

Waste Management and the Smart City

January 2017

So what is a smart city?

- *The intelligent and integrated use of technology and information to help cities function more efficiently and create a better quality of life for its citizens*
- SC's aim to be centred on the citizen - giving them the opportunity to engage and have more of a say in the services provided to them by the public sector
- A citizen may want to know how much waste they produce and what happens to that waste.

Waste Management

Managing waste effectively is extremely important for a number of reasons:

- public health
- the environment
- managing volumes and costs
- promoting sustainability

Background to waste in Portsmouth

In Portsmouth (annually) we produce:

Kerbside	
Refuse	48169.85
Glass	1910.44
Dry Mixed Recyclables (DMR)	8766.3
Textiles	281.03
Garden Waste	1233.08
HWRC	
Amenity Refuse	3653.92
Soil/Rubble	2803.12
Wood	2618.58
Plasterboard	158.67
Garden Waste	2345.11

- We currently work as part of a Hampshire wide partnership Project Integra (PI) and use the Energy Recovery Facility (ERF) and Mixed Recyclables Facility (MRF) at Dundas Lane

What smart technology is used in the waste industry?

- Public smart bins
 - RFID tagging/fill sensors
 - GPS
 - Route optimisation
 - Call management
 - PDAs
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- Less so - on board weighing, tagged bins

So what could we do?

- At Household level - RFID bin tagging technology exists (though not widely used yet in the UK)
- Could lead to 'pay as you throw'
- Route level - could be shared by collection route
- HWRC - breakdown by type of waste
- Waste data flow quite complex - but we could show it by waste type...is on www.wastedataflow.org.uk

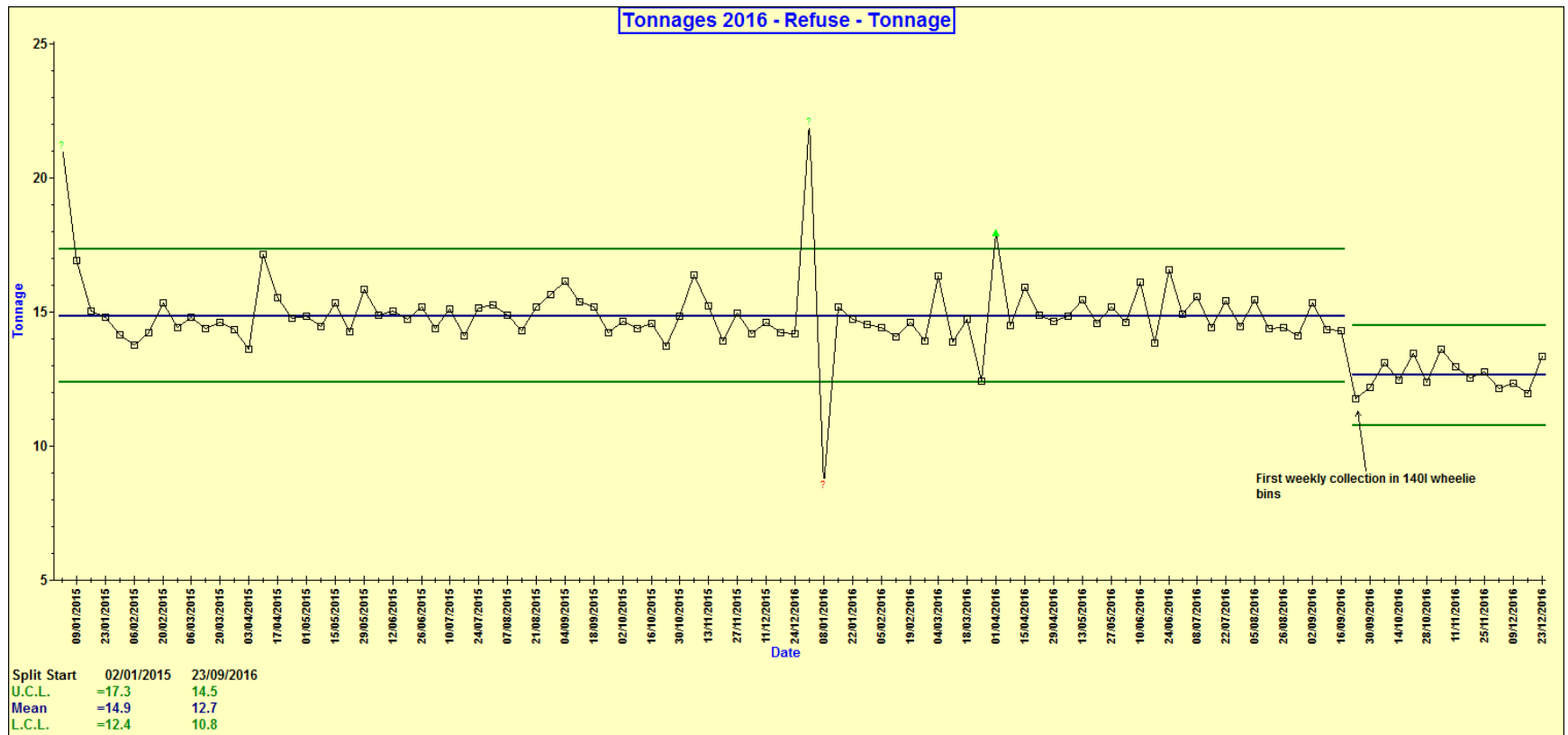
Who might make use of the data?

- Residents - book bulky collection, find nearest recycling facilities, info about what they can recycle
- How their neighbourhood is performing
- Government - National recycling statistics to hold LA's to account
- City Waste managers - need to understand how their collection systems are performing (or not) and bring forward efficiency measures.

So what are we doing in Portsmouth and what more can we do...

- Weight of waste - we collect weight of waste and recycling by round which can identify a specified area - we are beginning to look at this in order to understand where we can target resources to reduce waste and increase recycling – also to see if what we do is making any difference

Tonnage data – by round



So what are we doing in Portsmouth and what more can we do...(cont.d)

- Record where the waste comes from - we do this by round and we also breakdown other waste types by fly tip/fridge freezers/green waste/TVs etc.
- Improving our analysis of data and acting on it
- Consistent reporting format from contractor eg red hangers (PDA use)
- Developing a systems approach – the waste management team and Biffa are working to ‘enable recycling and remove waste on the collection day’
- We are looking into areas where ‘fill sensors’ might be used and whether there are savings in collection possible

Any questions?