integrated skills.

Efficient Street Cleansing with GIS Routing and Telematics-Based Service Verification.

Stuart Henshaw

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15 years Environmental Services Manager Selby DC

CIWM NE Councillor

17 Years experience in waste & streets consultancy

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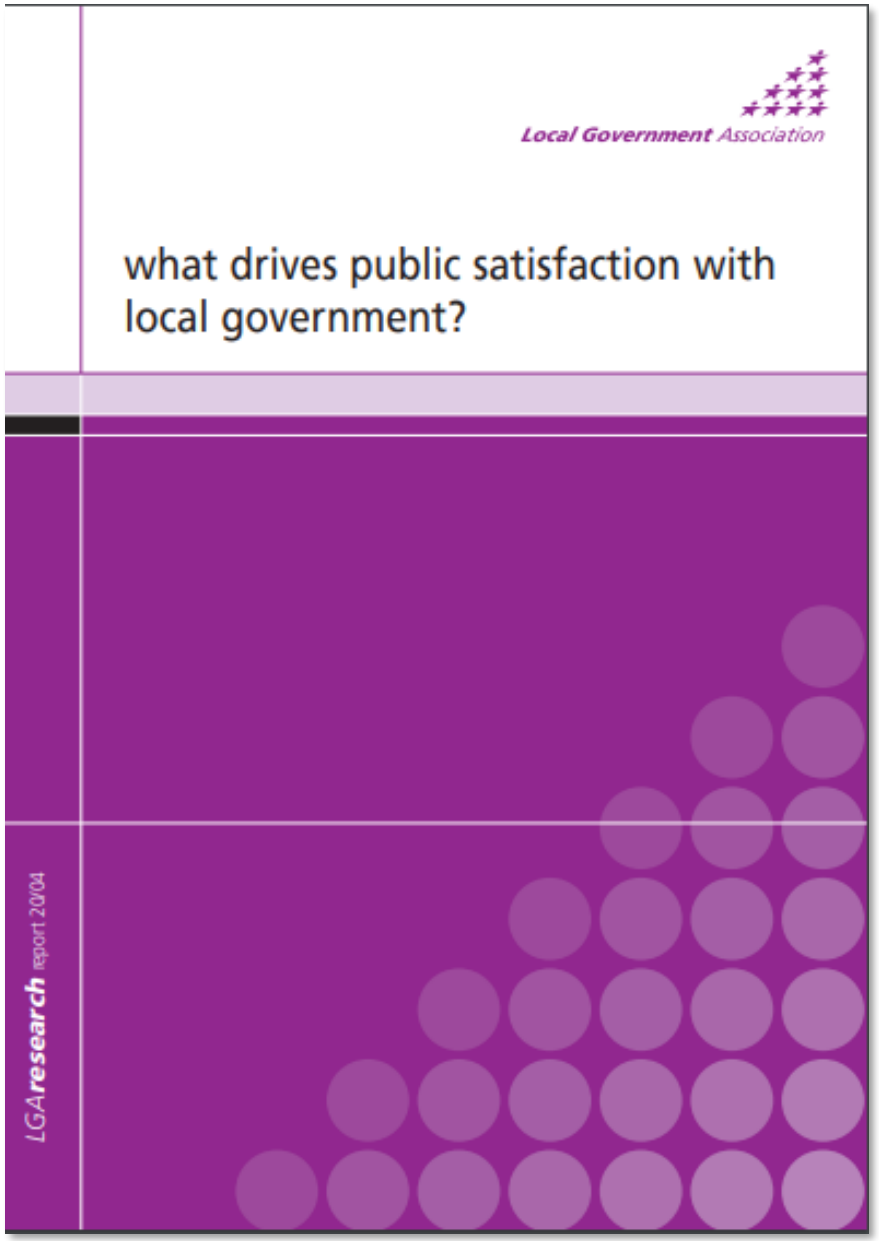

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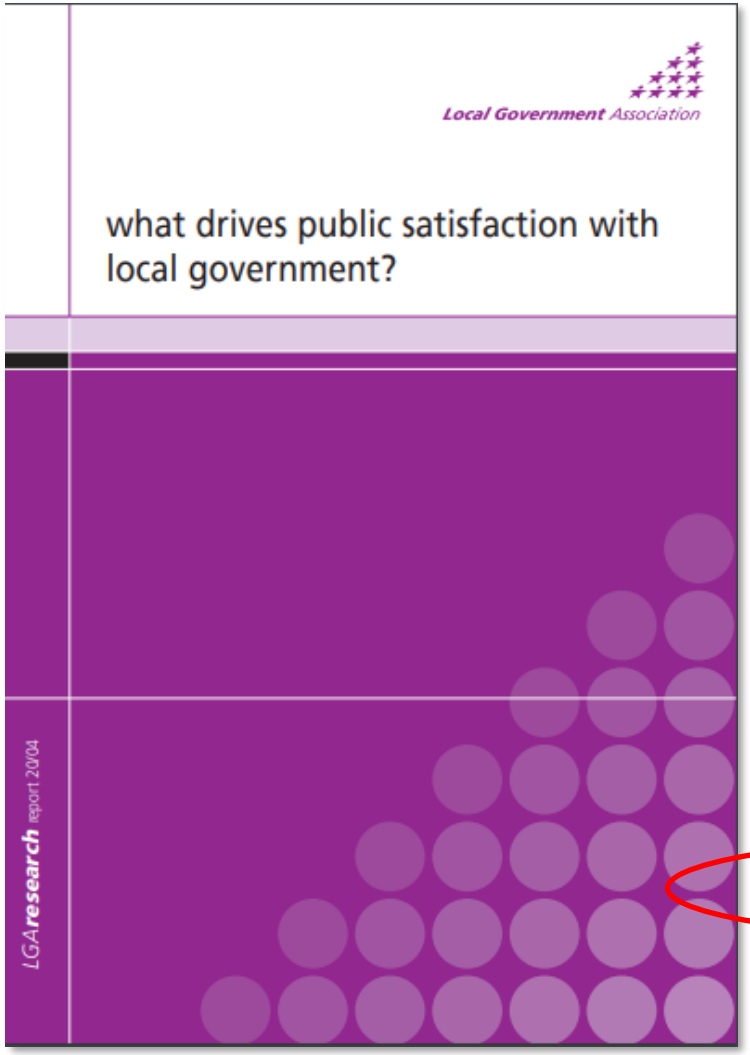


Implications for the LGA

The research highlights some key challenges facing the Local Government Association (LGA). The first is the need to formally agree, collectively, not only that the problem of poor perception exists, and damages the credibility of local government's arguments, but secondly that **collective** and **focussed** action is vital. While much has been achieved in the last seven years, only a radical shift has any chance of improving local government's reputation.

