

# Behaviour Change Meets Technology: Tackling Recycling Contamination

AUCKLAND COUNCIL WASTE SOLUTIONS



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# The context: Auckland's waste ambition

Zero Waste by  
2040



Growing  
population,  
increasing waste



A need to divert  
waste away from  
landfill



# To hit Zero Waste by 2040, we need to think differently



Is an  
intervention  
worth doing?  
Is it likely to help  
reduce waste to  
landfill?



Can we deliver  
the intervention  
at scale,  
efficiently and in  
a demanding  
real-world  
context?

# What levers we can pull to reduce recycling contamination: A pilot study

**41%**  
reduction in level  
of truck  
contamination

**77%**  
reduction in bins  
being identified  
as contaminated

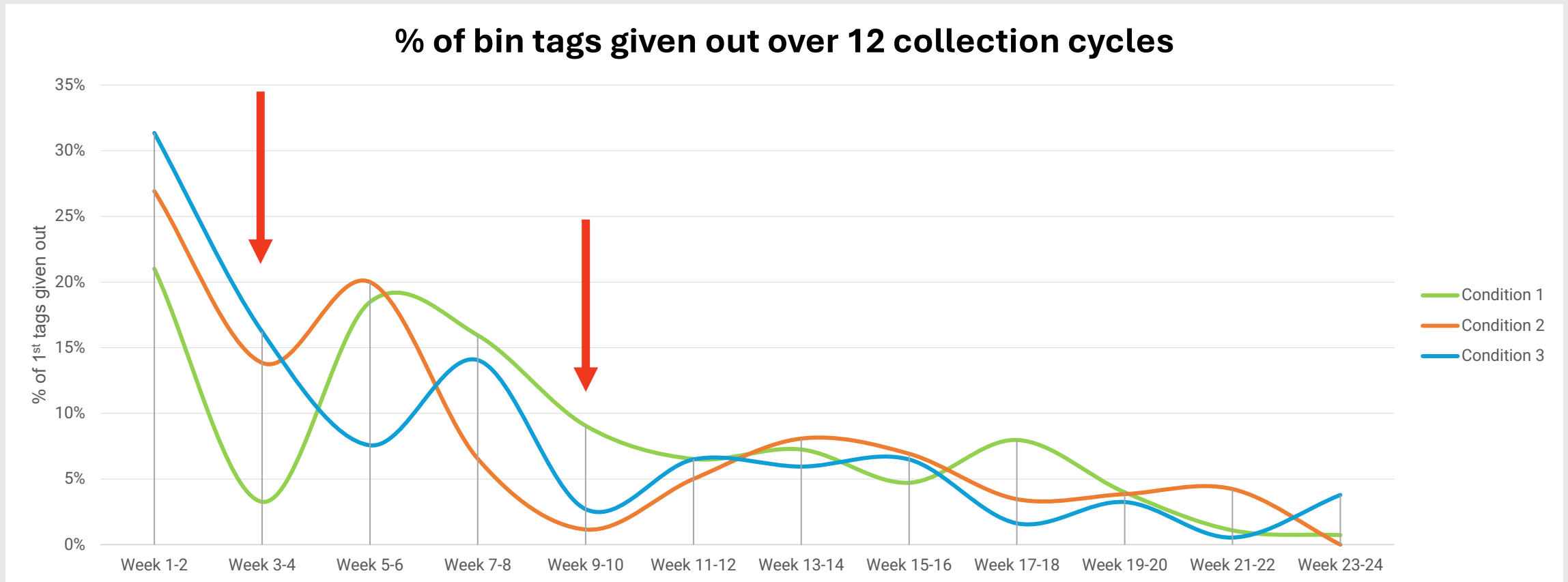


# Most people made mistakes; few were consistent offenders





# People were responsive to highlighting the appropriate behaviour





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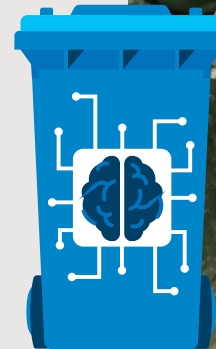


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# How Auckland Council is thinking about applying AI object recognition

- Checking the contents of all bins, every collection
- Identifying, recording, reporting & mapping contamination
- Targeting resources to areas with biggest impact





- inside

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0 kph



# How AI object recognition works as part of the collection service

- Truck hopper camera video & DVR
- AMCS Vision AI Cloud based application
- Object recognition using AI
- Identifying soft plastics and clothing/textiles
- Accuracy of approx. 80%
- Collaboration with collectors



# Where are we looking next?

- Extend the trials
- Increase customer support
- Expand the number of contaminants to identify
- Maintain human field presence, using technology to improve effectiveness



# How can behaviour change meet technology in your collections service?

Is an intervention  
worth doing?  
Is it likely  
to help  
reduce waste to  
landfill?



We need to know what levers  
will change behaviour

We need to recognise when a  
solution works, and when it fails  
to work

Can we deliver  
the intervention  
at scale,  
efficiently and in  
a demanding  
real-world  
context?



We need to deliver solutions  
efficiently,  
and at scale

We need to ensure that  
solutions are robust to real world  
conditions





# Thank you

**Auckland  
Council**  
Te Kaunihera o Tāmaki Makaurau

