



# Advanced MRF Operations and Benefits for Councils

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Our Future is Cleaner



Offsite  
Excellence

Re-Gen

# Waste

Serving local authorities with innovative MDR and Residual Waste services across the UK and Ireland.

Re-Gen

# wte

Supplying high quality RDF and SRF fuels to global markets.

Re-Gen

# Materials

Supplying recyclable material resources to global markets.





# Thriving family business







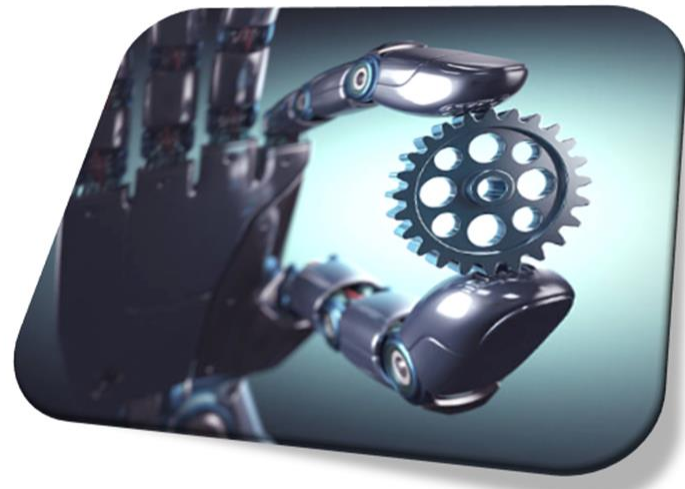
# Re-Gen Academy

Last year – Re-Gen Waste, Re-Gen Robotics and Connex Offsite  
– 7 apprentices have been recruited (total: 14)

- \* Accountancy
- \* Technical Design & Manufacture
- \* Heavy Vehicle Maintenance
- \* Mechatronics
- \* Welding and Fabrication
- \* Digital Marketing, Communications & Advertising

## The skills we need

- \* Digital/Mechatronics
- \* Robotics
- \* Artificial Intelligence
- \* Data Analysts
- \* Mechanics
- \* Re-use







**SMRF THE  
MRF**

**SUPER**

**MRF**



# Leveraging technology in MRFs

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## Investment

Highly automated processes supported by data analysis and decision making

## Skill Development

Replacing manual processes so employees can be upskilled and increase their job satisfaction

