



# Route Optimisation and Using New Technologies



**Alistair Struthers**  
Webaspx



# Improvement Trends and Challenges Emerging

- **Improving customer service while reducing cost**
- **Improving quality of service without increasing budget**
- **Delivering Income Generation from Chargeable Services**
- **Different strategic options for making best use of resources**

# The latest *Refuse Collection State of the Market report (2017)* shows budgets are still under pressure

- 69% of authorities expecting a decrease in revenue (31% are expecting an increase in revenue, due to more properties or increased cost of treatment)
- Expectations for next 12 months:
  - Round rationalisation 53%
  - Fewer staff 32%,
  - Fewer vehicles 28%
- Alternate Weekly Collections – 80% for residual, mid 70% for recycling,
- Under 5% undertaking three weekly residual collections currently, but growing interest



# So what efficiencies are you currently working towards or proposing?

If one of the core methods councils have been using to reduce cost has been done, yet the budget pressure still applies, then where next?

The survey asked 'What efficiencies are you currently working towards or proposing' and the main responses to this question are as follows:

- Moving to alternative weekly collections for recyclables and three weekly collection for residual waste. (service cuts)
- Reducing hours and re-viewing provision of Household Waste Recycling Centres. (service cuts)
- Route optimisation/double shifting of vehicles (more for less)
- **Increasing income generation opportunities** e.g. charging for green waste collections/wheeled bin replacement/ commercial waste contracts (more for less)
- **Introducing new technologies** e.g. Big Belly Bins, in-cab CCTV (more for less)
- Reducing contamination levels and introducing no side waste collection policies (more for less)
- Reviewing staffing and fleet levels (more for less)



Placeholder only – Image not licenced

# **A case study - Copeland Borough Council**



# The story so far.....

- Alternate weekly collections
- Rounds redesigned/optimised
  - Separated refuse & green waste services reducing vehicle & crew
  - Seasonal green waste collections
  - Limited green waste collections
  - Reviewed large bin policy
  - Reviewed assisted collection policy
  - Lane end collection policy
  - Minimised sack collections – fortnightly collections
  - Chargeable enhanced green waste service

# Drivers for further change/challenges

- Financial
  - Demand for income generation rather than savings – low hanging fruit is long gone
  - Maximise income from chargeable services
  - Increase in households & population - doing more for the same equals a budget reduction
  - Structure changes – reduced management and back office support



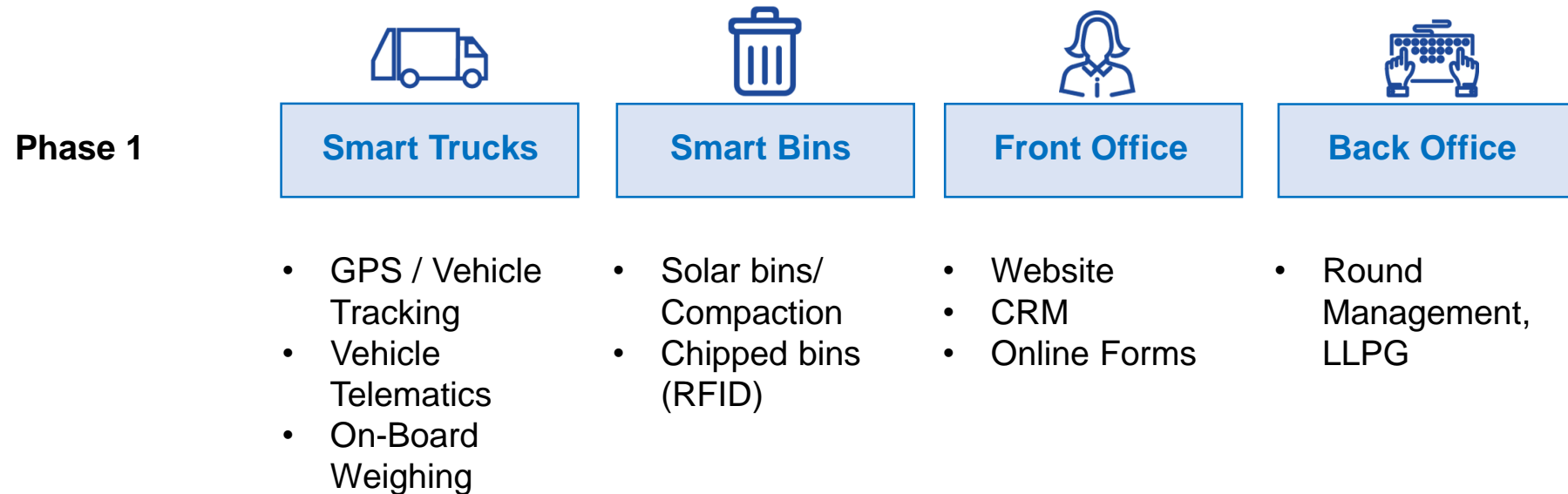
# Drivers for further change/challenges

- Customer expectations
  - Excellent service delivery – on time every time with no errors
  - Value for money
  - Accurate and up to date information and feedback (real time)
  - 24 hour access for reporting or requesting specific issues – electronic self service systems

