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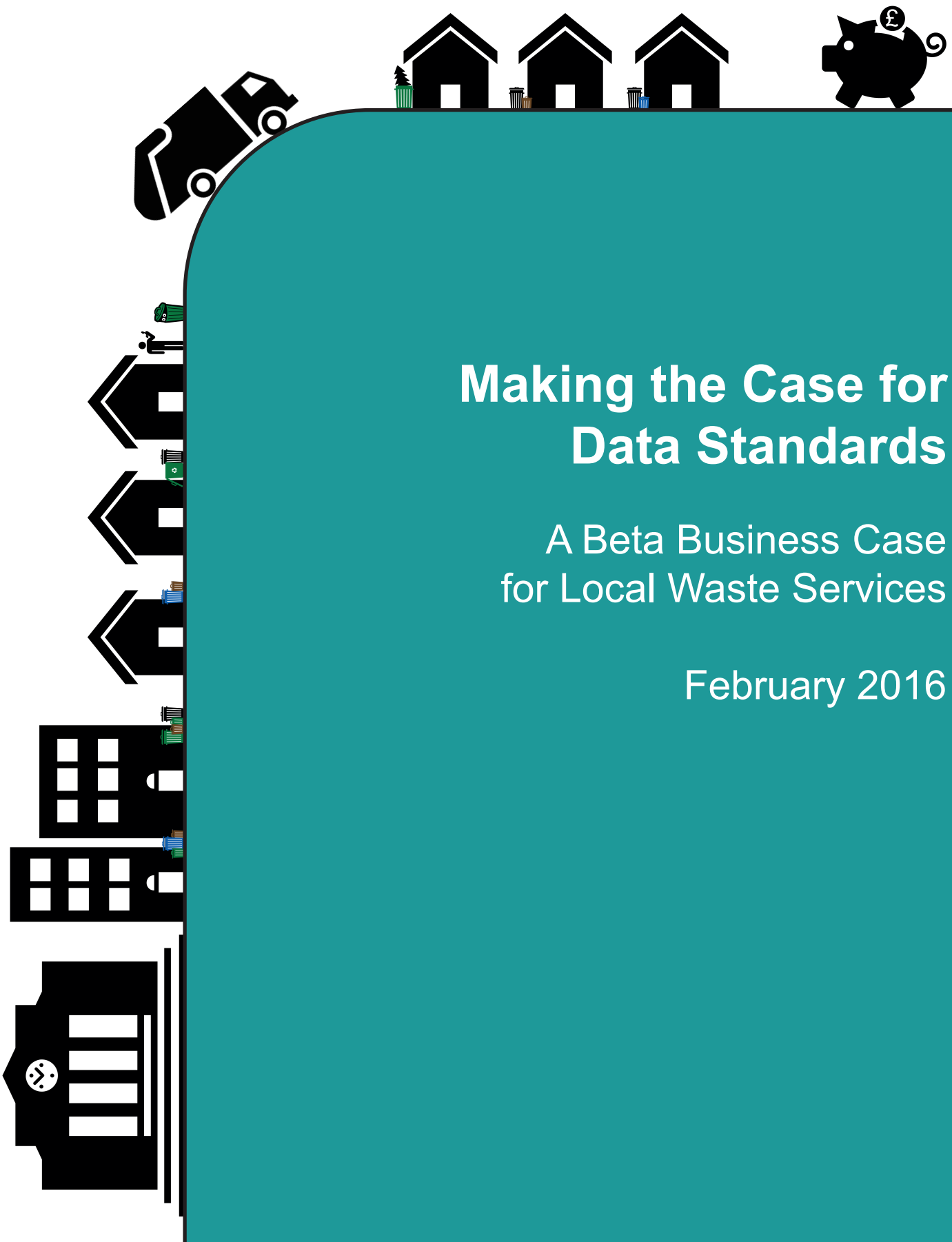

Making the Case for Data Standards

A Beta Business Case for Local Waste Services

February 2016

ABOUT THIS DOCUMENT

This is the latest iteration of the business case for common data standards (or data protocols) in local authority waste management services. It is a primary output of the Local Waste Service Standards Project, and should be read in conjunction with the Beta financial model spreadsheet.

In September 2015 we published an 'Alpha' or first draft business case and financial model based on data and insight we had captured from participating councils and others during the Discovery phase of our project, which ran from May to August 2015. Using missed collections as a starting point, the Alpha built up a detailed picture of the technology and customer service costs incurred at each stage of the service life cycle, and the impact a data standard might have on those.