The obvious areas for focus in terms of building reputation among local communities are:

- streetscene and liveability services;
- communications - explaining effectively what is being delivered and how to get it;
- contact - exceeding expectations on responsiveness, empathy and getting things right first time; and
- perceived value for money, explaining clearly where money is going.

If local government collectively agreed to focus on delivering these services/aspects to a high standard, its reputation would improve.

Integrated Skills

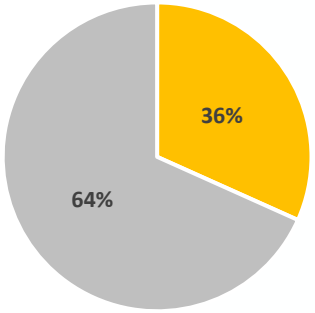
integrated skills.

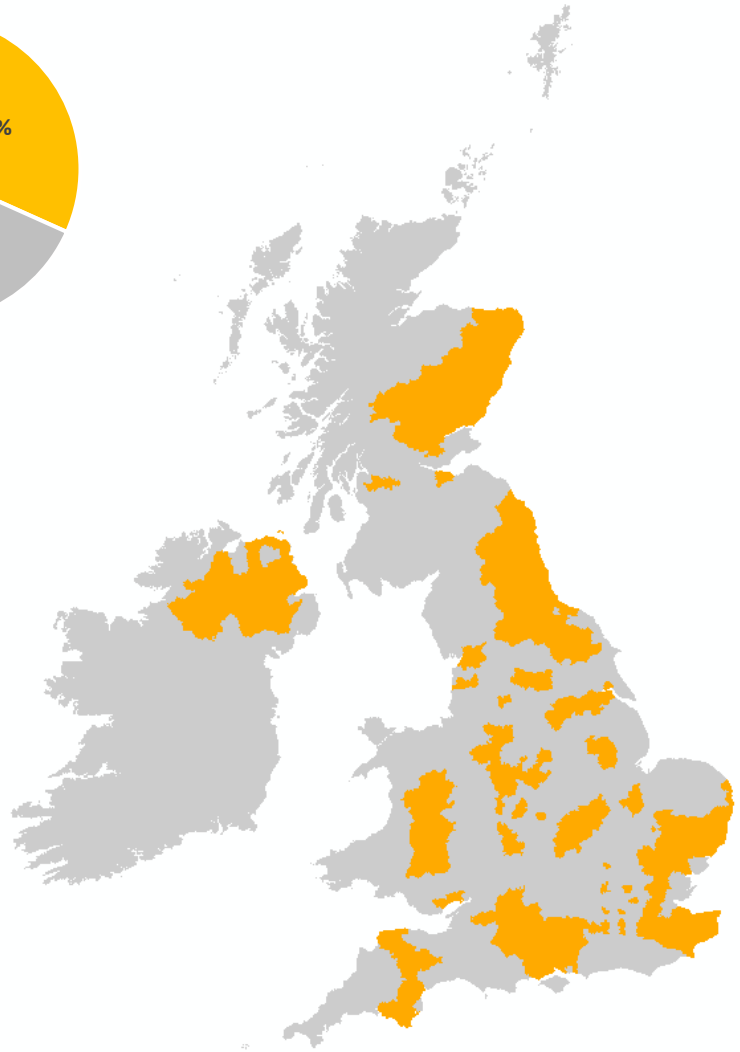
- Software solutions and waste management consultancy
  - Route optimisation, navigation/service verification & software systems to manage environmental services
  - GIS based software solutions
  - Environmental management, especially waste management
- Founded 1993 and based in the UK
- Public and Private Sector Clients in Environmental Services, Logistics, Utilities, Parcel & Postal Services
- Became an Employee-owned company in 2021

UK Population Served by ISL

integrated skills.

- RouteSmart - used by 8 out of 10 major UK cities
- Applied to street cleansing, waste & recycling management, winter maintenance, gully cleansing, etc
- Navigator & Fusion in-cab in use at 20 local authorities >1000 devices per day
- SmartSuite, built with Client Focus Group in use at 11 US & UK local authorities





Monitoring public participation

monitoring public participation in your services,

Efficient Street Cleansing with GIS Routing and Telematics-Based Service Verification.

integrated skills.

