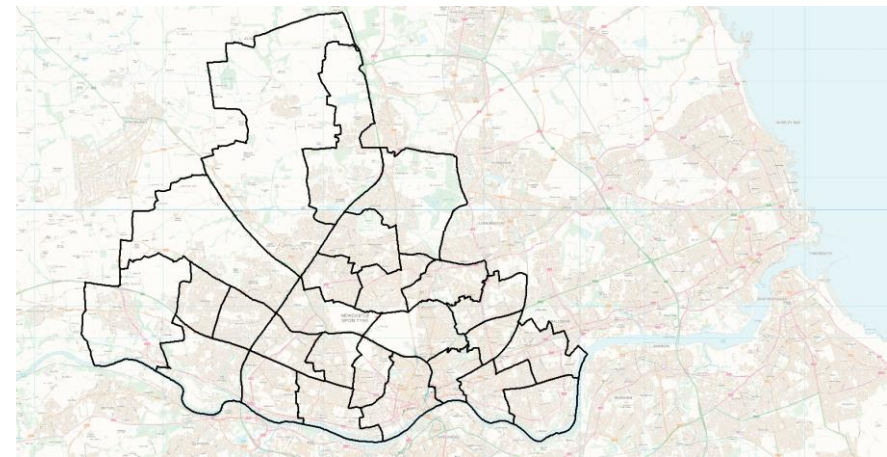


# Smarter Tech, Simpler Recycling : Newcastle's Digital Approach

Mark Mohun  
Lead Business Analyst  
City Operations, Transport and Neighbourhoods

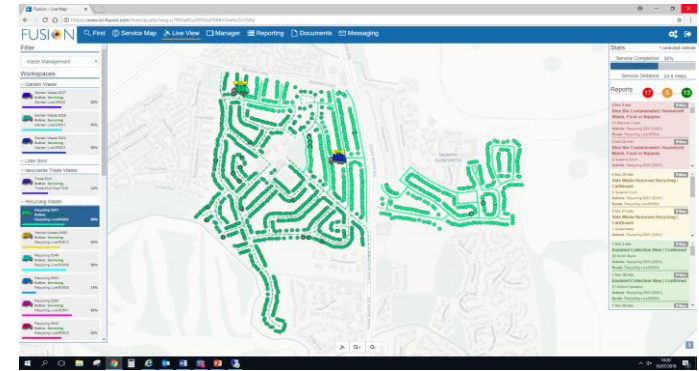
# Background to the City of Newcastle upon Tyne

- Regional capital of North East England.
- Approximately 140,000 properties with a variety of housing types – growing every day.
- Weekly alternate collections...
  - Residual – 240L / Mixed Recycling 240L
  - Chargeable garden waste collection – 24,000 props
  - Significant Trade Waste Service
- Street Sweeping : 3 vehicle types – 10-day cycle.
- City Centre – Daily Routes.
- Main Roads – Daily Routes.
- We manage over 300 operational routes.
- We support the Recycling Education Team.



# We need some new digital tools...

- We have used digital maps (GIS) since 1999.
- Introduced route optimisation application 2009.
- Data is key to provide our frontline services accurately and efficiently.
- Simpler Recycling compliant apart from food waste and flexible plastics.
- Our existing in cab had seen better days after 12 years of fantastic service. Not 4G compatible...it will break.
- Software worked with limitations such as no photos.
- Full procurement exercise (cost and functionality) for a new modern flexible solution for our services.

