



WEST OXFORDSHIRE
DISTRICT COUNCIL

West Oxfordshire District Council

Name and date of Committee	Cabinet: Wednesday 21 April 2021
Report Number	Agenda Item No. 8
Subject	Environmental Services In-Cab Technology System
Wards affected	All
Accountable member	Councillor Norman MacRae, Cabinet Member for Environment; Email: norman.macrae@westoxon.gov.uk
Accountable officer	Scott Williams, Business Manager – Waste Email: scott.williams@publicagroup.uk
Summary/Purpose	To present Cabinet with a business case on the costs, benefits and risks of procuring an Environmental Services In-Cab Technology system and seek approval to proceed in procuring the system using the capital budget of up to £140,000, which is set aside in the 2021-22 capital programme.
Annex	None
Recommendations	(a) That the business case be supported and approval granted for the allocation of up to £140,000 set aside in the capital programme for 2021-22, to be used to procure and implement the Environmental Services In-Cab Technology system from Yotta (including software licences and maintenance costs in year 1); and (b) That it be noted that a proportion of the revenue savings in the Ubico contract costs of at least £50,000 p.a. will go to fund the software licences and maintenance costs of £34,103 per annum in years two to four inclusive of the contract.
Corporate priorities	The proposal contained within this report supports the Council priority: Climate Action - Leading the way in protecting and enhancing the environment by taking action locally on climate change and biodiversity.
Key Decision	Yes
Exempt	No
Consultees/ Consultation	Councillor Norman MacRae and Senior Council and Publica Officers.

I. BACKGROUND

- 1.1. Ubico Ltd which performs the environmental services (waste, recycling, trade waste and container deliveries) on behalf of the Council uses mainly manual processes to support them in undertaking their duties. These manual processes are resource intensive and there is the opportunity for mistakes to happen which affect the service received by our customers and add to the costs being paid for by the Council – such as returning to missed collections.
- 1.2. A piece of work was commissioned by Cotswold District Council in 2018 on behalf of a number of partners including West Oxfordshire, to examine the business case for procuring an Environmental Services Management System with In-Cab Technology.
- 1.3. Following the completion of the initial procurement exercise, further partners wishing to procure the system are able to call-off a contract on the same terms, rather than having to complete a separate procurement with increased cost and time.

Environmental Services System with In-Cab Technology

- 1.4. In-Cab Technology is a widely used system available on the market which allows live data to be viewed and updated by teams involved in delivering environmental services. The driver of a waste collection round would use a touch-screen display with clear, simple icons to view everything the crew needed to know about their route. The built-in GPS provides vehicle tracking and also ensures the display shows only the premises/jobs of immediate interest. The round each crew collects from is pre-loaded onto the system and the crew then have to click to confirm they have completed collections from each location.
- 1.5. Each individual property is listed, i.e. houses 1 – 20 on The High Street using the Local Land Property Gazetteer (LLPG) unique property reference numbers, which enables crews to indicate if a property has not presented waste, a bin is contaminated, side waste has been left etc.
- 1.6. Assisted collections can be highlighted and where there have been problems i.e. a repeat missed collection, an address can be flagged and crews can be required to positively mark that they have collected from that property before the screen allows them to move onto the next location.
- 1.7. Crews benefit from faster round completion by having an on screen map of roads & properties to collect from, which is particularly useful for drivers/crew members who are unfamiliar with the round and/or agency staff covering holidays/sickness. The system reduces the need for local knowledge and prevents a large amount of human error which results in recalls for missed collections decreasing. In addition, the system eliminates large amounts of paperwork having to be completed by drivers such as vehicle check sheets and round problem sheets, as everything can be done using the tablets.
- 1.8. Back-office staff see information reported from the In-Cab tablets in real time, not needing to wait until the end of day when round problem sheet paperwork is returned and entered on to the system manually. This means that they can respond quickly to customer services and provide feedback on customer requests or complaints, a stage that is frequently missing at present. Customers receive a much improved level of service, missed collections significantly reduce which lowers call volumes and as a result, and costs to the Council are also significantly reduced.

