Binfrastructure: Bradford
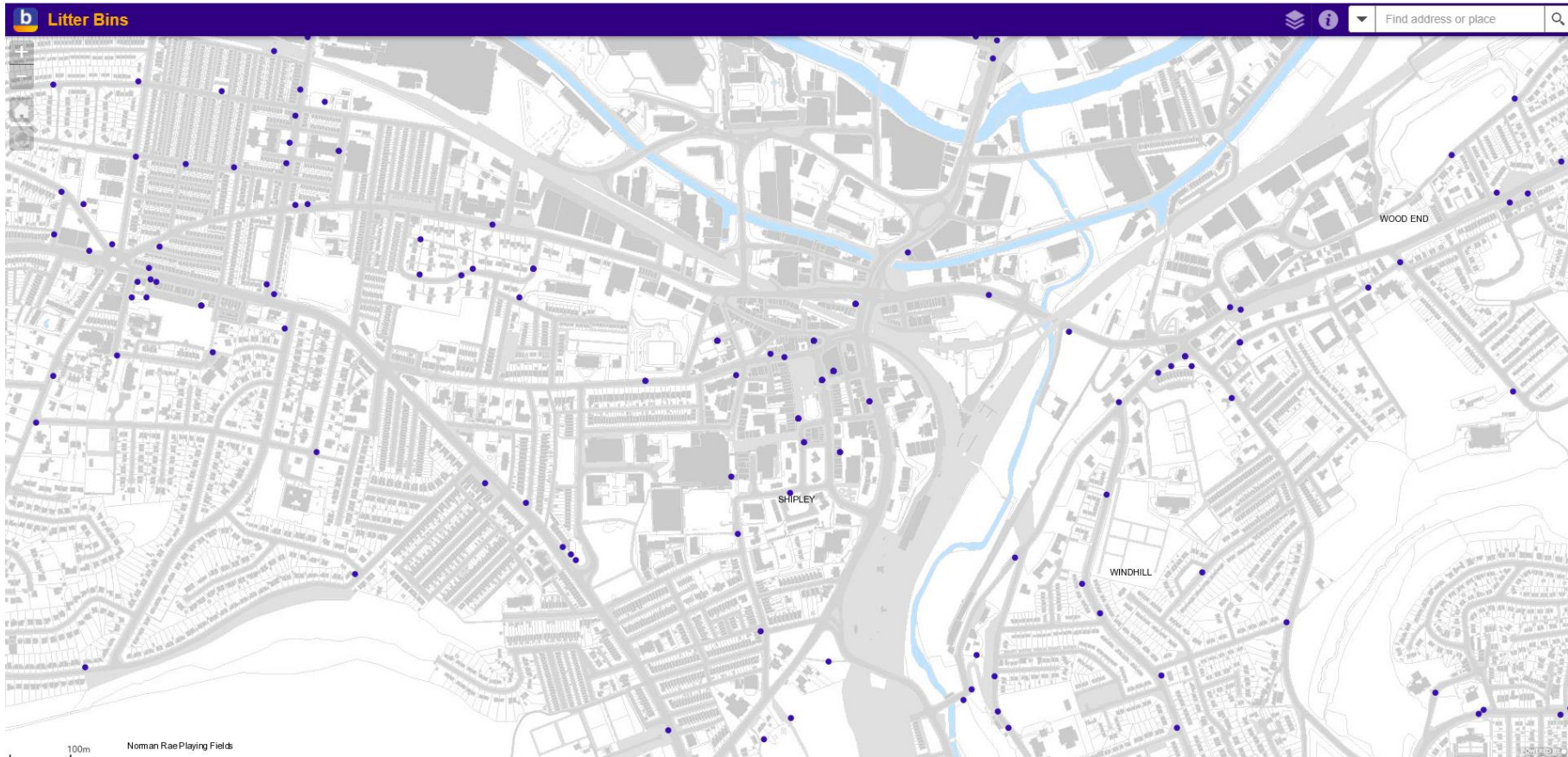
Neighbourhood & Customer Services

Background Information

Metrics

- Population: 534,000

- Housing Stock: 216,490

- Road Network: 2,100+ km

- Approximately 65% rural

- City of Bradford and 13+ distinct outlying towns and villages

Political Structure

- 30 wards / 5 Area Constituencies

- 18 Parish & Town Councils
  - 2 more possible

- Labour control (48 seats out of 90)