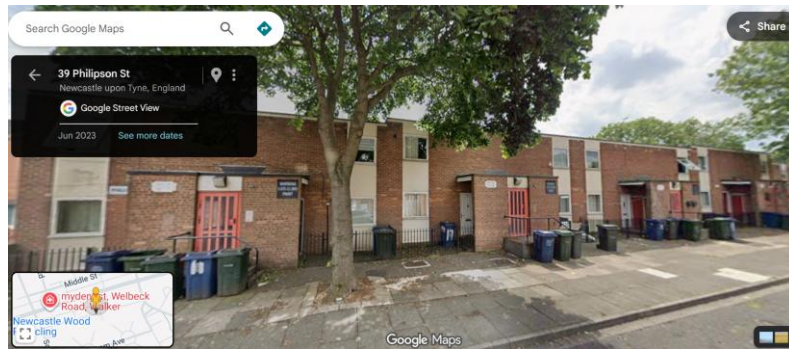


# We need to plan and pilot a food waste service...

- Key differences with other services.
- Do not want bins at pull out points with others.
- Use of the support bin required in some streets.
- Customers need to know where to put the bin.
- Staff need to know where to service.
- The urban environment is complicated (apart from those who live there). Some very complex estates such as Byker Wall.
- We have thousands of terraced properties with lanes (containment).
- Front Collection (SB) / Back Collection (SB).



# Collection Considerations



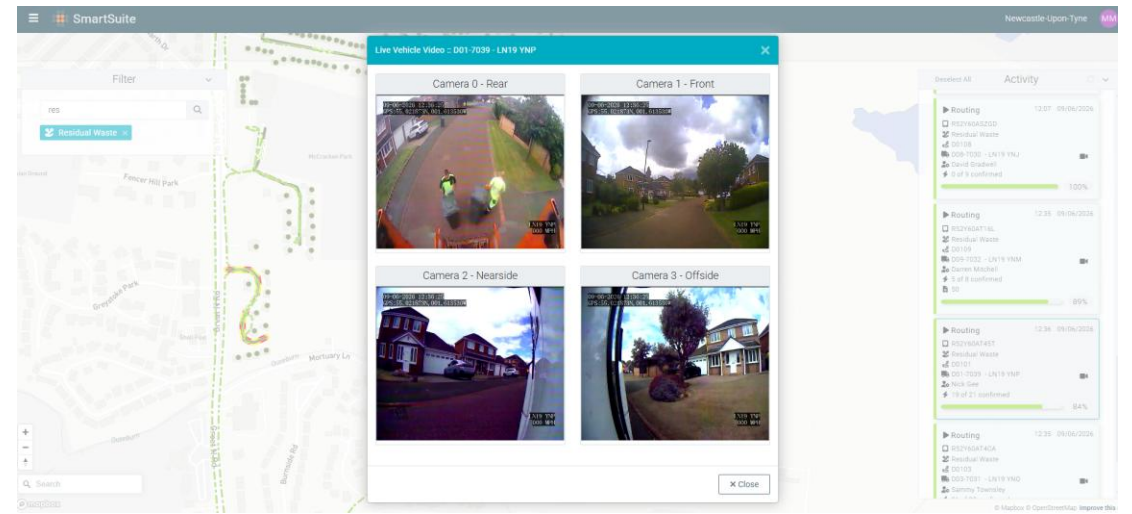
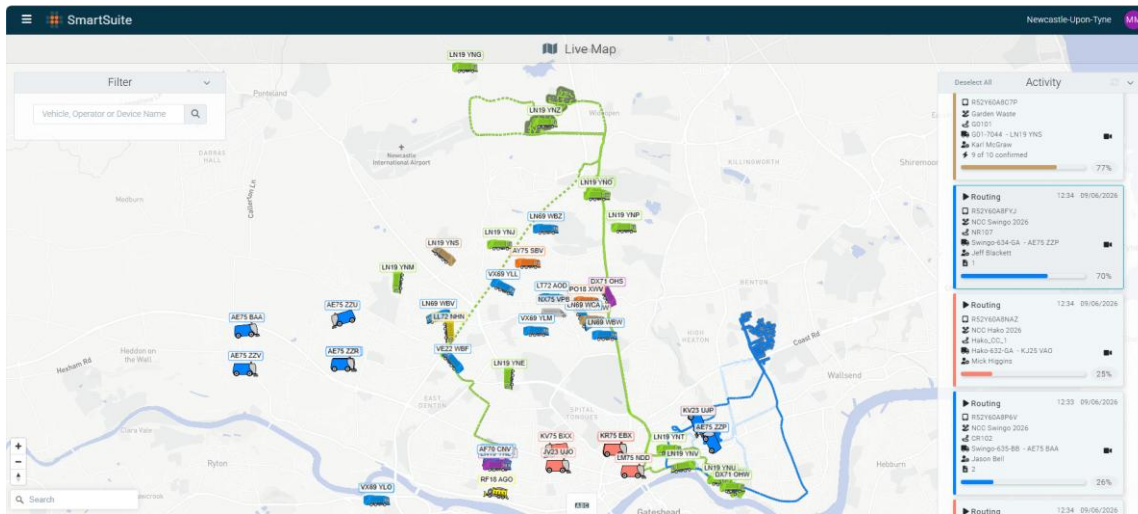
# Our New Software – Smartsuite Web