It concluded that local government as a whole could potentially save £600 million over 7 years once a data standard was in use across waste services.[1]

We received a lot of support for our approach, as well as some constructive feedback which is summarised and addressed below.

This Beta Business Case aims to incorporate the feedback we received, drawing on some new data and insight that has come forward, and starting to look at some of the wider benefits of data standards. However, it has remained challenging to find reliable or complete sources of data[2] and we are still keen to hear from anyone with data to contribute. There is information on how to feed back at the end of this document. We aim to publish a final version by the end of March 2016.

1. The full Alpha data set and summary can be viewing in our Alpha financial model (Excel) - bit.ly/waste-alpha-data
2. A recent survey by the LGA and DCLG found that well over half of councils don't monitor or know the unit costs of their transactions.

EXECUTIVE SUMMARY

- Use of a waste data standard could drive a total of **£500 million** in savings for UK local authorities over a 14 year period.
- This is lower than the £600 million over 7 years that was proposed in the Alpha, but is the result of a more sophisticated Beta model which reflects varying degrees of digital maturity among councils, and allows for the differences in savings depending on whether councils in-source or outsource.
- **£126 million** of these savings could be realised in the first 7 years.
- £357 million of the 14 year savings are directly associated with waste data standards, with an additional £142 million coming from associated channel shift savings.
- We estimate that individual councils could save **between £115,000 and £215,000** annually by implementing data standards (including resulting channel shift savings).
- The Beta does not yet capture additional savings that could be made by suppliers to local authorities.
- We make the case that data standards are essential for enabling better systems integration, which in turn leads to more successful and sustainable channel shift.
- Standards can also enable new partnerships and business models as well as stimulating innovation.
- While we make the case that councils and suppliers should invest in adopting common standards, we acknowledge that the benefits of adoption are only guaranteed when a critical mass of councils and their suppliers have implemented the standard.

1.CONTEXT

Why data standards?

This document aims to articulate the benefits of developing and working to a data standard around a particular local government service (waste management), and from that, make the case for data standards more generally. The project grew out of a growing consensus that data standards should be an important enabler of local government digital transformation, and in doing so should unlock significant savings. The Local Waste Service Standards Project has been designed to test that theory.

In the Alpha version we gave the following overview of why data standards are important:

> *Often the inefficiencies and avoidable costs in the delivery of a service come when information or data has to pass between people or systems. This is as true in the digital age as it was in the days of filing cabinets and cashiers, but the inefficiencies are harder to spot for the layperson.*
>
> *In an efficient service all the people and systems involved have a common understanding of the information they are dealing with, and are able to pass this information around and use it without having to explain or re-format anything. This applies not only to council staff and systems, but also to those of the partners and suppliers involved with the delivery of the service.*
>
> *In order to achieve this efficiency all parties need to be working to common agreed standards, including a data standard. If this exists all parties can refer to it in their initial negotiations, in the design and delivery of solutions, and in their management reporting. Technical systems that are built with reference to the same standard can talk to each other more easily, without the need for intervention or manual work, unlocking further efficiencies. This kind of automated communication between systems is enabled by "APIs" (application programming interfaces).*
>
> *Markets or sectors that adopt data standards therefore tend to be more efficient markets, as suppliers and clients know what to expect, removing the cost of bespoke work, and making it easier for either party to move between suppliers/clients.*

Why waste services?

Every household and organisation in the UK generates waste, and around 350[3] English local authorities are responsible for aspects of its collection and management. Waste generates a lot of customer contact - it's the third biggest source of calls to unitary authorities (14% of all contact) and often generates more contacts to district councils than any other service area.[4] In the 2014 Socitm Website performance report waste featured in the top five reasons to visit local authority sites - coming top of the list for districts (21.44% of visits), Metropolitan Borough Councils (12.27% of visits) and unitaries (16.68% of visits).[5] Fortunately very few of these contacts are likely to involve sensitive personal data or coordination with other agencies, so it's a relatively simple and safe area for us to work with. It was also a service area that many of the authorities interested in this project were planning to work on in the next few years.