## Challenging Ourselves

Continually looking to do it better and improve the environment





Where we started 18 years ago



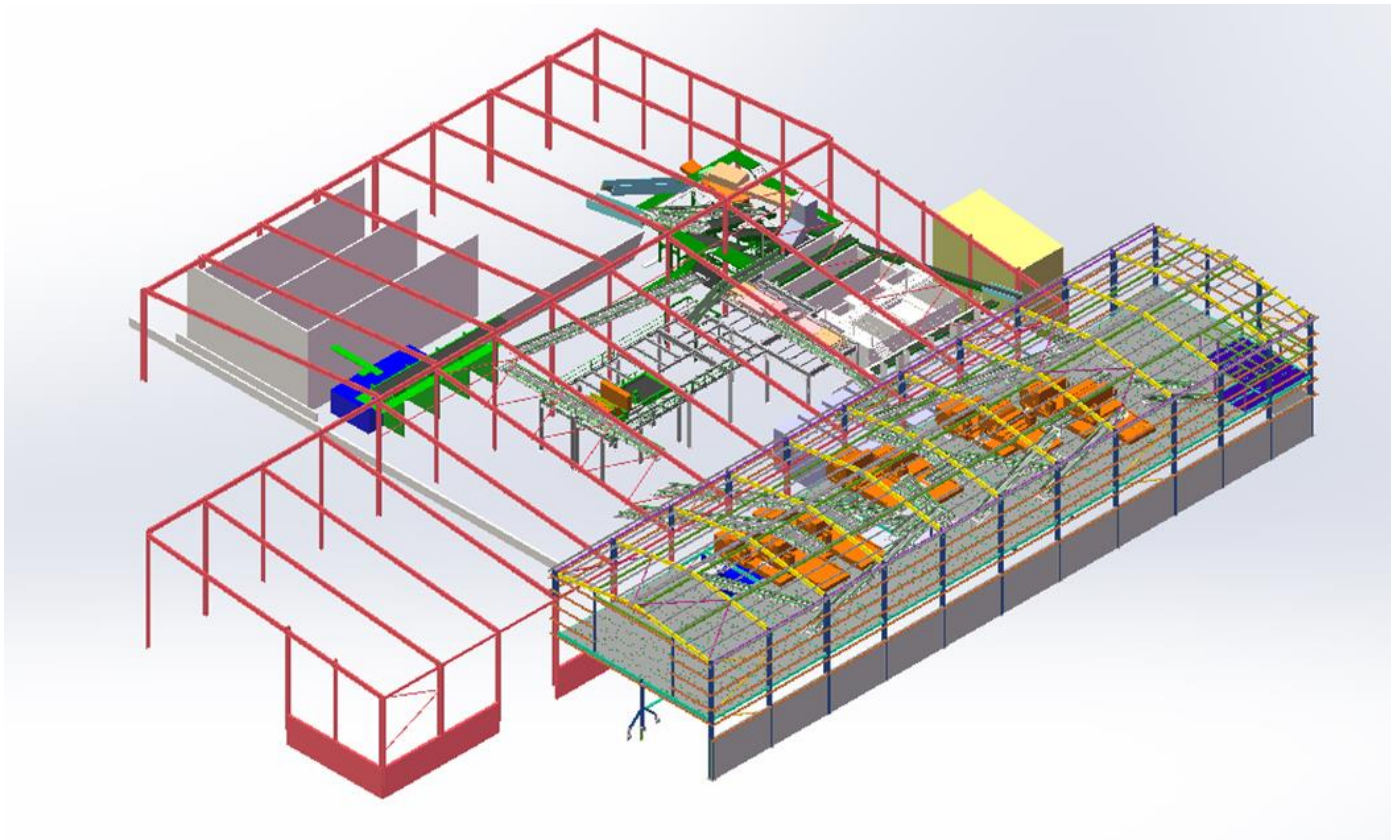