TELTONIKA

SCARAB
FAYAT GROUP

nomix enviro

Project Partners

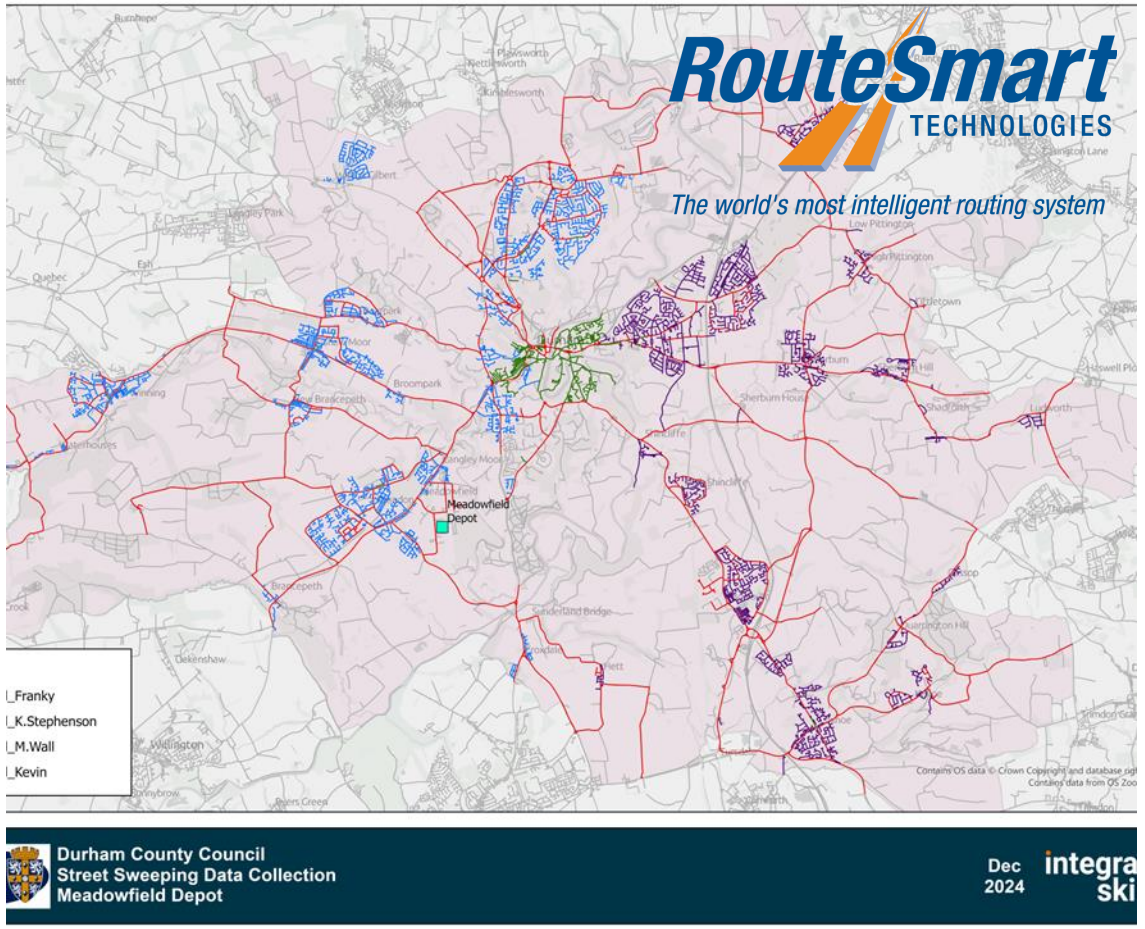
integrated skills.

Efficient Street Cleansing with GIS Routing and Telematics-Based Service Verification.

- GIS-Based Routing for Optimised Operations
- In-Cab and Telematics Integration for Real-Time Monitoring
- Service Verification and Performance Analytics

integrated skills.

- **GIS-Based Routing for Optimised Operations**
  - Leveraging Geographic Information Systems (GIS) to design efficient, cost-effective street cleansing routes.
  - Reducing fuel consumption, travel time, and environmental impact through intelligent route planning.
  - Responding to non-planned work requirements.



Barrington Road		Newton Aycliffe	
Tunstall Road		Newton Aycliffe	
Carileph Close		Newton Aycliffe	
Paulinus Road		Newton Aycliffe	
Ebba Close		Newton Aycliffe	
Bruce Road		Newton Aycliffe	
Pease Way		Newton Aycliffe	
Castlereagh Close		Newton Aycliffe	
Butler Road		Newton Aycliffe	
Ritson Road		Newton Aycliffe	
Merz Road		Newton Aycliffe	
Bowes Road		Newton Aycliffe	
Bewick Crescent		Newton Aycliffe	
Isherwood Close		Newton Aycliffe	
Marley Road		Newton Aycliffe	
Wallis Road		Newton Aycliffe	