- A clear representation of the urban environment for any service need.



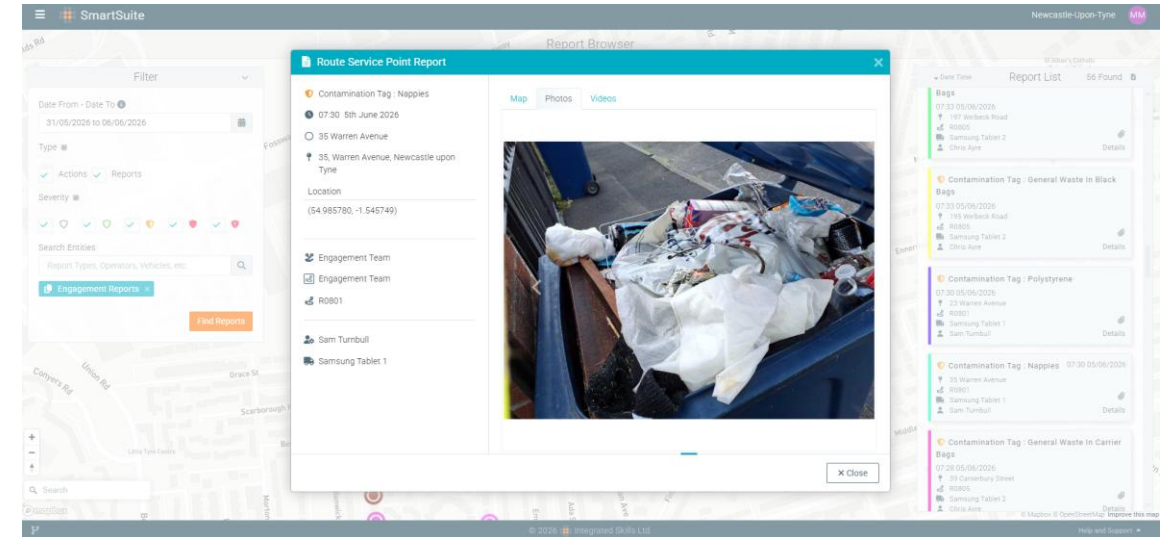
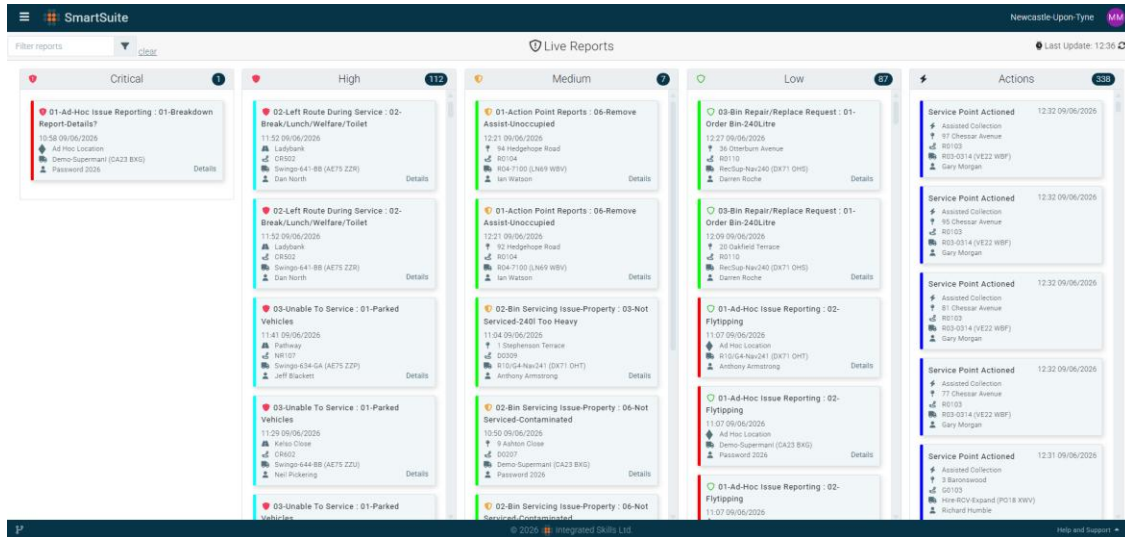
- The software allows us to add notes to streets as well as assigning the street to front or back collection, highlighting where a support bin is required.

