

APSE Highways  
Resilience Forum 2024

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Debbie Cavanagh – UK Sales Manager

**Efficient Management & Optimisation of  
Highway Maintenance Tasks**

## Safecote Ltd

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- 26 years running
- Based in Stockport, Cheshire
- Snow & Ice Clearance Products
- Company has grown with innovation



Safecote Additive



Liquid De-icers



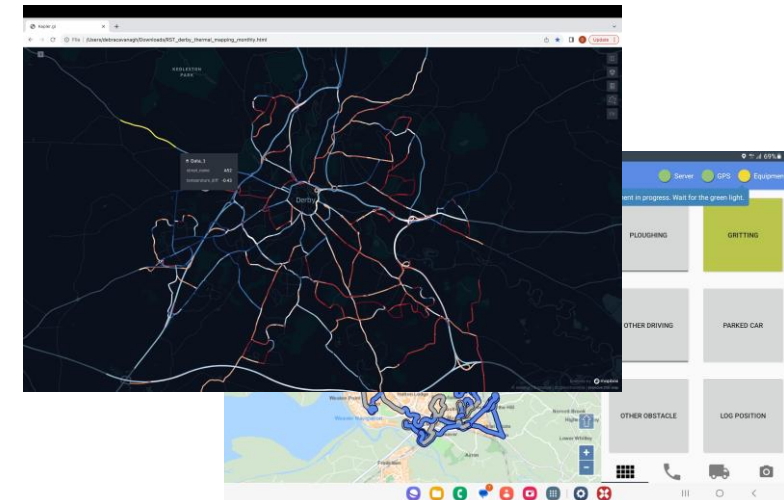
Weather Sensors



Ceramic Plough Blades



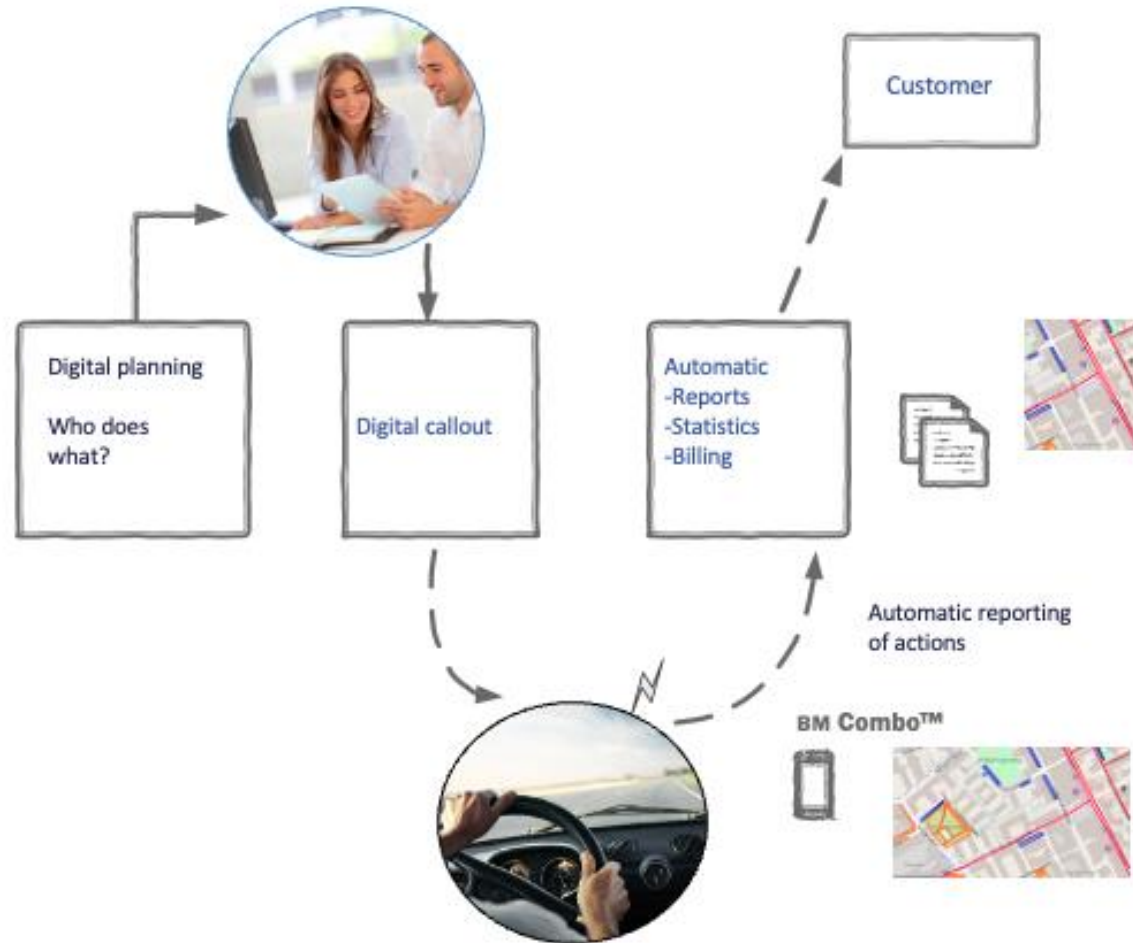
Storage Solutions



Tracking & Weather

# Intelligent Management System for Highway Maintenance

## Digital work process





# Proactive & Reactive Tasks

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- Gritting
- Grit bin refills
- Gully cleaning
- Flood locations
- Grass cutting
- School collections
- Gully cleaning
- And more



# Algorithm Parameters

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- Position – road length - areas
- Vehicle capabilities
- Timings
- Network Restrictions
- Focus points
- Quality



# Outcome Requirements?

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- Time
- Distance
- Labour
- Vehicle costs
- Co2
- All of the above



