**Waste 2017 Abstract Submission**

Recycling the waste business model for smarter cities

*My presentation is relevant to the following topic area(s).*

🞎 Circular economy 🞎 Overseas experiences

🞎 Collection (inc MUD’s, transient population areas) 🞎 Problem/Hazardous waste (inc asbestos, clinical &

🞎 Container Deposit Schemes medical, ocean plastics, paint, tyres etc)

🞎 Economics (inc business cases, data gathering, 🞎 Product Stewardship

monitoring performance) 🞎 Regional issues

🞎 Education (inc community engagement) 🞎 Recycling (inc CRC’s, collection)

🞎 E-Waste 🞎 Regulations and levies

🞎 Grants (outcomes and processes) 🞎 Social enterprise

🞎 Infrastructure (inc major waste grants, EfW, organics) 🞎 State based issues (eg. Fit for the Future NSW)

✔ Innovative projects (case studies preferred) 🞎 Technology

🞎 Landfill (inc operations, regulations) 🞎 Tenders and contracts

🞎 Litter and/or illegal dumping (inc litter initiatives) 🞎 Other 🞎 Organics (inc collection, processing)

**Presenter information**

**Presenter name:** David Puxty

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**Biography**

David is an environmental scientist with a background in waste and facilities management. David procured waste services for the Department of Defence for several years, which served to educate him on many of the “opportunities for improvement” in the industry.

David is the founder of Fernlawn Environmental, a company that combines a passion for Smart Cities with the motivation to improve and demystify the waste industry for clients.

Fernlawn Environmental brought SmartBin sensors and OnePlus compactor monitoring systems to Australia. The company has also recently launched BinShare, an online service to assist businesses to sell spare bin capacity and to aggregate recyclables in the “first mile”.

**Abstract Summary**

How does the current waste management business model combine with modern societies expectations? Does the need to collect light bins for profitability fit with the drive for smarter and more liveable cities?

This presentation explores the conundrum of a business model that needs to change to reward the behaviours that broader government is promoting. In a time where reducing carbon emissions is a priority and the circular economy is the next step for our recycling industry, can we do more to reward waste companies for efficiency in all that they do to extract maximum value from recyclables

**Abstract**

In recent years there has been a lot of focus on smart cities and the “Internet of Things”. People quickly turn to sensors to make everything smarter but sensors are one small part of the equation. The waste industry is underwritten by set schedules and the need to pick up light bins to turn a profit, so how does that translate into modern needs of clients who want to decrease heavy traffic in their towns and efficiently collect recyclables to maintain some residual commodity value after considering logistics costs.

You can’t have smart cities with dumb business models. While ever the profit margin of waste service providers is tied to picking up empty bins the circular economy and broader recycling rates will continue to be hamstrung. You simply can’t run a heavy vehicle through cities in traffic to pick up bins that are light and expect the true value of recyclables to fund secondary “circular economies”.

Local Government contracts for litter-bins that agree a set fee per bin serviced are promoting the over servicing of bins and an increase in traffic. The more bins serviced, the higher the revenue. Local governments that are aiming to make their city centres more liveable, promoting street dining and a sense of “place” will be disappointed to have waste trucks frequenting the city centres on schedules designed to pick up light bins.

The business model needs to change to tie efficiency to profitability, to tie reduced emissions and greater recycling rebates to clients with the profitability of the collector.

What are the possible financial drivers to achieve this? Would a hike in the price of fuel for collectors be motivation enough to change the billing model and create a more transparent “price” for services? Would congestion charges for heavy vehicles in our cities do it? What about a rebate to collectors who can demonstrate the intent and delivery of improved yields of efficient collection of recyclables and other waste streams?

In America the model is slightly different, where “haulers” haul and waste managers “manage”. The rise of Rubicon Global and the significant investment in Rubicon Global by Suez marks a shift in the approach to clients. Rubicon embraces as required servicing, using advanced routing and transactional software to provide waste services to clients when they are needed. They manage the market of haulers to meet the needs of clients, creating clear tasks for haulers to fulfil, increasing the yield of waste and recyclables per kilometre travelled and retaining commodity value of recyclables rather than spending that value and more on the collection of empty bins.

Prepare for a range of new business models to enter the market and for clients to demand their service is tailored to their specific and changing needs. So if light bins is the key to profitability in the current market, what will be the key to profitability in the smarter waste management business model of the future?