3. There are 353 local authorities in England. For convenience we have rounded this down to 350 in our financial model.
4. Red Quadrant & CIPFA Customer Contact Benchmarking Club - *Contact Benchmarking Tool Insight Report 2014.*
5. As referenced in the LGA report *Delivering better local online transactional services.*

2. FROM ALPHA TO BETA

We have received lots of valuable feedback on the alpha business case, which we can group into four main themes:

	Alpha feedback	What we've done in the Beta
A	Some councils already make good use of data, digital technology and associated automation so perhaps have less left to gain or their savings won't be as significant.	We now suggest that 25% of councils are already confident about using data and technology to optimise services, whilst 75% still have work to do. The rationale and implications of this are explored below.
B	Only 50% of councils outsource their waste contract, and have the associated tendering and implementation costs (the alpha erroneously implied all 350 councils had these costs).	The new model reflects that only 50% outsource their main waste contract.
C	The costs of systems integration looked too high.	We have further interrogated this area and added data from new sources - all of which suggests that integration is indeed one of the most expensive and concerning blockers to service optimisation. However the splitting of councils info confident/less confident means: a. We can now show a range of costs rather than just one version b. We have acknowledged that these savings will be spread over a greater time period.
D	The savings from channel shift and greater automation can't all be attributed to the use of a standard.	Yes, and we acknowledge this, but still think that data standards are an important enabler of channel shift. In the Beta we are showing these as savings *enabled* by standards, rather than directly and fully attributed to it.

Taking these four main areas of feedback we have developed the Beta in the following ways:

A. Digital confidence

The Alpha model implied that all councils face the same costs when they undertake digital development work and stand to benefit or save at the same level. Yet, in reality councils are at different stages in their digital transformation and have different existing technical set-ups and skills. This will mean that, for example, the cost of setting up a new online transaction might be greater for a less experienced council than for a council that has a strong in-house team and is already using APIs to communicate between systems.

This may explain why some feedback suggested our costs were too high, whereas the data from others suggested we were underestimating.

In order to allow for these differences the Beta model has two columns for every area - a column

of figures for a more digitally confident council, and a column for the less digitally confident. We have assumed that 25% of all councils are confident (with associated reductions in their costs and savings) and that 75% are less confident.

This reflects that over half of council websites (58%) are still getting only one or two stars in Socitm's 2015 Better Connected survey, with councils reporting recently to the LGA and DCLG that 73% of their transactions have some scope for further digitisation.[6]

As with the Alpha, the model is based on the national average of 68,000 households per council, but this can be adjusted to show the picture for a larger or smaller council in sheet 3, cell B2 of our model.

B. Outsourced vs. in-house

The Alpha model also implied that all 350 councils go through a waste service tendering and implementation process every 7 years. This is incorrect as only an estimated 50% of councils outsource their waste contract. The new model therefore reflects this and just 50% of councils are shown to have the upfront costs of tendering and implementing a waste contract.

We also now recognise that full benefits will be realised over a longer time frame:

I. At the start of first tendering process: benefit from reference to published standard, reducing time spent specifying and negotiating technical details.
II. During the implementation of the first contract ("first round"): investment in cleansing data and adapting internal systems to the new standard, but with reference to published standards/blueprints. Reduced effort and uncertainty/risk versus a bespoke implementation.
III. During the second tendering & implementation process ("second round"): ability to switch between suppliers who use the standard, without significant technical work needed.

This is shown in the purple-section in the financial model, labelled "Tendering & implementing a new waste contract". It now suggests that the sector could save £33 million over 14 years.

Although we have now shown these upfront waste contract costs for only 50% of councils, all councils - including those that manage waste in-house - are likely to work with suppliers or off-the-shelf products for other aspects of the service, such as their CRM, their website, their payment system, etc. There are still procurement and integration costs associated with all of these, and integration has emerged as even stronger a theme than it was in the Alpha.

C. A focus on integration - plugging things together

During 2015, as part of their Customer Contact Benchmarking Club, CIPFA[7] and Red Quadrant surveyed local authorities and found that "Better system integration" was in the top three factors that respondents felt would influence their ability to improve management of customer contact (68% of the respondents). Many of them also flagged "technology issues - preventing channel shift and automation" as one of their top five challenges to improving the customer contact experience. The LGA dedicated a whole section of their recent report to the issue of integration (or the lack of it).[8]

This points to a growing understanding at a senior level of the importance of getting systems to

6. While the published report quotes "a high proportion of councils report that there is scope for further digitisation." (p.18 of *Delivering Better Local Online Transactional Services*), the underlying survey showed 73% of councils reported scope for further digitisation.
7. The Chartered Institute of Public Finance & Accountancy - www.cipfa.org.
8. LGA - *Delivering Better Local Online Transactional Services* (p.15), Lack of integration leads to substantial re-keying of data.

talk to each other efficiently – which is precisely what data standards aim to do.