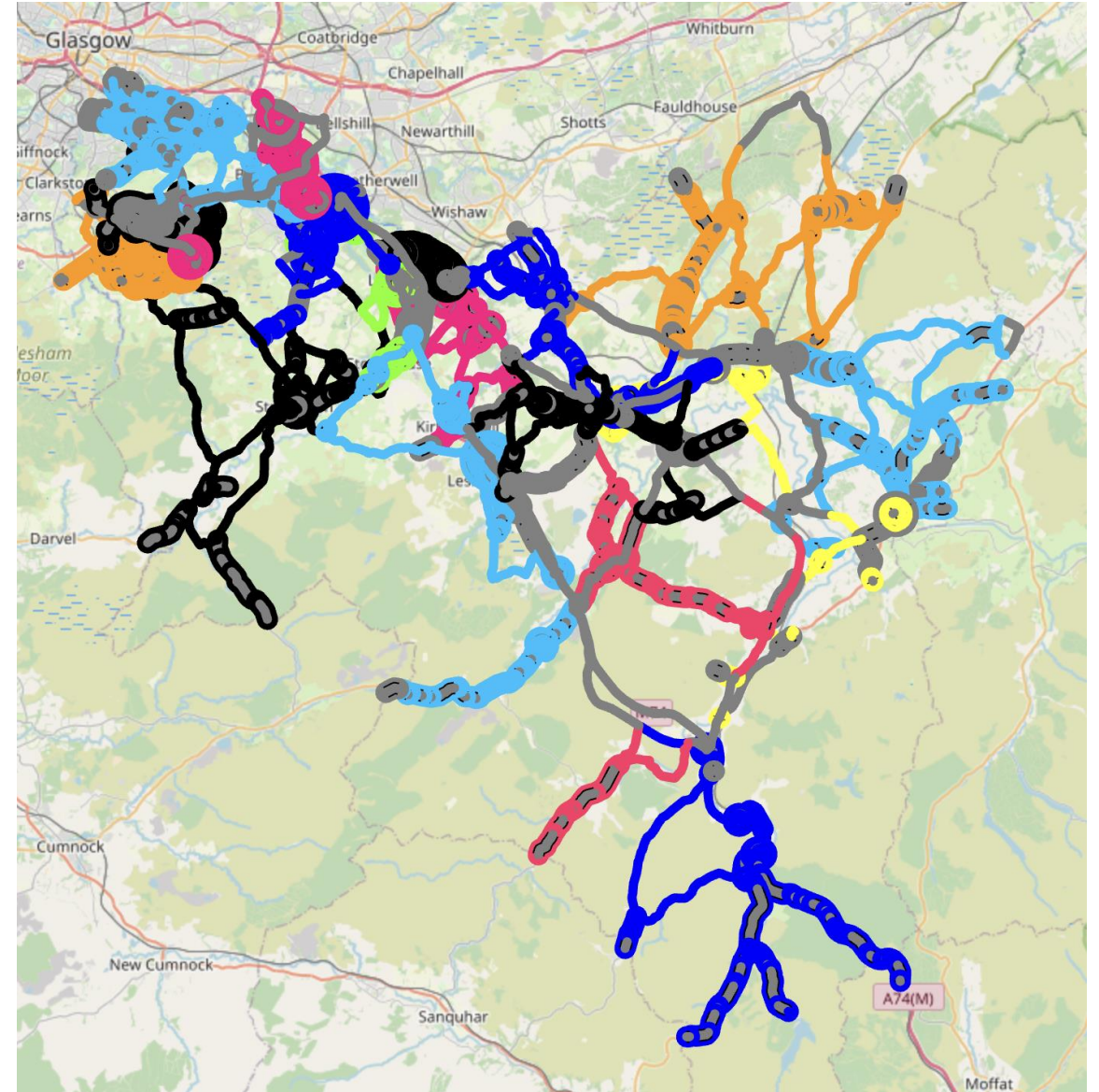


# Case Study 1

South Lanarkshire Council

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- 23 to 19 routes
- £250,000 saving winter 2023-24
- Driver recruitment saving
- Vehicle purchase/maintenance
- Co2/environmental reductions





# Case Study 2

## Carmarthenshire County Council

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- 13 to 11 routes
- Routes based around climate and topography
- Potential to reduce further based on time constraints
- Co2/environmental reductions



To Whom it may concern,

### Re. Winter Service ~ Gritting Route Optimisation

We worked with Safecote during a 4 month period earlier this year using the BM Road Service System to prepare new optimised gritting routes for the forthcoming winter, 2024/25. Carmarthenshire has the second largest highway network in Wales and we needed an effective system to analyse our network to develop an optimised schedule of prioritised primary gritting routes.

Our requirements were met in full, and this will allow route reductions from 13 to 11 across the county. Considerations were also given to climate and topography, in particular elevated roads throughout our mainly rural network in order for our route based forecast routes to be salted separately as the weather dictates.

This exercise has proven to be a great success allowing us to make considerable efficiency savings providing both cost and environmental benefits, and we thank the Safecote team for their assistance.