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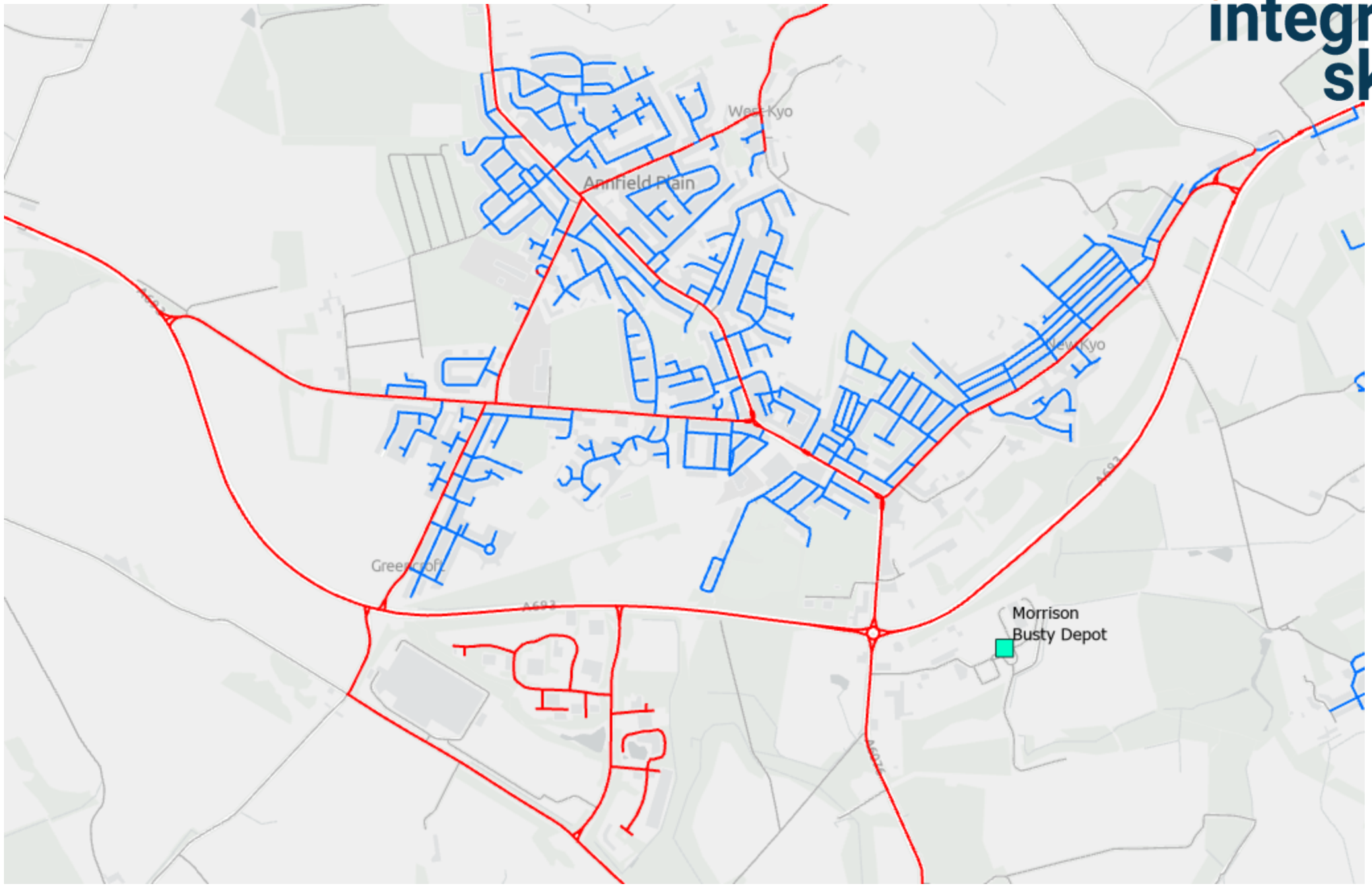
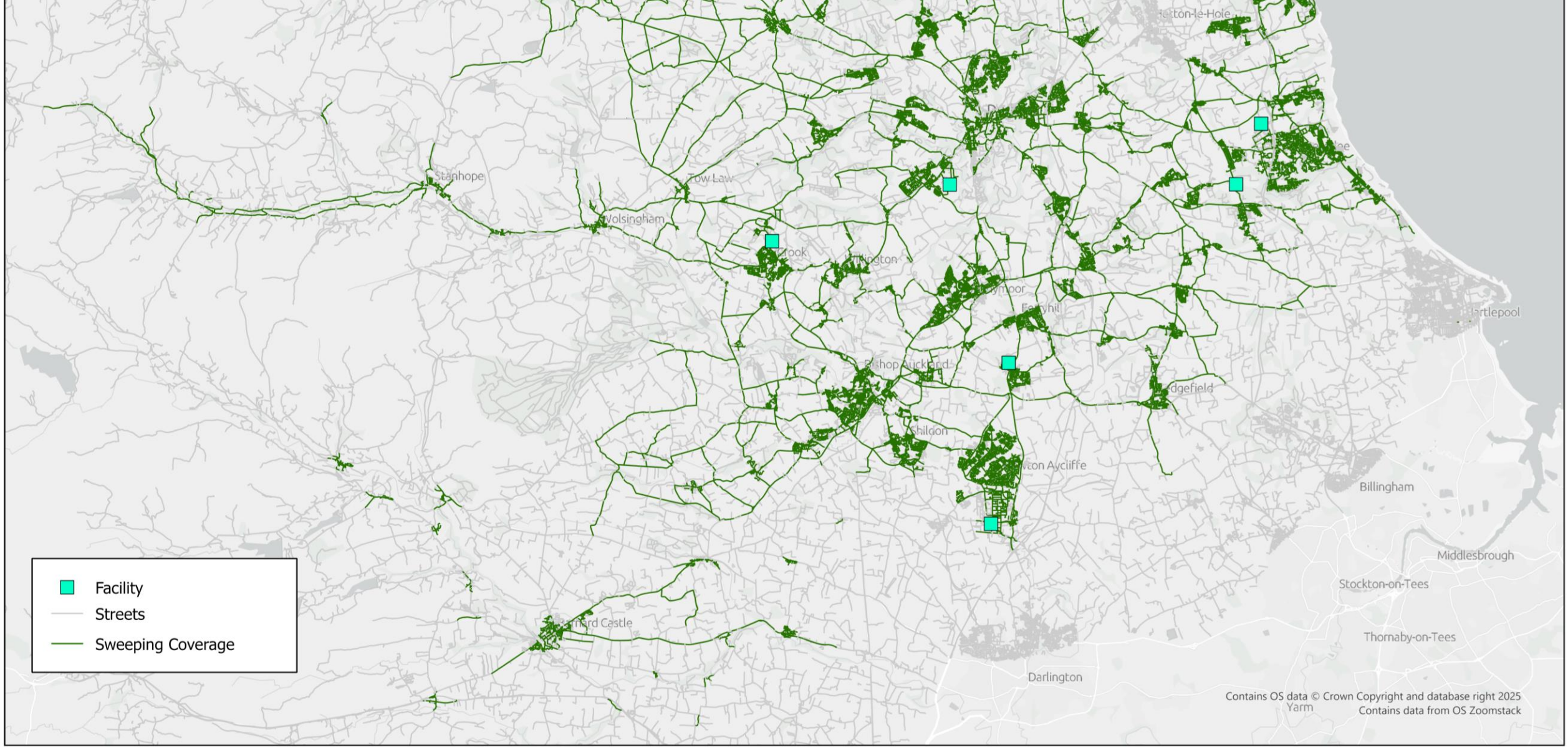




