

Cardiff's route to intelligent



After Cardiff awarded a tender for a new sweeper fleet on contract hire, the council found that close cooperation between suppliers and the implementation of smart telematics could help achieve significant savings and improve efficiency. LAPV reports.

Sweepers take to the streets of Cardiff

Cardiff Council's initial sweeper fleet consisted of 12 Johnston Sweepers CX201 compacts. The machines worked seven days a week over four shifts during the morning, afternoon, nights, and at the weekend. Apart from the standard cleansing rounds, the local authority also had internal service level agreements in place, such as car parks, and for events. The fleet was also put to work for external contracts and ad hoc assignments during specific occasions and in shopping centres.

Matt Long, service manager for Waste Services at Cardiff Council, is in charge of improving the business efficiency for the street cleansing department. So, when the fleet contract came up for renewal in 2018, he had several challenges to address.

'With Cardiff being a capital city with vivacious events, popular nightlife and student scene, the workload for the street cleansing team is hefty,' Matt told LAPV. 'The fleet rotation was a specific challenge for the management team. Some of our sweepers were triple shifted, and despite all sweepers being the same brand and model, the drivers were reluctant to assist with the old process during which the machines rotated. The operators all had their favourites and didn't like to drive another sweeper.'

However, that wasn't Cardiff's only hurdle.

With a weekly usage period agreed in the contract, certain vehicles were exceeding their hours excessively while some were significantly under their allocated time. Despite having a pooled usage decided it was not sustainable, resulting in excess hour charges and early warranty termination.

Furthermore, monitoring the fleet's performance also posed a

problem for the council. For instance, it was impossible to check if a round had actually been swept and not just driven. Idling was also an issue, as well as complaint management.

Besides that, the clients which the council contracted for required Cardiff Council to produce more detailed reports such as time spent on site and cleansing frequencies. Moreover, the team also needed to provide evidence in case of accidents to fight false claims. The standard vehicle tracker on the sweepers, Matt added, also did not offer the depth of information required for thorough accident investigation, nor the general performance of the fleet.

Cardiff Council already had a well-established relationship with its suppliers through the Optimised Waste and Logistics Partnership (OWL) which is managed by telematics provider CMS SupaTrak, based in Swindon. The OWL Partnership promotes an integrated approach for vehicle procurement. All parts of the vehicle supply chain, which included the OEM, the contract, hire and lease provider as well as the telematics, camera and software company, should work together to ensure that the highest standards are maintained. OWL also aimed to improve environmental standards for the public sector as well as to eliminate road transport air pollution.

For this reason, it is no great surprise that this approach paid off after Cardiff went through a competitive tendering process. The council awarded Dawson Group Municipal the contract for 12 new Johnston CX201 compact sweepers on three-year contract hire agreement with maintenance in September 2018.

The local authority has dealt with Dawson Group Municipal before to great satisfaction. 'Both maintenance support and account

cleansing management

management have been responsive and to a high standard,' according to Matt. 'It was not surprising that Dawsons could provide evidence for this to satisfy the stringent quality evaluation criteria Cardiff applies when procuring vehicles.'

Historically, the Johnston Sweepers products have always been successful for Cardiff. Driver feedback has always been positive for the manoeuvrability of the CX201, particularly around the city centre and parklands where drivers need to negotiate street furniture. Cardiff has a high amount of both urban and suburban tree cover. Leaf fall season demands a robust, powerful sweeper and the CX201 meets this requirement. Matt emphasised that the council never had much success in the past with detailed telematics on sweepers. However, this was about to change.

Smart tracking and analysing of data

All compact, mid-sized and truck-mounted Johnston sweepers have the Smart Link vehicle tracking and management system supplied by CMS SupaTrak. Smart Link provides the company's products with the connectivity to carry out servicing even faster, while also providing the client with a range of operational and performance data. There are several packages available, and they are subscription-based.

Each of Cardiff's compact sweepers submits tracking, performance, service and diagnostic smart-data. The information can be viewed through an account-based portal on a dashboard, enabling the fleet manager to track the location of sweepers via Google Maps, as well as reviewing KPIs such as fuel consumption, engine rpm, hours worked, and more.

The Smart Link software picks up the individual drivers' habits, alerting the fleet managers to critical warnings such as speeding and sweeping without water. The monitoring system encourages the correct operation of the fleet, while performance is continuously measured.

It also means that Cardiff can see when sweepers require service, while also providing the ability to store information and produce reports for the local authority as evidence of work completed. Smart Link also protects against third party insurance claims.

Initially, Cardiff supplied the machine hours to Dawsons to collate and feedback via contract meetings. With the new contract and introduction of Johnston Smartlink, based on the CMS SupaTrak platform, all parties now have access via the telematics system, and as for the systems schedules, the reports are scheduled and shares them every month between Cardiff and all the suppliers.

Matt explained that the Smart Link system naturally guides the council to liaise with all the OWL partners, and the product didn't need retrofitting because it is OEM approved, and this also eliminates warranty issues.

'As the fleet lifecycle progresses, we observe more significant benefits with Smart Link system being a go-to platform for these technologies,' said Matt.

One of these technologies that the council started to implement is Ring-fencing. It offers more robust management of vehicle movements without having to apply additional staff expenditure.

'For our sweepers, this includes monitoring vehicle movements for contract management, and these include private contracts with car parks and shopping precincts and internal service level agreements for our events teams. Our customers are surprised how



easily this data can be provided and can quickly resolve any disputes.

'Cardiff realised the advantages of Smart Link by default. Previous attempts of installing telematics in sweepers for more detailed information had not been successful. It was a surprise,' said Matt.

Cardiff found very rapidly that Smart Link delivered significant benefits for fleet operation.

'The usability of Smart Link is outstanding,' said Matt. 'For service delivery managers like myself, it is fantastic to have a fully configurable dashboard which enables you to customise the information in the format required. It gives instant feedback which previously would have taken hours of interrogating telematics reports.'

Cardiff has been able to achieve high transparency for its operations. 'We now have a much better understanding of vehicle and driver performance. In times of financial austerity, it provides reassurance that our service is efficient and that we have maximised vehicle utilisation.'

Cardiff Council now also has real-time access to live and historical movements of its fleet, including a comprehensive source of sweeping data and reports. 'We especially love the Google Map and Street View, which has proven itself as an excellent tool for investigating brush arm damage.'

'We are also managing our hours so much better, and we have now implemented a system of information-led vehicle rotation. Smart Link has enabled us to design our round more efficiently. Hence, our shift productivity has gone up considerably,' continued Matt. And, because the fleet team now has a constant overview of where its drivers are through the live location provision, the operator safety has much increased. All in all, Cardiff's fleet team manages its internal and external contracts much more efficiently.

'We have finally brought down vehicle down-time to a minimum so we can now focus on our next steps to bring our operation to the next level. So, we are looking to introduce further guidance and support for drivers. Individual driver ID's, can offer an insight into performance, helping us to focus our driving on reducing fuel use and emissions. The introduction of route compliance programs to remove unnecessary mileage while managing the alert data in real-time. We also want to make the data available to everyone by putting this on big screens in our communal areas,' concluded Matt.

Screenshot of a map of Europe from the Smart Link vehicle tracking and management system.