- Narrow majority

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Cleansing Service

- Prior to 2012 - Street Scene

- Cleansing function moved to new service called Neighbourhoods

- Cleansing staff and Community Wardens managed by an Area Operations Manager

- £8.97 cost p/head (Budget £3.9m)
  - £8.42 Top Quartile exc. CEC (PN figure 2017)

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Area Constituency Office x 5
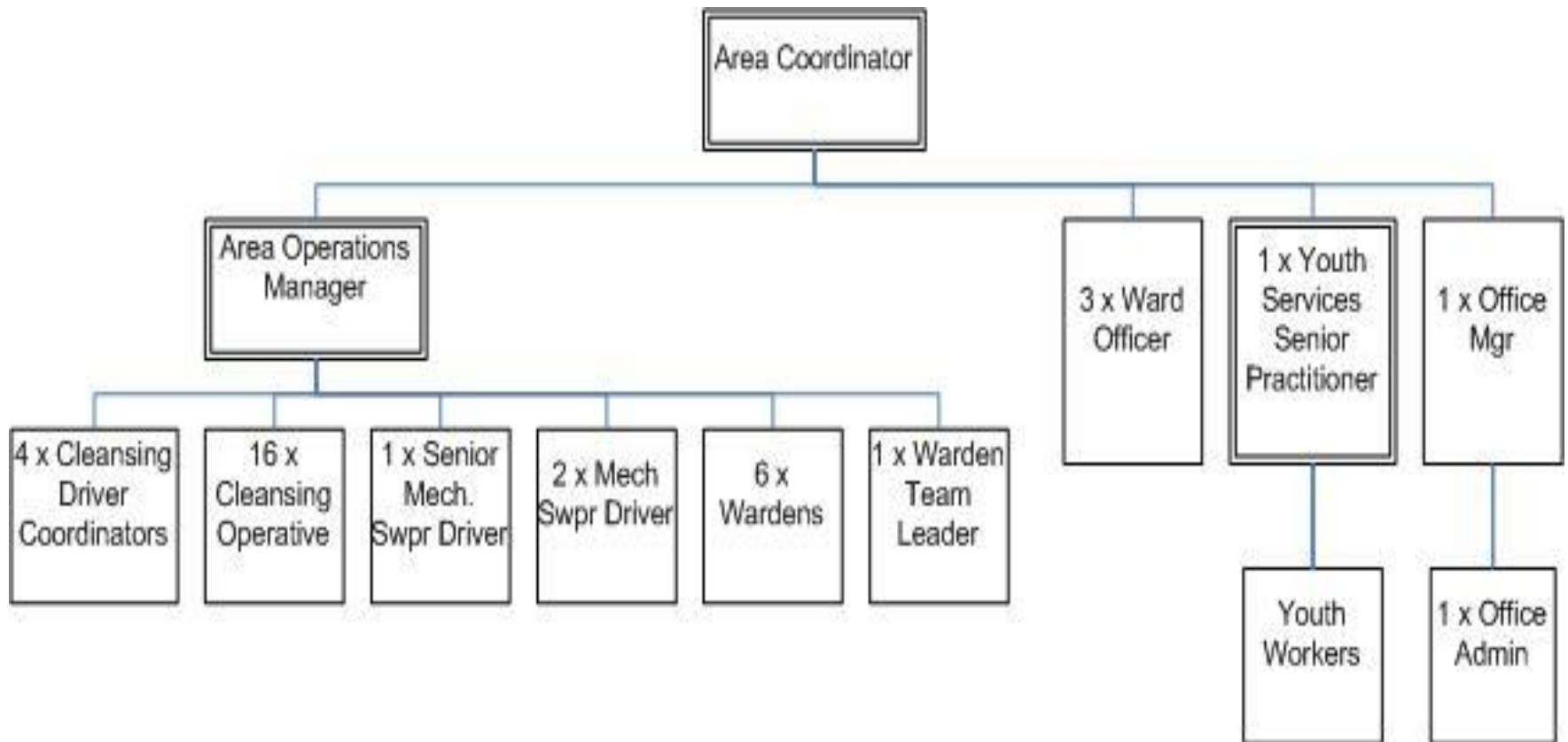
Staff Breakdown

- Split across the 5 Areas + City Centre Team
  - 17 mechanical sweepers + 1 Applied
  - 25 transits (113 staff inc drivers)

- Centralised
  - 2 Maintenance staff (litter bins etc)
  - 2 Graffiti Technicians