Durham County Council

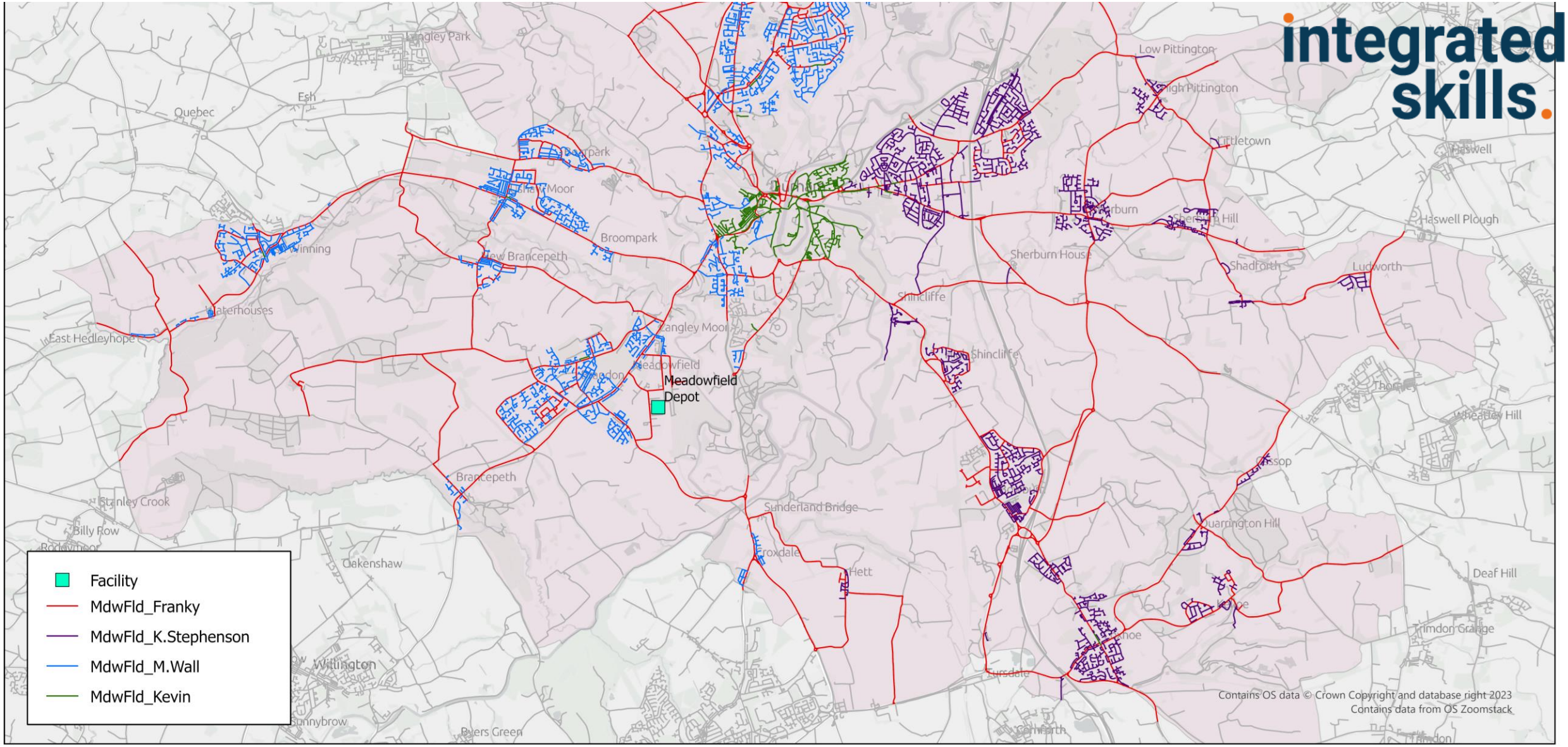
Durham County Council
Street Sweeping Data Collection
Coverage Overview

Dec 2024

integrated skills.

Building the Routes

- Prep time & clean down
- Shift length, service/non-service speeds, depots, tips
- Breaks
- Spare capacity – responding to flood/RTAs/other
- RouteSmart software provides optimised routes 97% go-live ready – review and make any minor amends.



integrated skills.

Durham County Council
Street Sweeping Data Collection
Meadowfield Depot

Dec 2024

integrated skills.

integrated skills.

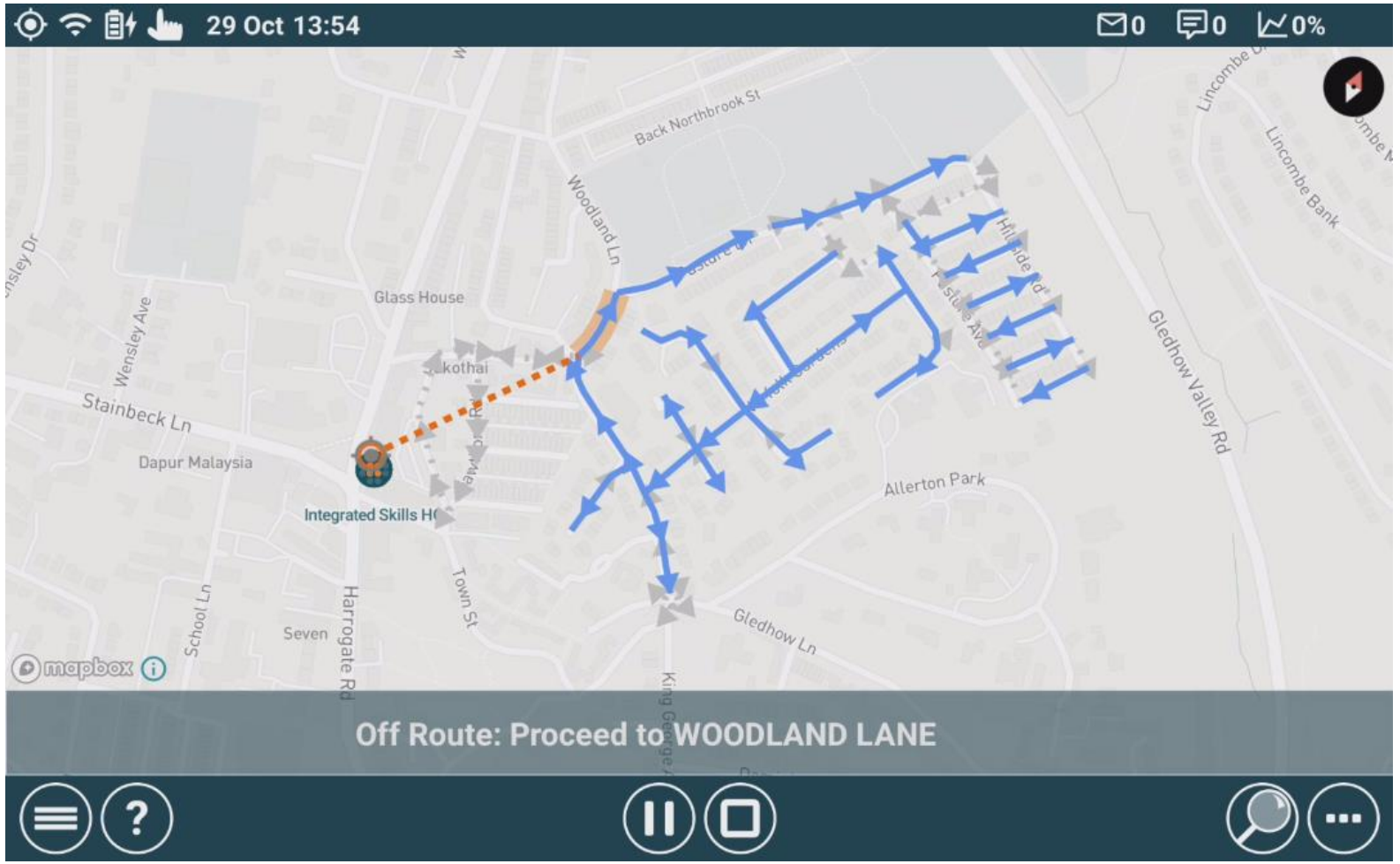
- **In-Cab and Telematics Integration for Real-Time Monitoring**
  - Using telematics technology to track vehicle performance, monitor driver behaviour, and ensure adherence to routes.
  - Enhancing accountability and responsiveness through in-cab systems and live data feeds.
  - Added value – ad-hoc work and reporting