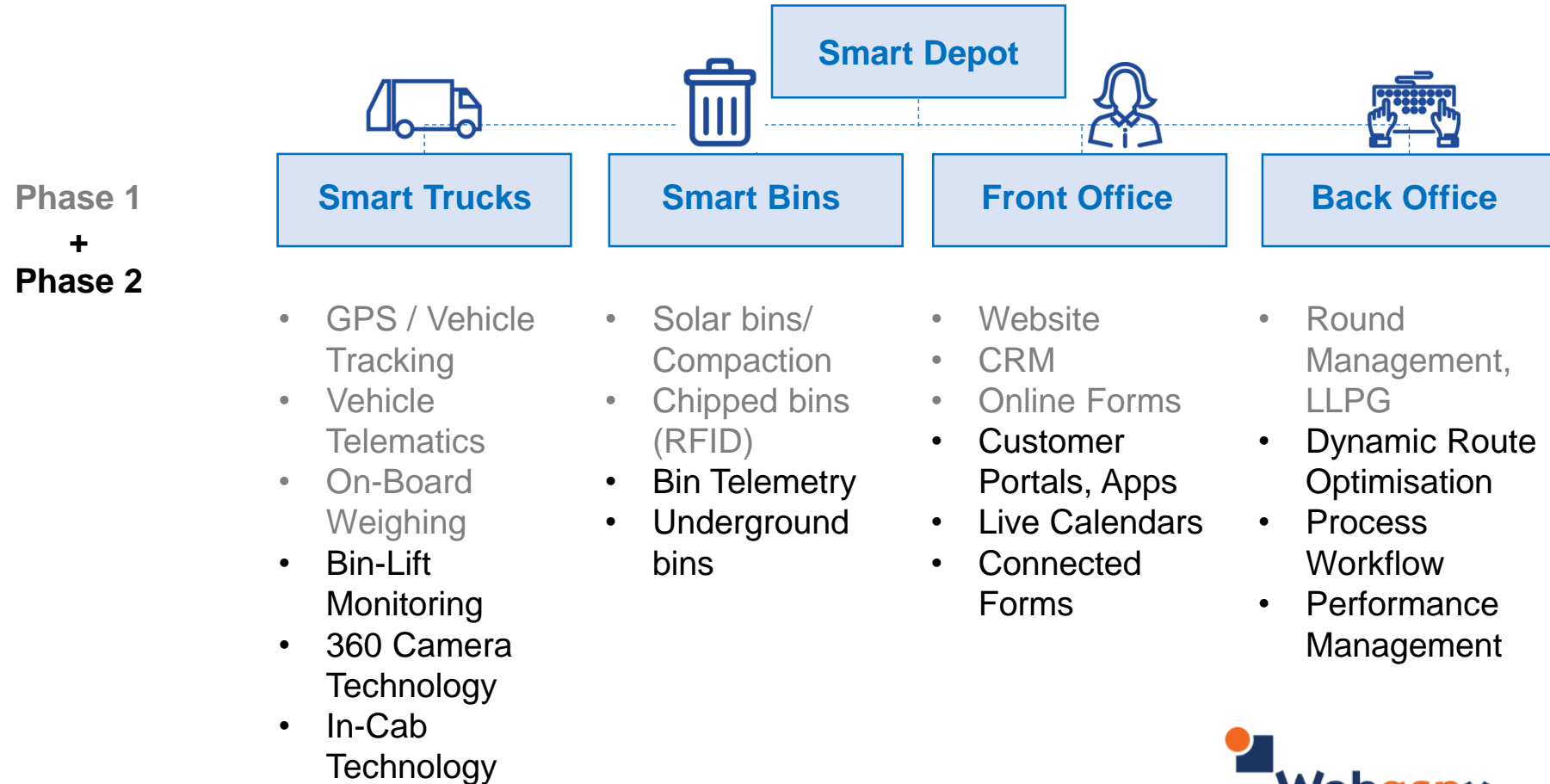
# Drivers for further change/challenges

- Operational
  - Maximise resources (vehicles & people) – right first time
  - Streamline or automate processes- consistency
  - Ability to provide the necessary feedback to customers (electronically)
- Making better use of Data –
  - Historical data identifying problems or trends
  - Service adjustments, eg assisted collections or large bins
  - Financial justification

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We are seeing the focus of technology investment move on from point solutions to building integrated processes

- Bulky Waste Collections
- Missed Bins
- Commercial Waste Account Management
- Garden Waste Subscriptions