Mechanical Sweeping Fleet

Strategy Group

- New routing software

- Private sector litter wardens

- New media campaign

- Driver Coordinator training review

- Tracking software

- Fleet management issues

- Prescriptive working plans

- Reduced weekend working

- 30 hour working for new starters

- *Plus much much more….*

Litter Bins

Problems

- Bin set-up homogenous; the district isn't
- No asset register:
  - est. 3 - 4,000 assets
  - Unknown whereabouts of £0.9-1.2m!!
- Varying condition of bins
- No site history i.e. burn-outs etc
- Knowledge retention
- Historic deployment behaviours

Variability in Provision

Litter Bins – The Distant Past

- No asset register

- 10-12 years ago a manual audit was done

- Man with a clipboard and bus pass

- Written records in an Access Database
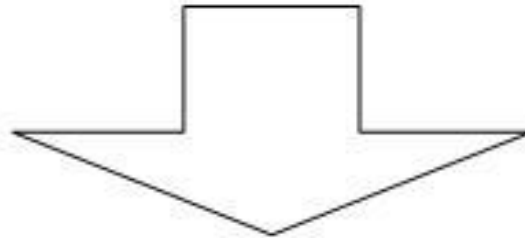
- 4,000 records (approx)

Disaster Strikes!

- It got corrupted: IT said "irretrievable"

- No belief we could do it again

- All knowledge remained in driver's heads

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What Changed?

Past	"Too hard!" "Too expensive!" "Don't know how!"	Specialist GIS equipment needed Specialist surveyor required Cleansing background not rocket-science

Present	"Our teenagers can do it so why cant we!"	Any Smart Phone can do it Cleansing drivers know where they are Someone in IT can knock up a layer

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# Collecting The Data

- Smart Phones now accurate to less than 10 meters
- Accept the data is representative; it wont be perfect
- Drivers all have a works Smart Phone
- Phone needs to have Photo Locations set to "ON"
- Brief drivers on what is expected – example photo
- Get them taking pictures on a full cycle of their work pattern
- Do quick sample check on any photos downloaded at end of day

Uploading The Data

- Photos provided to IT

- A script written….in Python

- Each photo has a point placed on map

- Active link between point and the photo

- Ability to later add text data to each record

"Drag and Click" Set Up
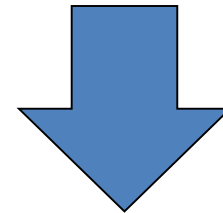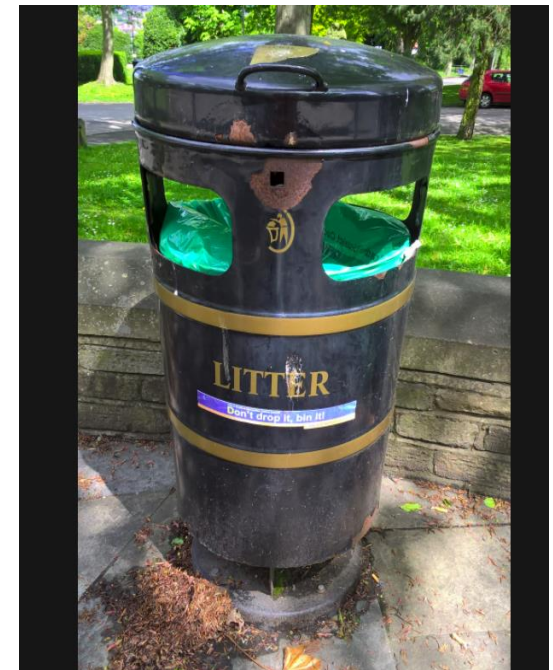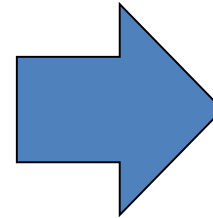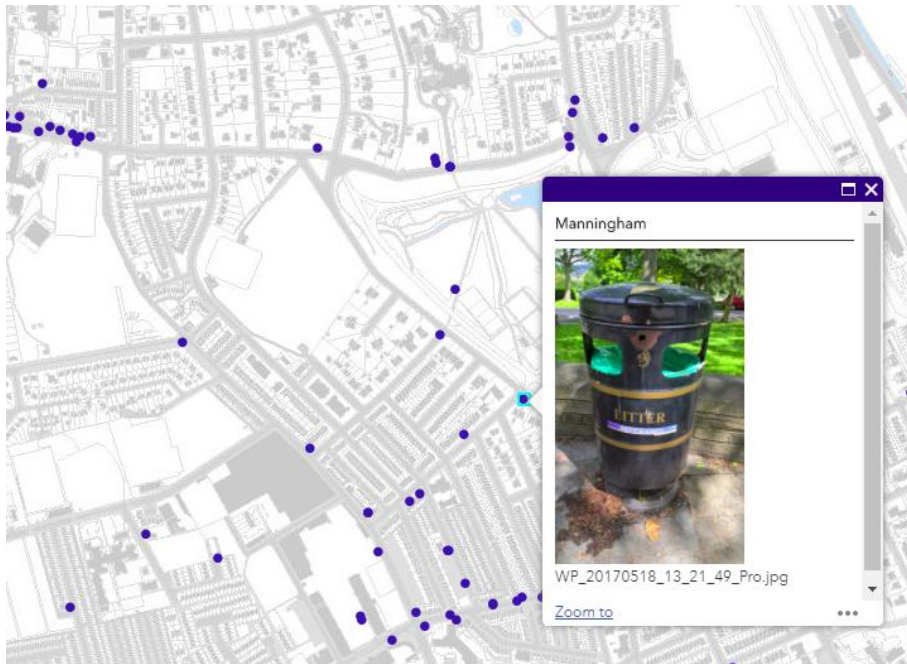
ID NO	TYPE		STREET	STREET ID	CONDITION	LAST ASSESSED
001	KNIGHT	BLACK & GOLD	MANNINGHAM LANE	09784809	POOR	09/02/2018
002	KNIGHT	BLACK & GOLD	MANNINGHAM LANE	09784809	OK	09/02/2018
003	KNIGHT	BLUE & GOLD	ST PAULS ROAD	01869321	OK	12/12/2017
004	KNIGHT	BLACK & GOLD	OAK LANE	07814900	GOOD	30/07/2016