SmartSuite.

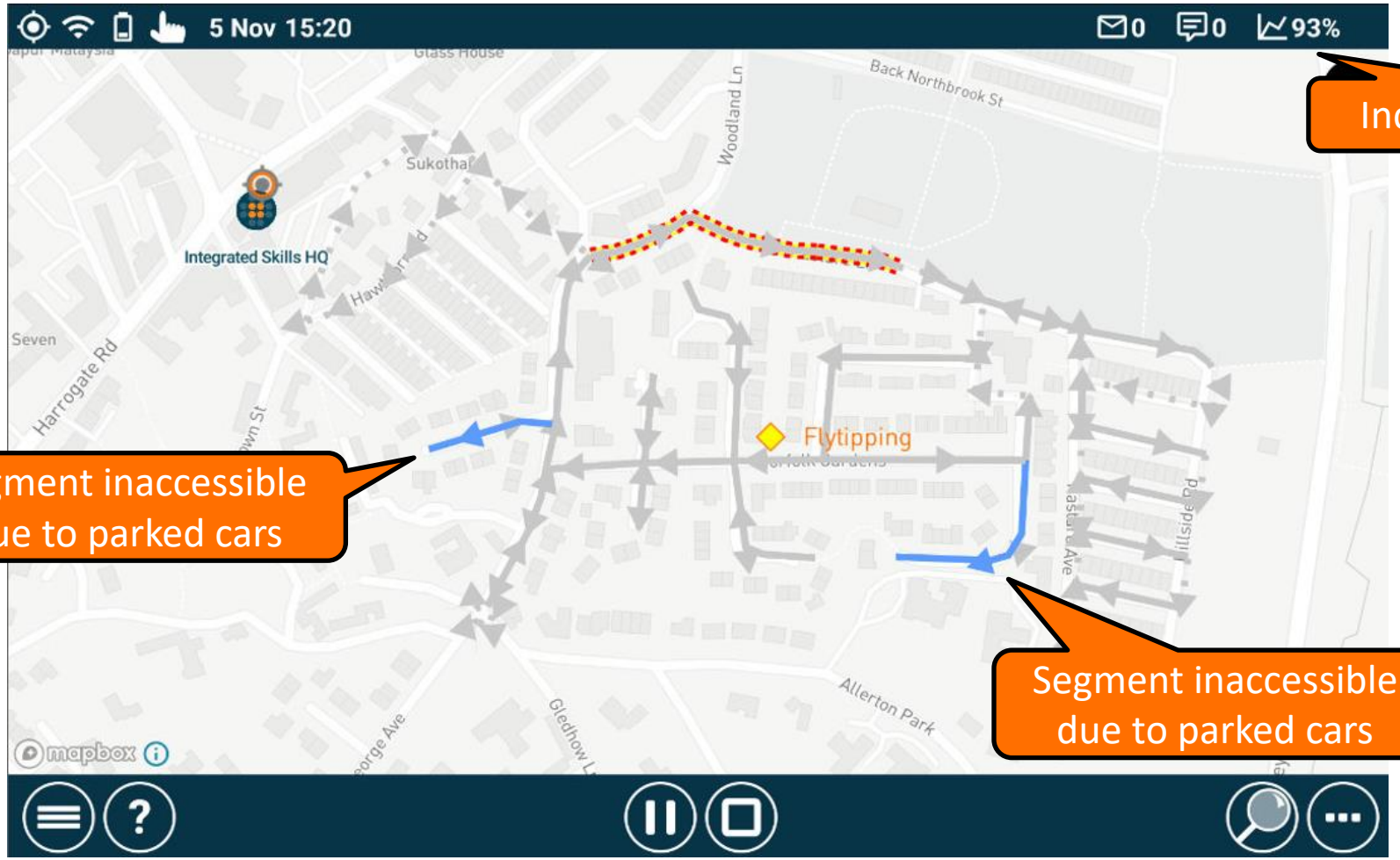
integrated skills.

Transforming the conversation around in-cab and back-office systems by prioritising users with intuitive, easy-to-use technology.

