



Infrastructure Victoria

9th December 2019

Recycling and Resource Recovery Infrastructure

Dear Sir, Madam

Teletrac Navman welcomes the opportunity to respond to Infrastructure Victoria's discussion paper, *Recycling and Resource Recovery Infrastructure – Evidence Based Report*. As a global company that specializes in the use of precision instrument to collect data, Teletrac Navman can add to the awareness regarding the tools that are currently available to better manage domestic waste at the kerbside.

Background

Teletrac Navman is a global telematics company and a subsidiary of the US-based Fortive (NYSE:FTV – Market Cap \$28B USD). Our company has more than 40,000 customers and 550,000 vehicles currently tracked on our network, with markets predominantly in the US, UK, New Zealand and Australia.

Our core business is precision measurement and telematics. Our major markets include mining, construction, transport, heavy industry and government. In terms of government, our company provides solutions to many agencies at the Commonwealth and State levels. We also deliver services to more than 100 councils throughout Australia which are located in every region and state.

With specialized solutions that deliver greater visibility into real-time insights and analytics, Teletrac Navman helps customers make better business decisions that enhance productivity and profitability. Our fleet and asset management technology uncovers information that would otherwise go unseen, helping customers reduce risk and confidently move their business forward with certainty.

The ability of working with and developing solutions to a diverse range of customers in a range of fields, brings considerable experience and operating benefits which can be applied to solving problems identified in your discussion paper.

As expected for a company of our size and presence, there is significant investment in research and development. Our operating environment is also rich with innovative and niche third-party providers that have expertise in areas that this paper seeks to address. These partners have developed a range of sensors and technologies that can be combined and integrated to our telematics solution which collects specific data around kerbside waste which can be integrated into other applications such as GIS solutions.

Section 6.1.3 Measure It, Manager It

The discussion paper, specifically Section 6.1.3. "Measure it, manage it" recognises the business colloquialism that "a problem that can't be measured, can't be solved". Another adage, "digital touches everything" is also true and in this regard Teletrac Navman is applying IOT (Internet of Things) concepts to kerbside waste so that data is created and turned into information which becomes the basis for decision making and ultimately the ability to better manage the problem.

It is believed that the collection of data from kerbside bins is superior to data that is collected at the waste station as it allows a greater granularity as to where, when and how much waste was collected.

While there is the capability to link waste-to-bins-to-individual households, it is believed that this would also result in new behaviours occurring which would ultimately distort that data. Rather, our view is that anonymized data at the street, neighbourhood or suburb level could be vital in driving better outcomes.

Councils introduce our technology to solve specific problems such as asset utilisation, or to reduce fuel and maintenance costs or to help councils meet their regulatory obligations (WHS, Chain of Responsibility or Governance). But because of the nature of our data and its flows through the organisation, broader benefits are achieved for the council.

A key feature of our solution is the ability to collect data from the use of other equipment that sits on those vehicles. For example, this could be the switching on or engagement of sprays, pumps, brushes, or other operations. This results in precise measuring of specific activity – for example a detailed report of the route of a street sweeper or slashing tractor or other vehicle, such as a waste vehicle.

About 15% of our existing council customers are collecting data involving waste at the kerbside in states other than Victoria. By using different technologies on waste vehicles, councils are obtaining data which is allowing insights to be developed to help solve specific problems.

Kerbside Waste Data

Our company is currently providing technology in a waste management scenario to councils throughout Australia, which is allowing those councils to solve local problems involving waste. There are a couple of different ways that data from domestic bins is being collected at the kerbside.

Some councils are seeking data around four generic measurements – "Heavy Bin"; "Bin Blocked", "Bin Not Out" or "Bin Overloaded". This data is collected, marked and date-stamped and can be overlaid on maps to provide information that could assist councils to better understand consumer behaviours.

An outcome of this could be obtaining insights at a local or district level of consumer behaviours around waste which could be used to influence other proactive initiatives that result in the desired outcome.

For instance, some marketing campaigns take a scatter-gun approach whereas this data allows for the creation of targeted campaigns which results in a more efficient and effective messaging and hopefully outcomes.

Cameras can also be linked to the technology to create an actual visual image which can be linked to GPS location to demonstrate a specific event.

Councils adopt this solution for varied reasons. An example is to reduce the number of frivolous calls into council call centres regarding the collection of residential rubbish bins.

The use of immutable data has reduced the number of events where council has responded by providing ad-hoc truck rolls to resolve a complaint. Through data, council front-of-house staff can provide evidence to support a position that in most incidents exonerates the council.

Another area is the placing of sensors in the arm of the waste truck or shock absorbers or suspension bags of the waste vehicle to collect individual bins weights. This then allows specific bin weight data to be collected. This sort of technology is proven and has been in the heavy vehicle industry for the past 20 years.

By collecting information on bins weights and overlaying this data on to GIS mapping solutions (Esri eg) additional insights are created.

Our experience in developing solutions with government and the private sector has been used with some of the largest councils in Europe and with some of the largest waste collectors such as Suez.

Conclusion

The purpose of our submission is to raise awareness as how technology is being applied by councils throughout Australia to better measure waste and thereby improve its management. Our solutions result in data from kerbside bins which provides intelligence to decision makers and thereby underpin many of the challenges that Infrastructure Victoria has identified in its report.

Technology continues to evolve and Teletrac Navman is a global company that is leading in areas of telematics and precision measurement. It currently works with more than 100 councils throughout Australia in delivering value and operations benefits that is helping local governments reduce expenses, meet regulatory requirements and improve customer service and operations.

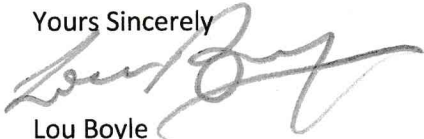
At present we work with councils that are applying different technologies to solve specific problems that they have identified around waste at the kerbside.

Our understanding of the issues identified in the paper is that there needs to be better awareness and understanding as to how technology can be applied to collect data about waste at the kerbside. This data then becomes crucial in developing subsequent strategies and plans to manage the problem.

Our company would be willing to share our insights and experience with Infrastructure Victoria should an opportunity exists.

For more information please contact Teletrac Navman's National Manager Local Government Lou Boyle on lou.boyle@teletracnavman.com

Yours Sincerely

A handwritten signature in black ink, appearing to read 'Lou Boyle', written over the printed name.

Lou Boyle
National Manager – Local Government