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Litter Bins – Present

- Now we have a digital record of 3,200 bins

- Can visually see every bin

- IT working on editing tools
  - Move / Archive / Add New

- Start a process of data-cleansing

- Installation, removal and maintenance of bins

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Litter Bins – The Future

- Use the Layer as the sole back office management tool

- Organic not static

- Utilise data for:
  - Rationalisation of work patterns
  - Removal of inefficient bins
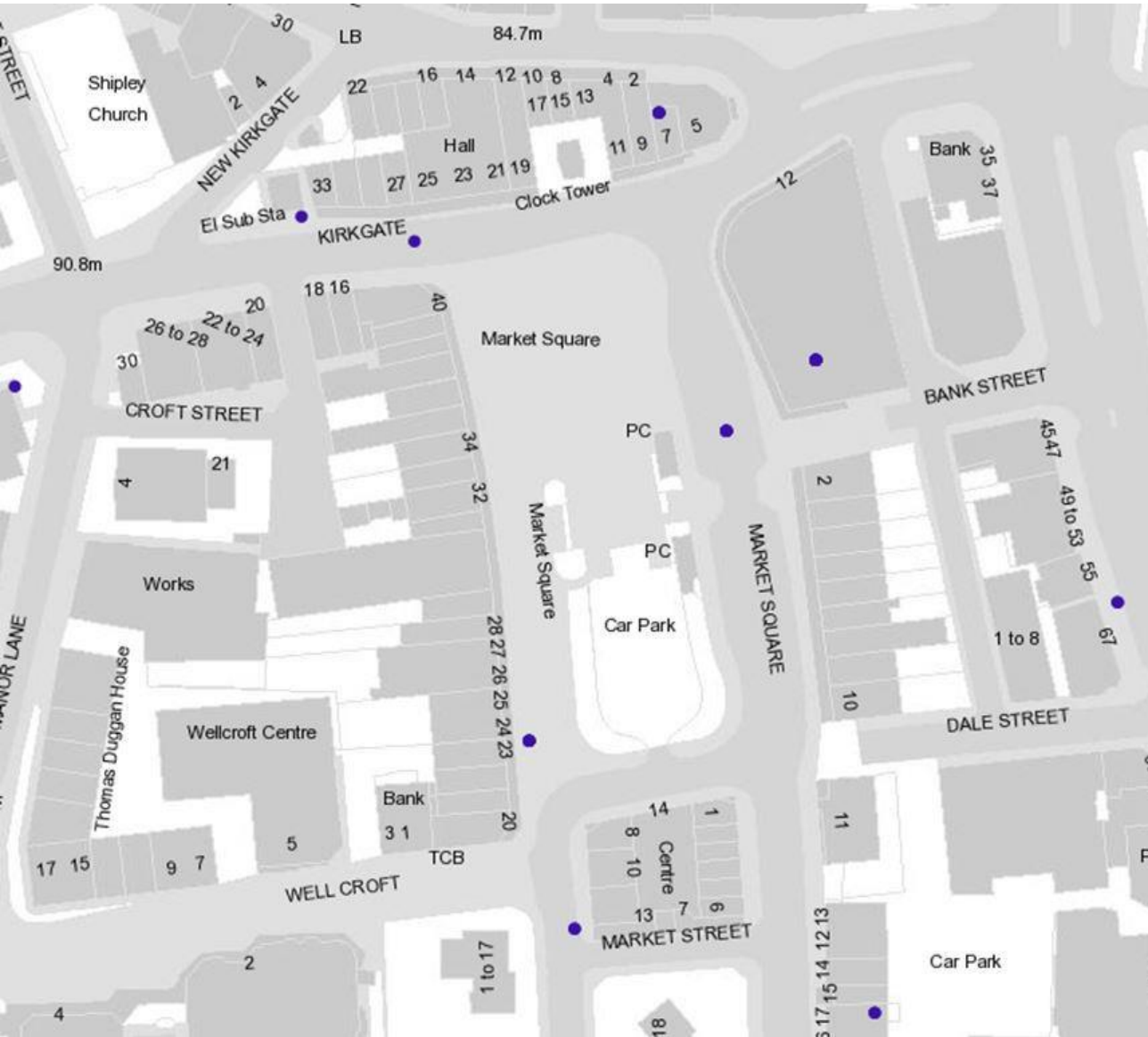 - Plan for replacements (10yr life span)