# Our New Software – Smartsuite Web



- Live Map with each vehicle showing accurate route progress.
- Displays the full vehicle gps trail of each vehicle chosen.
- Linked to our live vehicle camera system (Fleetclear)

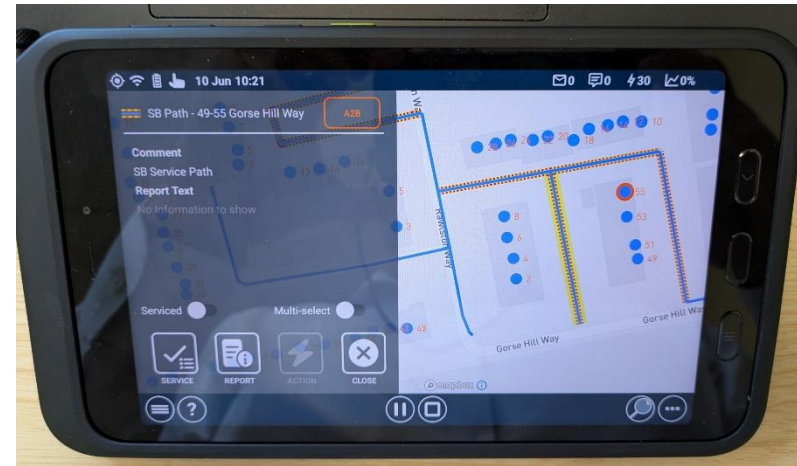
# Our New Software – Smartsuite Web



- Hundreds of operational location-based reports generated each day.
- Photos can be added to reports...Nappies in mixed recycling!
- All data accessible via API's so we can generate jobs based on reports.

# Our New Software – Smartsuite Mobile

- We use Samsung Tab Active 5 Android Devices
- Other apps can be loaded – modern, fast, responsive 4G / 5G.



- We have 70 devices working daily to monitor route progress and capture vital service information. Positive driver feedback.



# Summary

- Food waste progress has been delayed due to vehicles procurement. We are ready to deploy more routes when more vehicles arrive soon.
- We have gained operational knowledge from the 1<sup>st</sup> route informing the planning process.
- We use the Smartsuite platform to support our front-line and back-office teams including our Food Waste and Education Team.
- We installed the technology over a 4-week period 23<sup>rd</sup> Feb to 23<sup>rd</sup> March. We trained 160 operatives and 20 back-office staff.
- Just installed on 2 quads for weed control.

