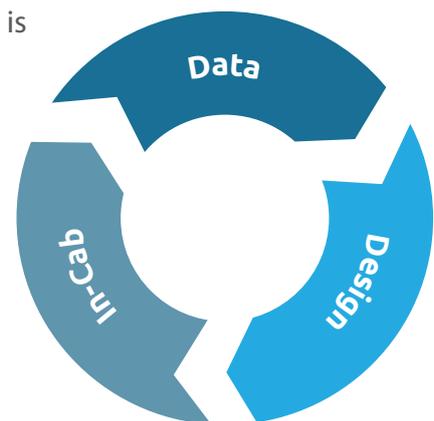


Data is good, but too much is overwhelming

From smart bins to smart trucks, local government environmental services have not been immune to the growth of big data. Yet few councils have turned such data into actionable insight.

Before implementing technologies designed to capture ever more data, we believe local authorities need to establish what data they need and how it will be used to support meaningful service change. In simple terms, what is the purpose and how will it help? When considered in this way, it turns out that many councils already have the most important data they need. They just need to use it.

One way in which data can be used to deliver actionable results is by connecting performance data within In-Cab systems to the round designs within route optimisation systems. In doing so, service teams can create a virtuous circle whereby planning and operations follow a continuous cycle in which real-time data collected by the In-Cab system is used to regularly redesign and optimise rounds in order to maintain high performance and efficiency.



Reduce demand as well as increasing efficiency

As well as helping people work more efficiently, digital technology solutions should also aim to reduce the amount of work required in the first place. Whether it is using In-Cab systems in Refuse Collection Vehicles to reduce the number of bins that get missed, services calendars on the website to cut calls to the council, or email and social media campaigns that encourage residents to recycle more effectively, having a focus on Demand Management – that is, the concept of reducing the citizen’s need for help from the council – will help both reduce cost and improve customer satisfaction.

Local Authority Example - Falkirk

At Falkirk Council, online calendars are available on the council’s public website. By creating these from their round management system, the council can be sure that the information is accurate and up to date. Round information is also shared with MyFalkirk, the council’s citizen account management system, allowing the council to send day changes and the new collection calendar to thousands of citizens using their app. Missed bin calls have come down by 20% on an average week as more accurate information has helped residents present the correct bins for collection. The council has also seen fewer calls to the contact centre as would be callers check online or through their app. Calls related to collection dates are down 15%.



Make sure the overall solution is achievable and affordable

While we all want to think big, we see one of the barriers to success is where local authorities begin to assemble a patchwork of solutions. The result is often the creation of a solution where applications don’t talk to one another, or an overwhelming integration task that consumes too much time and money. We believe a better approach is to centre the transformation strategy around an core solution focus covering both planning and operations, which can be delivered quickly and cost-effectively, with additional eco-system apps integrated as required.

Conclusion

As one of the most high-profile services delivered by the council and a major source of demand on the call centre, it is critical that the same focus of channel shift, process automation and performance management is applied to environmental services as the rest of the business.

If digital transformation within the waste and street cleansing functions is limited to customer contact forms on the website or a customer experience (CX) focused project, with rounds still designed on paper and business processes still reliant on email and the phone, then the ability to reduce cost and react efficiently to change will be missed.

We believe that local authorities should be looking to add the same level of efficiency at the back-end of your business processes as your customer experience platform delivers at the front-end. We see one of the barriers to success is where local authorities begin to assemble a patchwork of solutions with the result often being the creation of silo applications that don't talk to one another, or an overwhelming integration task that consumes too much time and money.

Our view is that the best approach is to centre the transformation strategy for waste management and street cleansing around a core solution focus covering both planning and operations, which can be delivered quickly and cost-effectively, with additional eco-system apps integrated as required.

About Webaspx

Webaspx is an award-winning technology company for waste collection, street cleansing and highway winter maintenance providers. Our software and services are used by over 200 local authorities and environmental service companies around the world to increase performance and reduce costs. With an integrated solution covering route optimisation, service management and in-cab technology, we are helping our customers to streamline business processes and make better use of resources.

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