Specifically in our model we look at two areas:

I. The costs involved with buying (and/or building) bespoke digital and back-office solutions, and then having to plug them together.

This is the blue section in the model, labelled "Creating a joined up end-to-end experience". We've reviewed the costs in this area based on some feedback that it looked too high in the Alpha. However, further data and conversations have backed up the level of spend we suggest. This time however we're able to look at a range of costs - one set for the more digitally confident/established councils, and another for those that are less digitally confident. We can adjust this further in the final version if more data is shared with us.

We've also taken a longer view in the Beta, and considered that the first time councils work on optimising a part of the service (e.g. resolving missed bin reports) even with reference to a standard, the savings won't be dramatic ("first refresh"). However, the next time they come to work on the service once the standard is established, it should be much easier and therefore cheaper to implement changes ("second refresh").

In order to compliment the 14-year savings timeframe suggested in Section B above, we've made an assumption that every council will refresh key parts of each of their waste services - from reporting missed bins and fly tips to billing for trade waste - twice in the next 14 years. This should be a conservative estimate. We've assumed that, without a common standard across products and suppliers, this service upgrade would incur the level of costs currently seen by councils (£75k - £160k per service use case). To get a figure for all elements of waste services (rather than just missed collections) we have simply doubled the savings we identified for missed collections in recognition of the fact that work on subsequent waste services will be easier once one has been implemented (i.e. the spend on optimising four or five services will only be twice that of optimising the first one). We imagine this to be a conservative estimate of the savings, given the fact that our discovery work has highlighted the potential for savings across over a dozen parts of waste management services.[9]

This results in a total spend across the sector of £177 million over 14 years, of which we estimate £59 million could be saved by reference to a standard.

In reality, service optimisation is likely to become much more iterative over this period, with fewer big-bang refreshes, but we think this sum can helpfully represent "tech work" on a waste service over the period.

II. The cost of running a service where systems aren't well integrated, for example where staff are having to re-key information, look at paper logs, or ring up colleagues in other teams.

Re-keying of data is often a hidden cost lurking behind seemingly "digitised" services. The National Digital Report of 2015 found that 54% of the data transferred from online forms to the back office was re-keyed.[10] This is a major area of unnecessary cost that could be addressed by better systems integration, enabled by data standards. This is shown in the red section labelled "Investigating waste contacts" which estimates that the sector spends £53.5 million a year investigating waste contacts. We are making a bold assertion that 75% of this could be saved if well-integrated standards-based systems were enabling customers to self

9. See our 'Epics spreadsheet' of areas where standards could improve waste management services: bit.ly/waste-epics
10. *NDL National Digital Report of 2015* (p. 16).

serve and staff to efficiently look into issues. That's a potential saving of £35 million a year by year 14.

D. Standards and channel shift

The benefits to councils of shifting customers from face-to-face and phone contact to online self-service are already widely acknowledged and discussed. What we are asserting (and what is also acknowledged by the LGA and the CIPFA/Red Quadrant Benchmarking Club members) is that well integrated services, where data flows efficiently between the citizen, the website, customer services and service delivery teams are more likely to succeed in channel shift than less well integrated services.

If a data standard enables better integration then it enables a more joined-up and successful digital customer experience. The example we gave in the Alpha was a citizen who is able to find out online why their bin wasn't emptied, and perhaps to challenge that via the website, rather than by phoning the council. This is only possible if data is passing efficiently in real-time between the waste collection crew, the council's case management system and the website. Data standards should make it easier and cheaper for councils to achieve this.

We believe the potential channel shift savings for the sector, across waste services, could be as high as £18.9m per year by year 14 - once all councils are offering a joined-up efficient citizen experiences - with a total saving across the period of £142 million. While we can't directly claim all of this for the data standard, we do think these savings can't be fully realised without it.

3. THE BIGGER PRIZE

In the Alpha, and also in the Beta work above, we've largely been making a bottom-up case for better integrated more efficient council services. Arguably, an individual council could make some of these improvements and savings without too much reference to what's going on in other councils or to a national/shared standard. So what does a data standard really bring? What is the bigger prize for individual councils and for the sector?