Where we are today



## How rich data is collected - Optics

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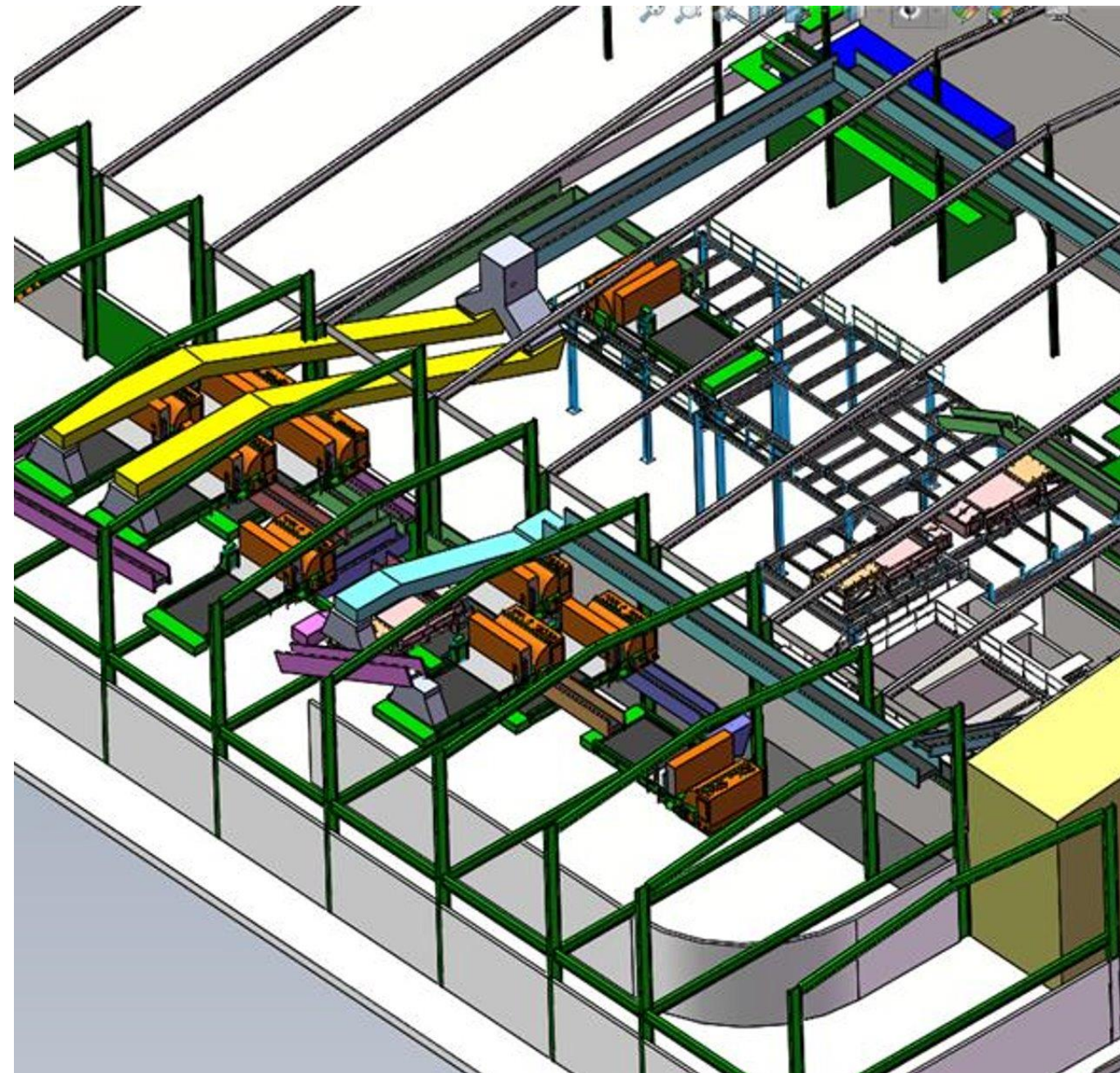