- 1.9. Using bespoke software designed for domestic waste, crews can view and complete their daily work, job by job. Changes to a crew's work plan can be made "on the fly" allowing jobs to be quickly reassigned from crew to crew during times of vehicle breakdown for example.
- 1.10. On screen information is also available about gate access codes, multiple bins, other special arrangements and important health and safety guidance. This is all linked in real time to the back office system which has in built navigation, complete with low bridge, weight/width restrictions alerts, guides the crew through their working day to tipping points, depots and other key locations.
- 1.11. Crews can quickly record completed work, service exceptions such as bins not out, contamination, blocked access to streets/premises and this is relayed straight to the Salesforce system at the Council and the Ubico depot. This is as opposed to the current method of recording everything manually on problem sheets which are handed in at the end of the day.
- 1.12. Pre-set and ad-hoc messages can be sent between the crews from the In-Cab computer to the back office team and vice versa.
- 1.13. In addition to information being recorded about the service, vehicle safety inspections can be completed and the crew can electronically record minor and major defects and log rectification times. They can also record start and end of day time and mileage readings to assist with periodic rounds optimisation initiatives.
- 1.14. The waste and recycling services utilises over thirty operational vehicles, most of which would benefit from using an In-Cab system. The system is web-based and customer services teams can see live data, see where crews are and the time they were at each location (with usually just a short delay).

2. MAIN POINTS

- 2.1. Cotswold District Council (CDC) has procured and implemented an Environmental Services Management System with In-Cab Technology from Yotta.
- 2.2. The CDC system was integrated with Salesforce this year and is now in the process of enabling the benefits to be realised as outlined in the business case. This means there is now the opportunity for West Oxfordshire District Council to purchase the system, using the set aside capital funding of £140k.
- 2.3. The implementation of this system would offer a number of financial, service related and carbon reduction benefits to the Council and Residents as follows:

Benefits to the Customer:

- Fewer missed collections as a result of more accurate information to direct the crews; this is particularly the case if agency crews are covering annual leave, staff sickness, or if crews are redirected to complete another round due to vehicle breakdown etc.
- Fewer missed collections for vulnerable residents with health or mobility issues requiring Assisted collections, which will be specifically identified on the Mobile tablet that the crews will use.
- Customer can view, via the online form (or Customer Services can advise), why their bin was not collected, which will display a red flag against the reason for non-collection e.g. broken lid, bin not presented.
- The Customer receives a quicker response to their enquiry or service request as Customer Services have access to more accurate and more up-to-date

information (the Mobile digital Tablets sync with Alloy, the back office system, every 15 minutes).

Benefits to Ubico:

- Crews have accurate, up-to-date information on collection rounds, issues and special requirements such as assisted collections or coded access for communal bin stores. This greatly reduces the risk of missed collections occurring.
- Accurate up-to-date information promotes continuity of service where crews may be unfamiliar with a particular round e.g. covering for annual leave and/or sickness, or if agency crews are required.
- Reduction in mileage completed, as the system guides crews precisely around their collection route. This will have a direct benefit in reducing fuel used, vehicle wear and tear and associated reduced carbon benefits.
- Reduction in spurious missed bin reports, as non-presented bins, lockouts etc. will be supported with photographic evidence; this will reduce the incidence of return journeys to collect (genuine missed bin reports may be more easily discerned).
- Reduction in 'missed misses' – in some cases, properties are particularly difficult to locate, these can be accurately plotted on the Mobile system to guide a crew to precise locations.
- Locations where particular care is required can be easily added to the system e.g. close to schools, blind corners, reversing manoeuvres.
- Crews' reliance on paper based recording largely eliminated as all information for completion of rounds will be carried on the digital tablet. This will reduce the risk of driver/crew error.
- Two-way communication between crews, back office and Customer Services.

Benefits to the Council:

- Reduced missed collections – increasing customer satisfaction and reducing the significant operational cost (staff time, fuel etc) of returning for missed collections. Estimated at c£50k p.a. if missed bin return journeys are reduced by 75%.
- Fewer calls to Customer Services – as a result of fewer missed collections
- Fewer 'missed bin' reports from the customer, as the online form will clearly state why a container has not been collected e.g. broken lid, bin not presented. This should result in a reduction in spurious missed bin reports.
- Customer Services will have quicker access to information regarding waste collections e.g. that a bin was contaminated, not presented, that the crew is delayed etc. This will help to resolve more enquiries at first point of contact without the need to contact Ubico or Waste Services' back office staff or call the customer back.
- Two-way communication between crews, back office and Customer Services.

2.4. To achieve the financial and non-financial benefits of introducing the system, the Council will need to adopt a policy of not returning to collect missed bins/recycling containers due to lack of presentation by the householder. Whilst the current Environmental Services Policy does put the onus on residents to present their waste and recycling containers by 6am on their correct scheduled collection day, it does

not explicitly state that collection crews will not return to properties where they have not been presented on time. In support of introducing an In-Cab System, this stipulation would be added as part of updating the Environmental Services Policy.

