**Abstract Summary**

Sutherland Shire Council has put away its old UBD maps print outs and highlighters, to transform its waste services operations by successfully planning and installing truck in-cabin technology into its fleet. The technology which has been embraced by staff has seen an improvement in Driver operations and communications resulting in improved customer service and safety, better compliance with Heavy Vehicle National Legislation and a move away from an administratively heavy and paper-based process. The changes are the result of a long and detailed consultation process, Procurement exercise via an initial EOI, followed by a formal tender for a Fleet-Waste IT Business Solution. Council concluded with an exhaustive evaluation process to ensure the technology outcomes aligned with our new waste strategy objectives before moving to implementation.

**Abstract**

Sutherland Shire Council (SSC) provides an internal resource waste and recycling collection service to 87,000 households. Traditionally this has been done utilising paper UBD maps and highlighters, where Drivers would refer to these to assist with and highlight their completed daily runs. Furthermore, missed bin service runs were specifically tailored / mapped manually on a daily basis, along with services for the bin delivery and repair teams. New drivers would also refer to these maps regularly until they became familiar with their waste collection runs.

Council has for many years had cameras and GPS in the collection trucks, which have assisted with location and the ability to review footage after an incident. However, while this meets the basic needs of the operations, the level of technology available to the market has improved significantly over the last 5 years.

SSC developed an EOI document to gauge what technology offering was available in the market to provide a more efficient way to run waste collection services. After the EOI process, Council tendered out and selected Intellitrac to provide an end-to-end solution that would improve Driver reporting and service run development and would improve Customer Experience by providing a more proactive response to requests, not to mention the removal of manual data collection.

Safety is a big priority for Sutherland Shire Council and our waste vehicles hold significant operating risk on a daily basis. Council through this technology implementation have enabled easier and better compliance with the Heavy Vehicle National Legislation but also improved safety and efficiency via the introduction of online plant inspections and Driver recognition.

The new technology includes a truck in cabin device that is connected to both the truck weighing scales and also the truck camera system. It combines this information and takes it to the next level. The Drivers use a swipe card to access both the vehicle and device which commences their workday and automatically tracks and reminds the Drivers to have their mandatory daily breaks. The technology also has the capability to link to Councils timesheet system to streamline that activity under future plans.

From here the Driver completes their pre-start check and then uses the tablet to select their run which appears in a map form with “bread crumb” capability where the bin location dot on the map changes from red to green so the driver can see his exact collection location. If the Driver needs to take a break or tip their load they know exactly where to recommence the rest of their run. This tracking capability data also shows the usual presentation location of the bin at the front rear or side, and links to Councils Property and Rating data for any collection validation issues such as contaminated bins, bins not out, or not collected.

Whilst this new technology has seen large efficiency gains across the operations, this project has been a major change management initiative that has required significant stakeholder engagement, involving Council wide collaboration starting with Drivers, Operational staff, and extensive Corporate Support for Procurement, Human Resources, Legal, Fleet and most importantly IT input expertise.

The most important part of any change management piece is to plan, communicate and engage. Council introduced this idea to Drivers through a formal Waste Consultative Committee (WCC), the Drivers were introduced to this technology through example videos and physical demonstrations that provided them with the opportunity to ask questions and have functionality input prior to Council’s EOI. At each subsequent WCC a progress update was provided on the technology options and project status. Prior to implementation we trialled two device options for Driver input on the positives and negatives, to allow Drivers to get a look and feel of how the technology would sit and operate in the truck.

Removing the paper and saving time

SSC did not only use manual UBD maps, but also used paper-based records of:

* Collection issue maps for recording contamination overweight bins etc. This has now become an automated process whereby at the push of a button on a screen a snapshot of the bin is taken its address recorded and the Driver can add voice to text notes if required.  A request back to base is created though Councils Request Management system where the resident can be contacted that same day regarding the collection issue. This has increased efficiency by 25% for the Drivers and admin staff and encourages the drivers to record issues.
* Plant prestart and post checks these have always been completed using paper and clipboard each day prior to work commencing and after.  This is now a fully automated system where the Drivers can take photos and add voice to text notes, the checks are automatically saved into the system.
* Safety issues and incidents.  Low wires can now be recorded at the press of a button, this information creates an alert on all the Drivers tablets to warn other Drivers of the safety hazard as well as sending an alert back to base so the utility provider can be notified.  This has significantly reduced the incidents of low wires across the whole team.

Compliance with HVNL

Another important safety feature for the waste industry is the compliance with Heavy Vehicle National Legislation. The new system creates a transparent environment where this is now automatically recorded.  The system is linked to the cameras on the truck providing full visibility and the capacity to easily view footage after an incident. Fatigue management is also managed and complied with through the full automation of timesheets. When the Driver scans into the system the start time is recorded, and their breaks are automatically calculated, and they are reminded to take breaks.  In addition, the system links with the trucks weighing mechanism providing the driver with real time weights of the load to manage the run with trips to the landfill or recycling processor reducing overloading and over compaction of material streams.

This project has created work and time saving efficiencies as well as improved overall safety for the drivers and the community as it has created a seamless Strategic Alignment where it links directly into Councils One Council system and Waste Strategy objectives.

Realised improvements include data that is fully automated thus reducing paper waste by 100% . The data is received from the tablet with a snapshot directly into Councils One Council as a works order, request notification and updates Property and Rating data. Office based staff are now able to make strategic improvements to Council waste collection services instead of being stuck in a business-as-usual situation. The Customer experience has also improved as Council can now directly access footage or a snapshot of a bin issue, resolving issues in a quicker timeframe.