£5m investment  
In optical sorting equipment





## VRS (visual recognition systems)





# How can Super MRFs help?

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Rich data

Mechanical sorting interfaced with visual recognition systems can capture rich data to provide detailed information on the material mix

This will be very important for helping implement EPR and DRS and maybe FPOC

## **EPR**

Rich data will enable Councils to maximise their claim for funding from the EPR Scheme Administrator

## **DRS**

Rich data will enable Re-Gen to provide evidence to the Deposit Management Organisation to possibly reclaim the deposits back on obligated items





# Material Facility Sampling CoP

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MF Sampling Regs 2014 – ENG and WALES

Sampling requirement = one 60kg sample per 125 tonnes **OR** 0.05%

Proposed Revision to MF Sampling Regs 2024 onwards – UK wide

Proposed sampling requirement = one 60kg sample per 75 tonnes  
**OR** 0.08%

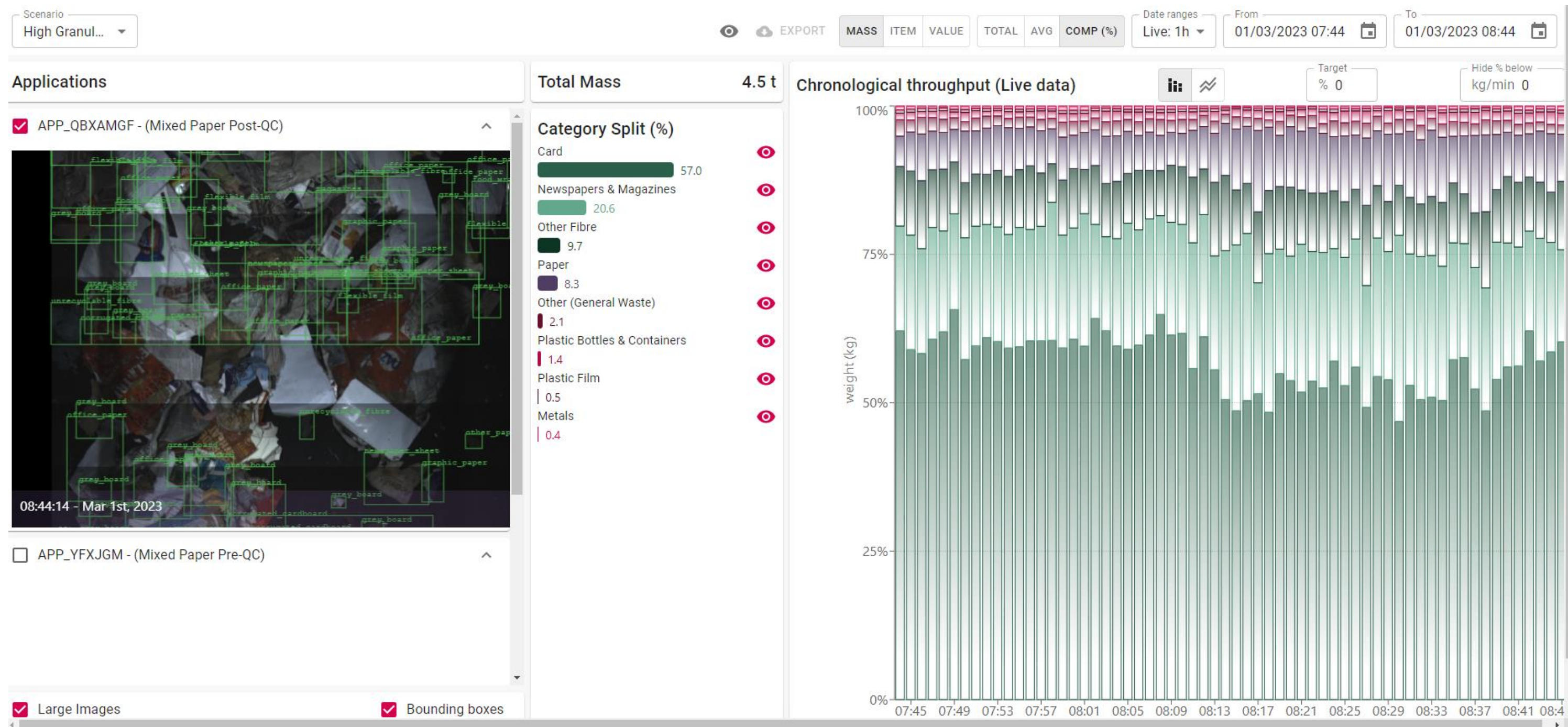


Manual sampling only assesses an insignificant percentage of the material

Continuous visual recognition can sample 100% of the material to 95%+ accuracy



# VRS/T (visual recognition systems/technology)





# DRS in Council Collections

Material	Tonnes	%					
Mixed Paper	11.743	42.05%					
Cardboard	1.073	3.84%					
Mixed Plastic Bottles	3.977	14.24%			% tot	% from tot bottles	% from good bottles
Steel cans	1.14	4.08%	PET Colour	0.382	1.37%	9.61%	14.64%
Aluminium cans	0.71	2.54%	HDPE Jazz	0.118	0.42%	2.97%	4.52%
Plastic Film	0.425	1.52%	HDPE Natural	0.667	2.39%	16.77%	25.56%
Wires		0.00%	PET Clear	1.393	4.99%	35.03%	53.37%
Wood		0.00%	PP	0.05	0.18%	1.26%	1.92%
Wee		0.00%	Total % good bottles		2.61	65.63%	100.00%
Mixed Rigid Plastics	0.02	0.07%	Low Value Bottles	1.367	4.89%	34.37%	
Clothes		0.00%		3.977			
Glass	5.845	20.93%					
Stainless steel		0.00%					
Glass Plant steel		0.00%					
Prepick	0.605	2.17%					
Paper Line Residual	0.532	1.90%					
Landfill		0.00%					
Fines	1.174	4.20%					
Paper from optical		0.00%					
Glass Plant Landfill	0.685	2.45%					
Bottle line residual		0.00%					
Pacon		0.00%					



**VRS** can recognise items by form, in this example, items obligated under DRS

**VRS** is a self learning system and the data from several MRFs across the UK is pulled together so the accuracy of the system improves and material capture increases

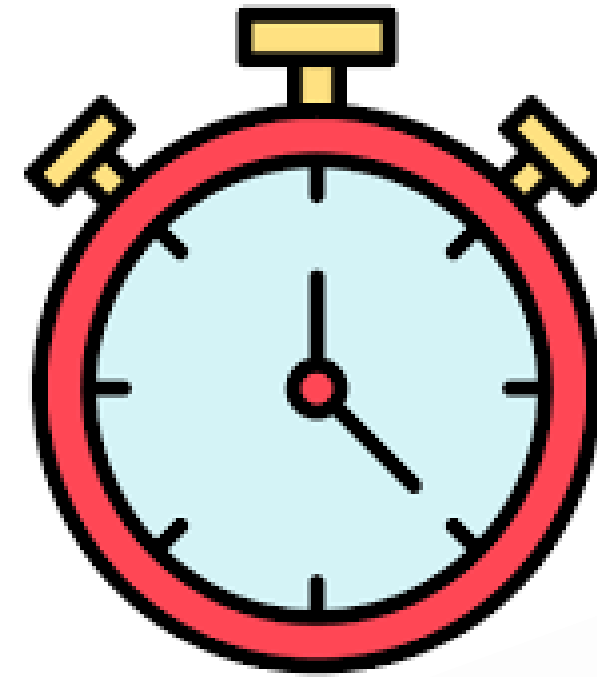


# Where next for the Super MRF?

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Automated sorting



Real time  
sampling







The future is bright ..... and driven by data

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Thank you



Building A Better  
Environment,  
Every Day