Enabling shared services & partnerships

As highlighted by the LGA[11] many council services are now provided through shared services or outsourcing arrangements that involved a mix of partners. These shared service arrangements can deliver efficiency savings (estimated at £462 million for the 416 currently in place) but to unlock these savings councils, partners and suppliers need to be able to efficiently integrate and inter-operate their systems.

The Somerset Waste Partnership is an early example of this. They say "partnership has certainly delivered valuable efficiency and eliminated significant duplication in management of data. The world has moved on since Somerset Waste Partnership was formed [in 2007] and, with recycling services so much more entrenched in local authorities across the country than they were a decade ago, merging collection services is certainly more challenging than it was before. In that context it could be that data standardisation offers a viable and achievable alternative to, or step towards, partnership working in today's world."[12]

Surrey Waste Partnership are also starting to experience the benefits of a joined up approach to data flow. Previously they were spending 3,000-4,000 hours of staff time a year on waste reporting across their 11 districts and boroughs - at a cost of £75k a year. They've now put in place a new waste data management system that will save them £135k over the first four years as well as delivering valuable management data in real time (rather than waiting for over 6 months).[13]

It will be interesting to see whether devolution to cities and regions will be a further trigger to more joined up approaches to service delivery. Data standards are sure to have a role to play here.

A more efficient and agile market

A sector or market that works to standards can provide buyers with more choice, and more assurance that the services they buy will be compatible with their existing systems and services. We've already illustrated above how reference to a shared standard could reduce the costs and risks to councils around changing waste suppliers in the future and also make it easier to integrate products and systems throughout the service as it evolves over time. Buyers would have more choice and more freedom to move between suppliers taking advantage of the efficiencies of an increasingly cloud based digital marketplace. For example, a council might want to trial a new app for reporting missed collections or a new payment service. Currently the risk and cost of integrating a new product is a barrier to this kind of experimentation and to an iterative approach to service improvement. But if suppliers and councils are working to common standards these barriers can be reduced.

Suppliers should also benefit from the reduced risks and costs around integrating with new clients, potentially freeing them up to concentrate on other USPs (unique selling points). A market that's working to a common standard also opens up more potential clients to suppliers, with fewer locked

11. In *Delivering Better Local Online Transactional Services* and also in their shared service map.
12. Interview between Mark Blaker of Somerset Waste Partnership and the DCLG Local Digital Programme on 5th January 2016.
13. See a presentation on this from Surrey Waste Partnership on the Local Digital website - bit.ly/swp-waste-data

in contracts.

One response to our Alpha work was the suggestion that some suppliers are already applying a standardised service model across their clients, so they might not see any benefit from a new national standard. Likewise those councils who already work with APIs might feel they have little to gain. Our assertion is that in both cases councils and suppliers should benefit from the freedoms brought by a standard, and the opportunity to “shop around”, to form a wider range of relationships, and to change these more easily. However, we’re keen to engage further with suppliers to understand the benefits and barriers they perceive around use of a standard, and how these can be better quantified in our final business case.

Innovation

At a technology level data standards can foster innovation – the Fix My Street app built by MySociety using the Open311 standard is a good example of this, and is forecast to save Lewisham council £118,000. Apps like this currently have limited application while local authorities and their internal systems are not working to the same standard. Standards enable smaller companies to develop new products or services confident that councils will be able to use them.

Bigger suppliers freed from complex bespoke implementations can also perhaps innovate more widely.

Councils themselves can also be bolder and braver in their experimentation, knowing that the technology barriers and costs have been lowered.

Finally, as mentioned above, standards might enable innovation at a more fundamental level - new kinds of partnerships or even business models.

4. REALISING THE BENEFITS

Barriers

To realise the benefits of standards a critical mass of adopters must tip the market in favour of the standard. For this reason, it is important to support and encourage these early adopters to join the standards design and implementation initiative.

What next?

This document is a Beta - we are therefore very open to further feedback in order to inform the final version, which will be published before the end of March 2016.

There are two opportunities to discuss this research with us face-to-face - for the private sector on 15th February, and for all stakeholders on 22nd February. You can offer feedback via email[14] by the end of February 2016.

This Beta is still very focused on the bottom-up view for single authorities. We would like the final version to more fully reflect the costs/benefits to suppliers, and to other groups and organisations such as partnerships - so please do get in touch if you have something relevant to share!

14. Please email henry.mathes@communities.gsi.gov.uk