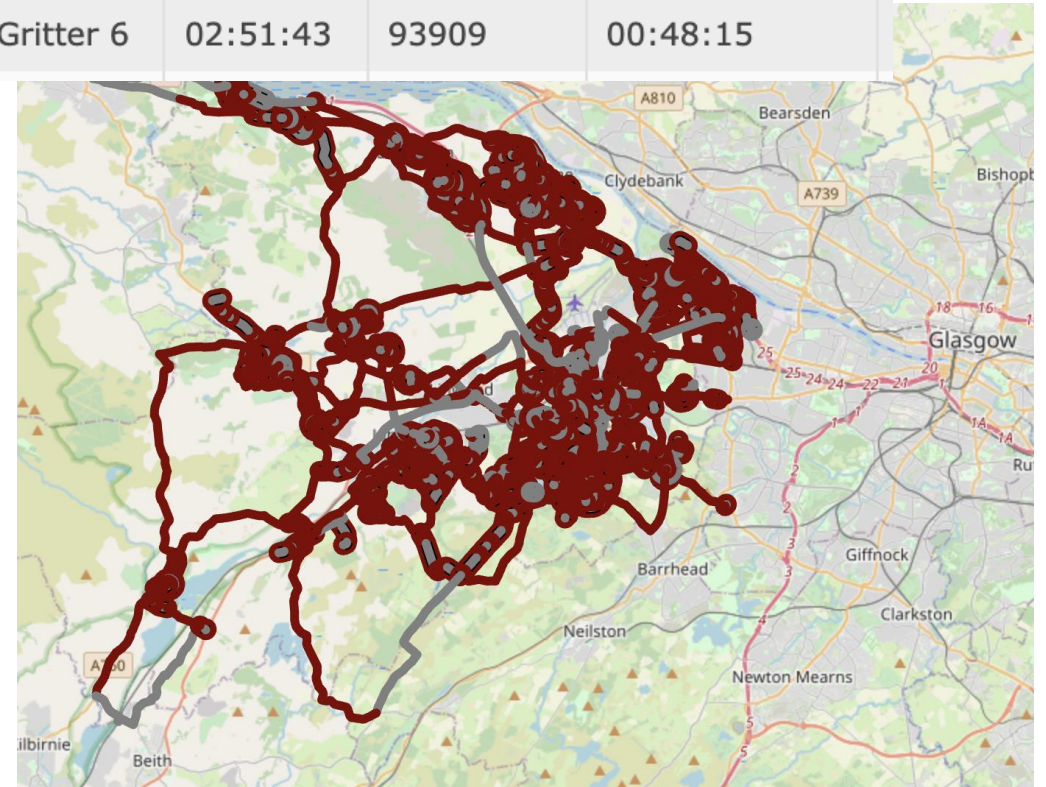
# Case Study 3

Renfrewshire Council

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- No change to number of routes
- More efficiency
- Balanced timings
- Reduction in labour
- Less Co2

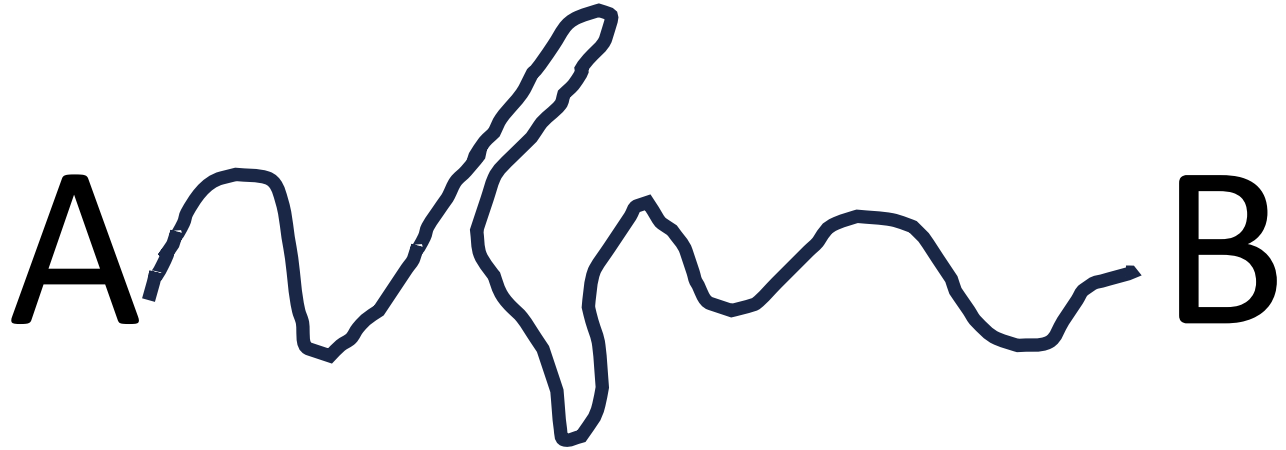
Routes				
-	Name	Time	Distance	Transport time
	AllOptFinal_01_Gritter 1	02:49:24	102638	00:48:32
	AllOptFinal_02_Gritter 2	02:42:14	93855	01:01:53
	AllOptFinal_03_Gritter 3	02:49:42	104804	00:47:50
	AllOptFinal_04_Gritter 4	02:45:34	108730	00:50:15
	AllOptFinal_05_Gritter 5	02:48:15	112027	01:02:27
	AllOptFinal_06_Gritter 6	02:51:43	93909	00:48:15



# Highway Resilience

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- Operatives labour
- Vehicles
- Management time
- Streamlined task handling
- Audit trailed solutions







Thank you for your attention

Any questions???

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