Route Selection – Route Loaded



Finishing a Route – Remaining segments



Incomplete route

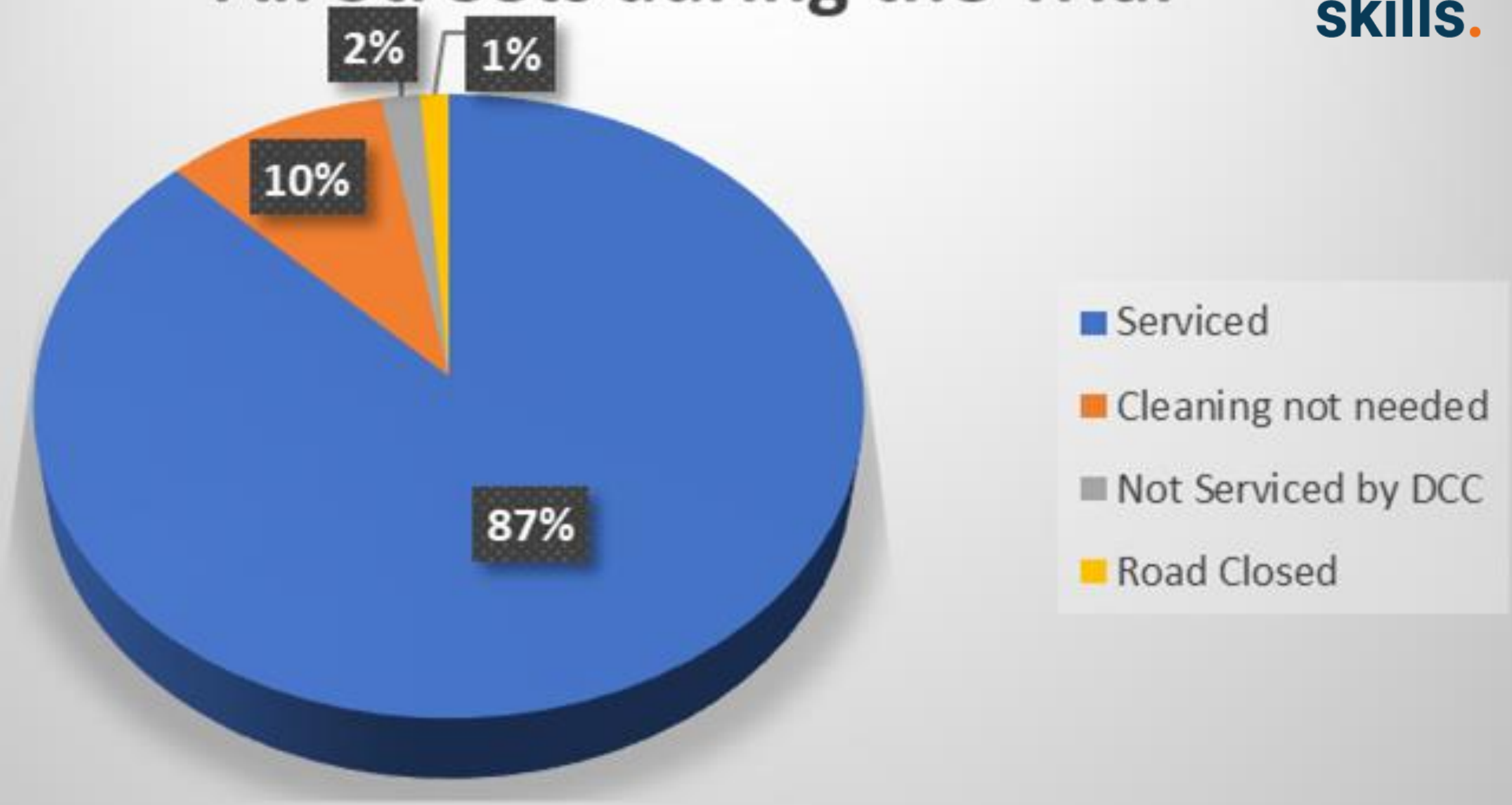
Segment inaccessible due to parked cars

Segment inaccessible due to parked cars

Click the stop button

All Streets during the Trial

integrated skills.



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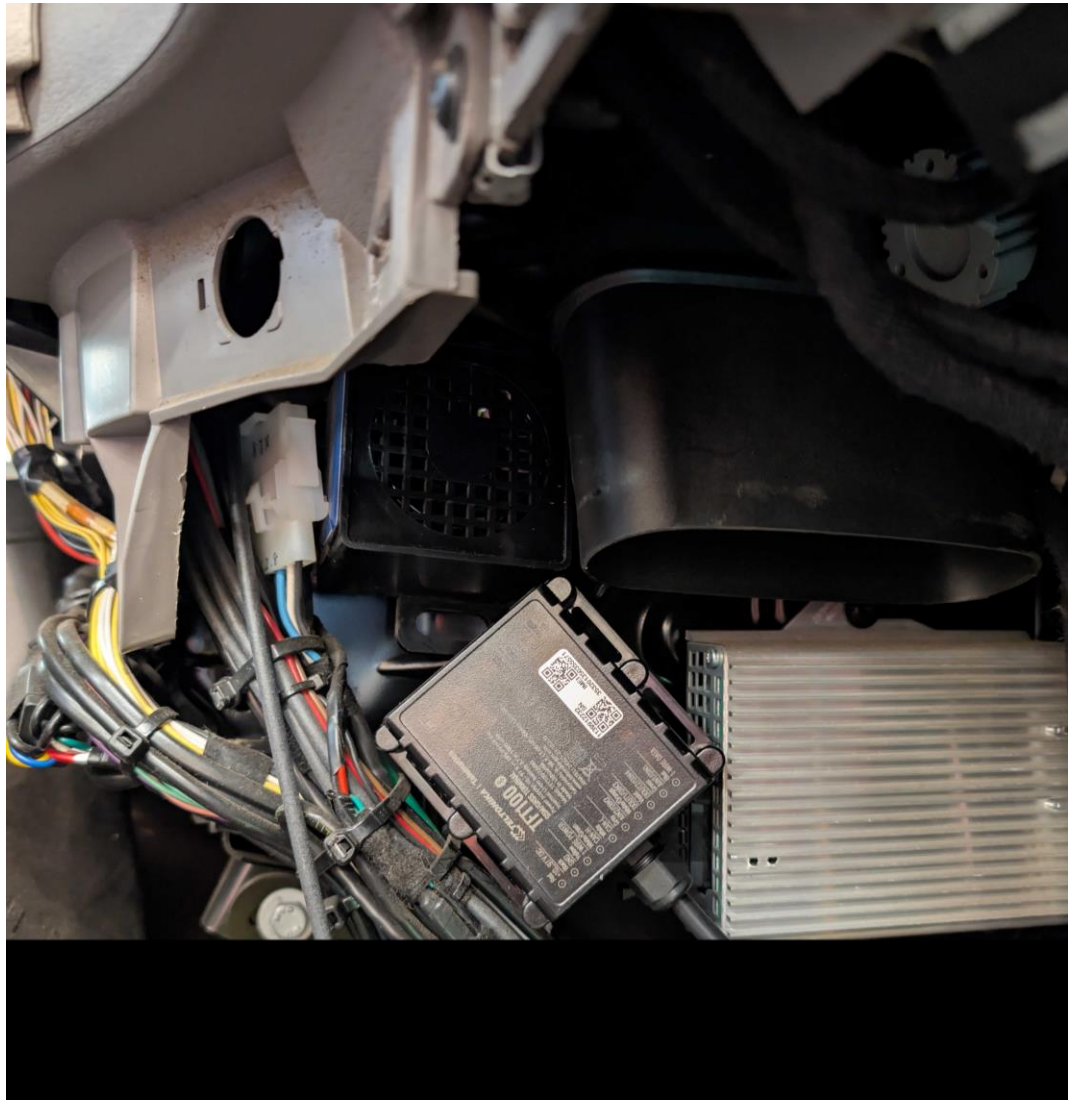

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Service Verification and Performance Analytics

- Implementing telematics-based tools to validate completed services and identify missed areas.
- Utilising data insights to drive continuous improvement and ensure high-quality street cleansing outcomes.