- 2.5. The Publica Technical Design Authority (TDA) reviewed the proposal as part of the procurement exercise and concluded that 'the Yotta In-cab solution has good APIs (application programming interfaces) for integration'. They felt that 'whilst there would be the requirement of integration investment to link the solution to Salesforce, from a technical perspective they are happy with this solution'.
- 2.6. This report is due to be considered by the Environment Overview and Scrutiny Committee at its meeting on 15 April, and Cabinet will be advised of any views arising from that meeting.

3. FINANCIAL IMPLICATIONS

- 3.1. A full EU compliant procurement process was completed by Cotswold District Council, which named West Oxfordshire District Council as a potential future partner wanting to procure the same system, and so there is a facility in place for contract call-off, without the need to complete a separate procurement.
- 3.2. Officers have set out the proposed Council requirement for refuse, recycling, food, garden waste and trade refuse collections and container deliveries to Yotta and they have provided a quote based on the same terms as the CDC procurement of **£229,900** over a four year contract period.
- 3.3. This cost is made up of a one-off capital cost of **£127,591** in year 1 for the hardware and software needed to set the system up and the licences, then **£34,103** revenue for each of the following three years for maintenance and licences to operate the system totalling **£229,900**.
- 3.4. In the period 1 January to 31 December 2019 (pre-pandemic), the Council received 4,471 reports of missed collections from residents.
- 3.5. Ubico has calculated a round trip from the Downs Road Depot to Witney is four Miles = £19.11 in operating costs. Downs Road to Great Rollright (Round Trip of 40 Miles) = £127.38. The average of these = £73.24.
- 3.6. Taking account of the fact that a large proportion of missed collections are returned to while collection crews are out completing their rounds, it is sensible to take a conservative estimate of each missed collection costing the Council £15 and on the basis that a large proportion will be prevented, it would equate to an estimated saving of approximately £67,000 p.a.
- 3.7. By comparison, if 75% of missed collection return journeys were eliminated then the estimated saving would be £50,000 p.a.
- 3.8. Comparing this whole-life system cost £229,900 including a small contingency of £10,100 (£240,000) and offsetting the anticipated saving of eradicating a large proportion of missed collections (£67,000), the estimated payback period of procuring the Yotta system would be approximately **4 years**, so it would be fully paid back within the life of the contract.
- 3.9. If 75% of missed bins were eradicated, then the comparison anticipated saving of £50,000 would result in an estimated payback period of **8 years** because of having to take into account the annual software licences and maintenance costs of £34,103 p.a.
- 3.10. However, both costs estimates are based on each missed collection costing the Council £15 currently and in addition, it's likely that further savings could be made

by realising process efficiencies which if cashable, would benefit in accelerating the payback period or providing additional savings in time/resources.

- 3.11. For the purposes of presenting a conservative cost/benefit analysis, these potential savings have not been taken into account. Following implementation of the In-Cab system, a systems and process review would be completed by officers to identify the secondary benefits and opportunities available.
- 3.12. The Council experienced significant problems during the waste service operational and contract changes in October 2017, which highlighted the need to track services and effectively manage missed collections. Whilst services have improved since that implementation, an In-Cab system provides the opportunity to further improve service standards for residents and reduce the cost of failure for the Council.
- 3.13. Once the system was in place and the benefits realised, there may be further opportunities such as integrating the street cleansing or grounds maintenance services, but given the significantly smaller resources used in these areas, this would be presented as a separate business case, with a full appraisal of the costs versus benefits.

4. LEGAL IMPLICATIONS

- 4.1. Any legal implications associated with this proposal are covered in the Council's finance and procurement regulations.

5. RISK ASSESSMENT

- 5.1. All risks surrounding the implementation of the Environmental Services System with In-Cab Technology for Cotswold District Council were fully mitigated and the system was successfully integrated with Salesforce and launched, so as the Council uses the same system (Salesforce) and the same service provider (Ubico), there is no reason to assume that any risks couldn't be similarly mitigated.
- 5.2. If approval is provided for the Yotta system to be procured, then a dedicated Project Board (supported by a Project Team) will be configured to provide the necessary governance for the implementation and identify, oversee and manage any risks accordingly.

6. CLIMATE CHANGE IMPLICATIONS

- 6.1. The introduction of an In-Cab system would reduce the mileage required to be completed by Ubico, because it would guide the crew around their collection route and would largely eliminate mistakes. This would have a direct benefit in reducing the fuel used and associated carbon usage. In addition, it's likely that the Council would see missed collections reduce meaning that return journeys to collection areas would not need to be made, which would again contribute in lowering the fuel and carbon usage.

7. ALTERNATIVE OPTIONS

- 7.1. The alternative to procuring an Environmental Service In-Cab Technology system would be to continue with the current method of service delivery.

8. BACKGROUND PAPERS

- 8.1. None.