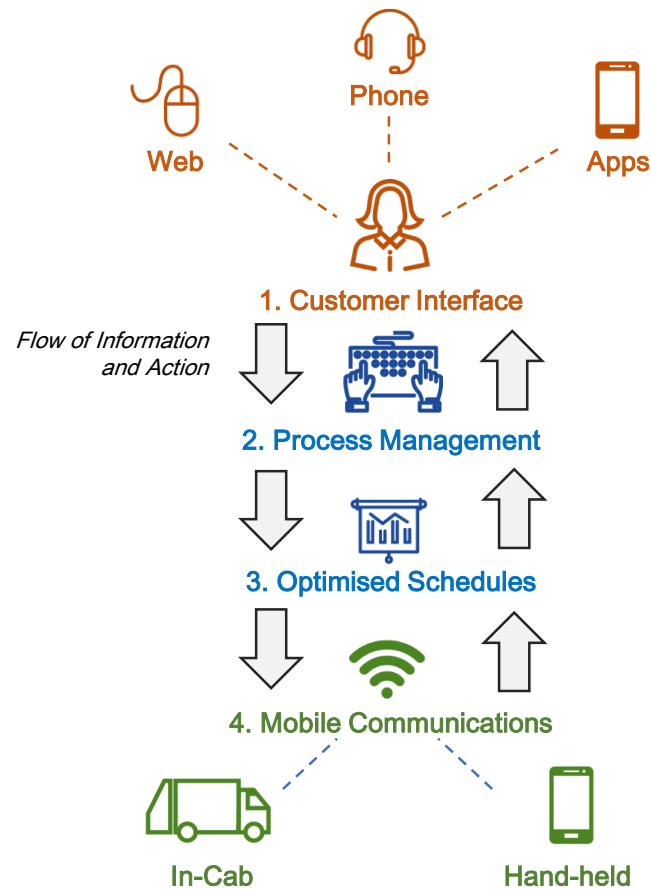
# Optimising core business processes is becoming the key to delivering the next wave of savings

<b>Smart Trucks</b> Managing Process Performance	<b>Smart Bins</b> Operational Process Efficiency	<b>Front Office</b> Self-Service Processes	<b>Back Office</b> Operational Process Efficiency
<ul style="list-style-type: none"><li>• Lowering fuel consumption/driver behaviour</li><li>• Understanding yields and participation</li><li>• Reducing complaints</li><li>• Cut paperwork and errors</li></ul>	<ul style="list-style-type: none"><li>• Minimising bin lifts</li><li>• Reducing resource requirement</li><li>• Reducing asset management</li></ul>	<ul style="list-style-type: none"><li>• Increase self-service</li><li>• Improve resident behaviour</li><li>• Reduce complaints</li><li>• Increase take-up of chargeable services</li></ul>	<ul style="list-style-type: none"><li>• Reduce fleet numbers</li><li>• Improve staff productivity</li><li>• Improve efficiency of chargeable services</li><li>• Reduce complaints</li><li>• Faster (data-driven) service redesign</li></ul>

# Improvement Trends Emerging

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We are seeing the focus of technology investment move on from point solutions to building end-to-end processes



- **DIGITAL DEPOT**

- Missed Bins
- Bulky Waste Collections
- Garden Waste Subscriptions
- Commercial Waste Collections
- Assisted Collections



# DIGITAL DEPOT - Example Process: Additional Bin Request

## Process steps:



- Resident contacts council to say family size means they need a bigger bin.



- Details taken by Customer Services and case created in Workflow or third party CRM



- Request is approved in Workflow and the job is then allocated to a bin delivery round/vehicle



- The bin delivery round is sent to Cloud Optimiser to optimise the schedule



- Once done, the job is marked complete on the delivery vehicle In-Cab, which updates the case in Workflow.



- WM Collections updates round database with additional bin (which increases work on that round).










- Additional bin information is automatically sent to refuse round In-Cab (new itinerary) so that crews are aware of new bin at the property



# Example Process: Additional Bin Request








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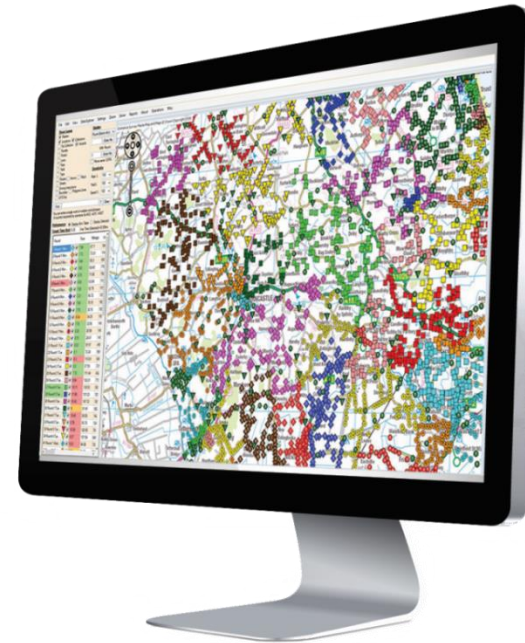
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## Contact details

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