Week	No. of Streets Planned for Service	Service Reports Made				Total Roads Reported against	% Roads Reported against
		Serviced	Cleaning not needed	Not Serviced by DCC	Road Closed		
1	742	519	98	0	8	625	84.2
2	494	341	108	6	18	473	95.7
3	390	370	0	20	0	390	100.0
4	612	587	0	10	0	597	97.5
Weekly	68	68	0	0	0	68	100.0
Total	2306	1885	206	36	26	2153	93.4

Vehicles

Vehicle 0001 2:01pm — Routing

Device 0041C — Recycling
Simon Erskine — Route 301

1452 Complete — Remaining 128

1

Vehicle 0001 2:01pm — Routing

Device 0041C — Recycling
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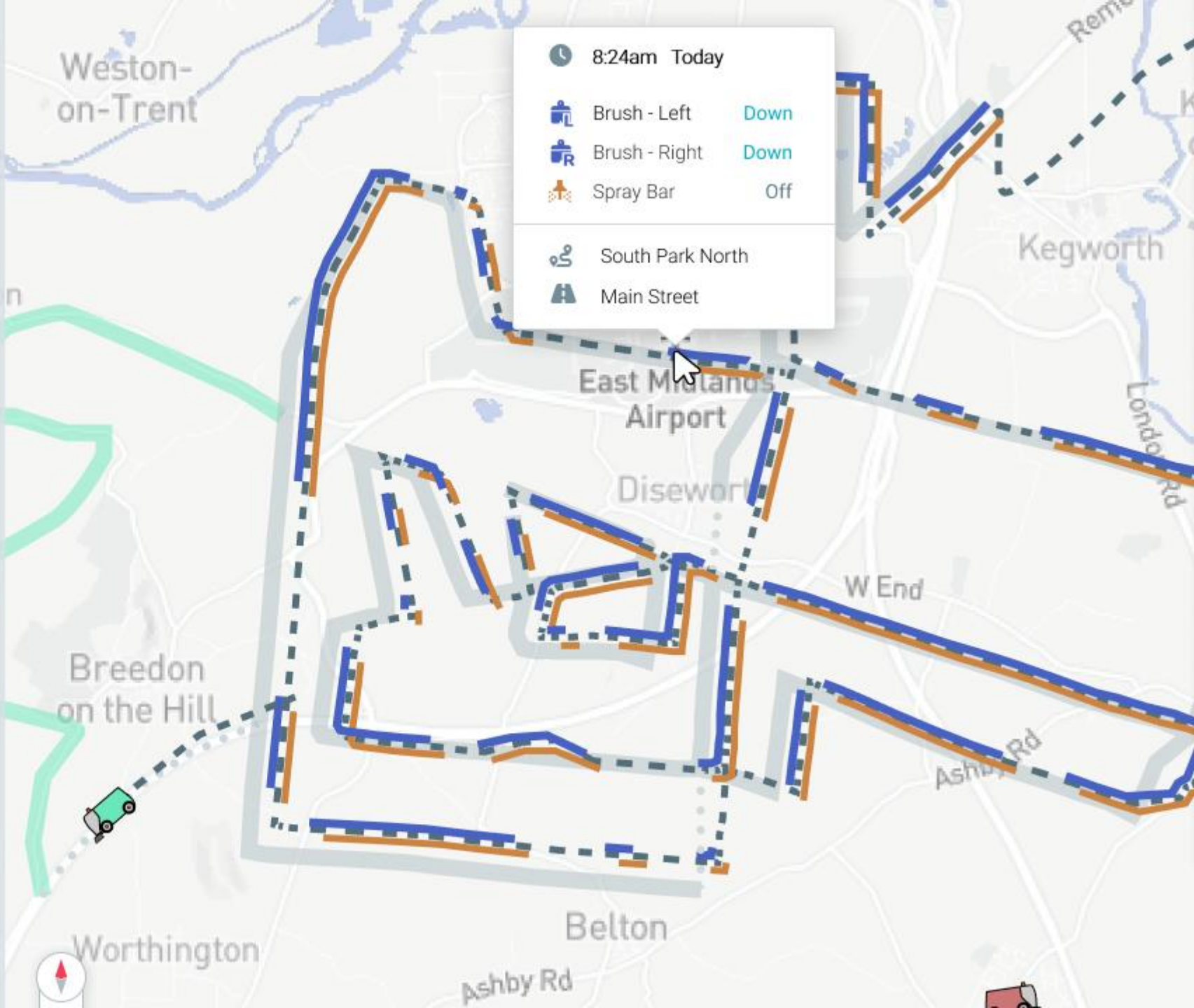
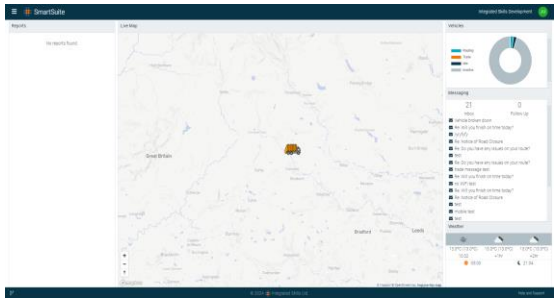


Data Flow

SmartSuite. Web

RouteSmart TECHNOLOGIES

The world's most intelligent routing system



SmartSuite. Mobile

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Thank you

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