Smart Bins In Bradford

- Currently 72 solar-compaction bins

- Started approximately 2 years ago

- Tender in progress for 6 more bins

From 36 bins, then 10, now 8

Shipley Market Square

Shipley Market Square

Bin Type	Bins	Time between empties (days)	Weekly Empties	Daily Empties (6 day wk)	Minutes Spent (p/wk)	Hrs Spent p/a	Cost p/a at £7.85 p/h
Standard	36	0.5	432	72	864	749	£5,878
Compaction	8	4.2	13.3	2.2	26.6	23	£181

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Evaluating Smart Bins

- High cost means strong business case required (10-15 times the cost)

- Cleansing operating practices:
  - Milk-round
  - Area-based

- Nature of areas deployed

- Clarity on desired outcomes

Ballot Bins

In Hindsight…

- Poorly utilised in Bradford District

- Area based-mgt structure hinders control

- Better coordination needed – centralise

- Needs a re-boot with media and web presence

On "Binfrastructure" Agenda

- Types of bins
  - Longevity / cost / materials / rust / locks / bags

- Using wheeled bins in certain locations
  - bin-lift questions arise

- Linking Litter Bin layer with CRM system

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Data

- When there are not enough resources to deliver everything you may wish to deliver, then having data to illustrate your point is essential for progress

- Less money requires greater investment in data structures to manage:
  - SLA's
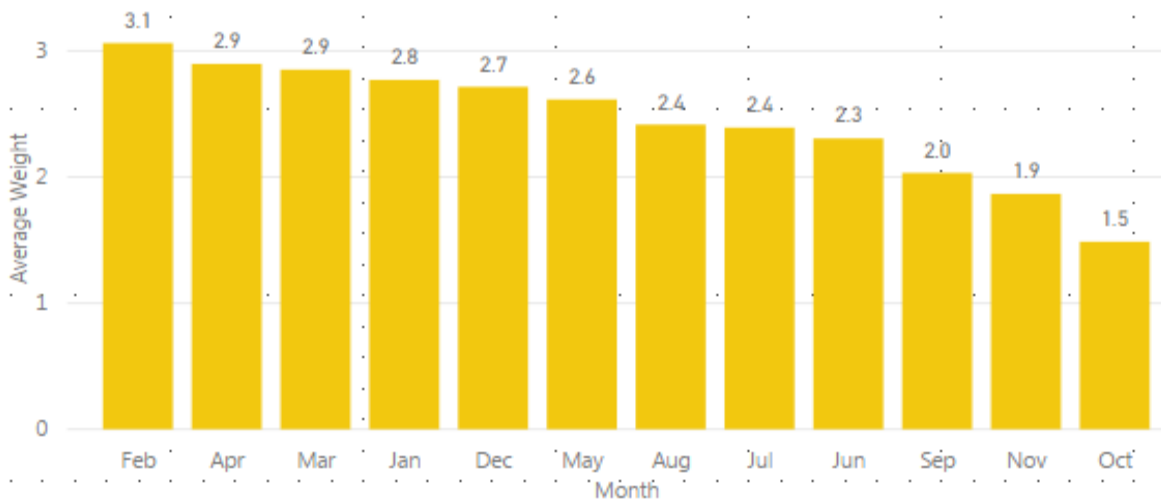 - Member expectations
  - Ensure efficiency

Dashboards

- Visited Barnsley Council (Waste / Grounds)

- Microsoft Power BI adopted

- Free to use (license only if want to publish to web platform
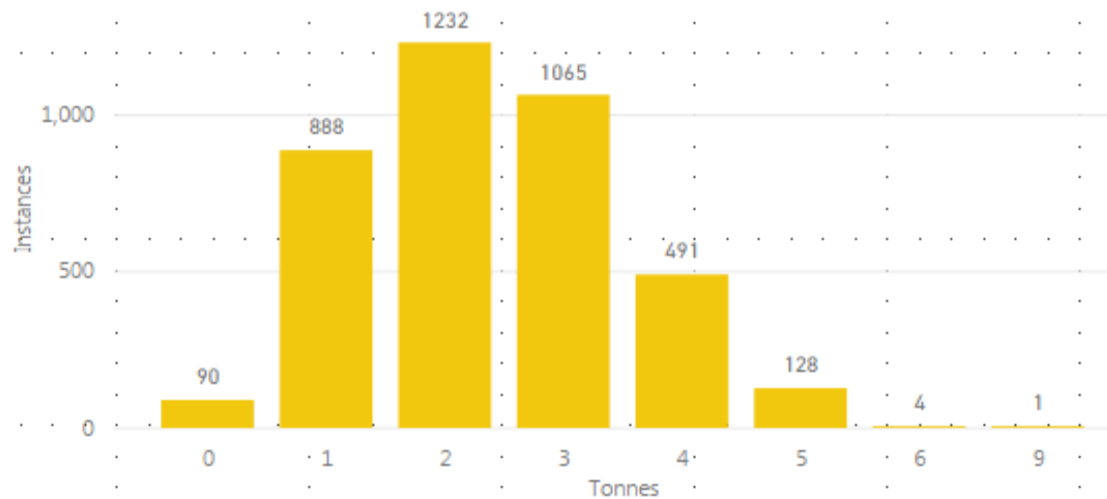
- Good Excel background sufficient to hit ground running

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Large Mechanical Sweepers - Load Weights

Average Load Tipped By Month

Bar chart of Average Weight by Month:
- Feb: 3.1
- Apr: 2.9
- Mar: 2.9
- Jan: 2.8
- Dec: 2.7
- May: 2.6
- Aug: 2.4
- Jul: 2.4
- Jun: 2.3
- Sep: 2.0
- Nov: 1.9
- Oct: 1.5

01 April 2014

Earliest DATE

Tipped Tonnage v Potential Tonn...

9161 (gauge 0K to 26K)

Instances of Tonnage Tipped (Rounded)

Bar chart of Instances by Tonnes:
- 0: 90
- 1: 888
- 2: 1232
- 3: 1065
- 4: 491
- 5: 128
- 6: 4
- 9: 1
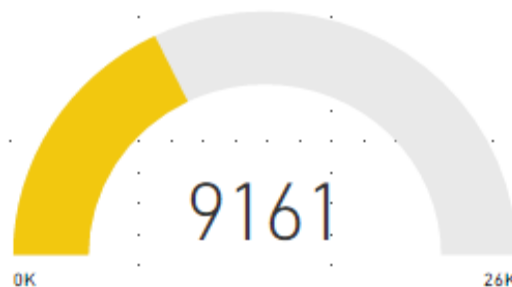
Looking Ahead

- Strategy Group continues: organic agenda

- 93% cost frontline staff and vehicles (PN Data 2017)

- Apr 2019 – Probable 25% budget cut (£1m)

- Job losses: Not if…. but how many?

- Review method of service delivery
  - More prescriptive working?
  - Changes to working patterns

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Looking Ahead (cont.)

- Data-driven debates (logistics v politics)

- Fewer people = more Performance Management?
  - SLA with public under more scrutiny
  - Ensuring efficiency when you cannot see your staff

- Continue adjusting infrastructure to improve efficiency

Contact Details

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