



# Tackling Single-Use Items

Evidence review through the lens of single-use cups

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# About Zero Waste Scotland

We exist to create a society where resources are valued and nothing is wasted.

# Why focus on single-use drinks cups?

**Issues affecting cups affect single-use items (SUIs)**

1. Data gaps
2. Recycling vs. prevention
3. Role of biodegradables
4. Conflicting agendas and messaging
5. How to drive
  1. Behaviour change
  2. System change

# Recycling

- Est. 2.5 billion single-use coffee cups/year in UK (could be much higher...)

## Recycling

- 1 in 400 recycled (1 in 25 claim from PCRRG)
- Industry focus:
  - Improves and preserves existing system
  - ‘consumer problem’
  - waste infrastructure problem



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### 'LATTE LEVY' COULD COST £819M AND RISK UK JOBS, SAYS INDUSTRY GROUP

By Rob Cole | 5 June 2018 | [Add a Comment](#)

# ‘Biodegradable’ Packaging

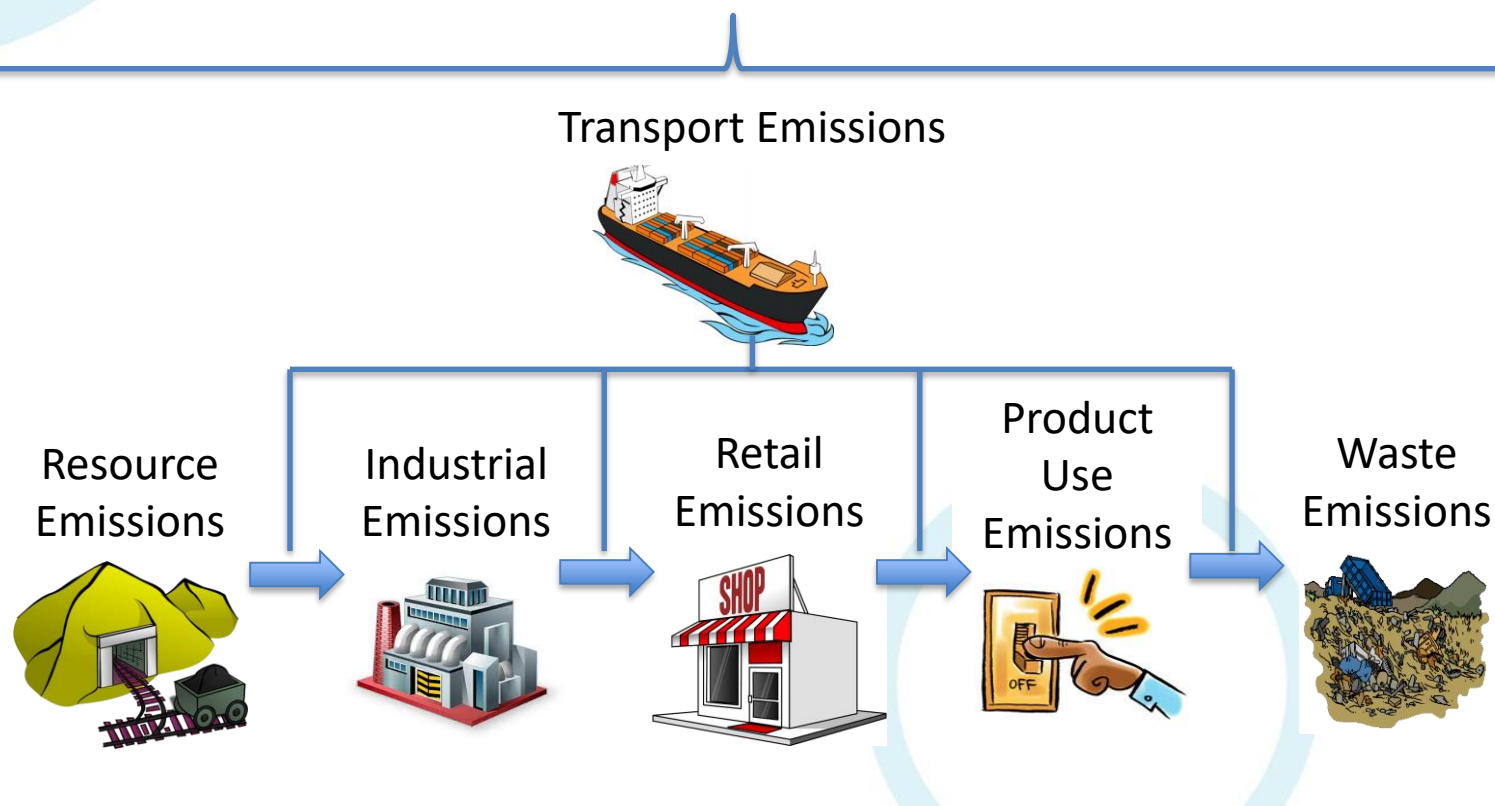
## Buying a single-use ‘solution’ to a single-use problem

- Slots in to existing service model
- Typically the first option consumers and organisations turn to
- Everything in waste journey must go right, or result is landfill/incineration



# The Case for Prevention

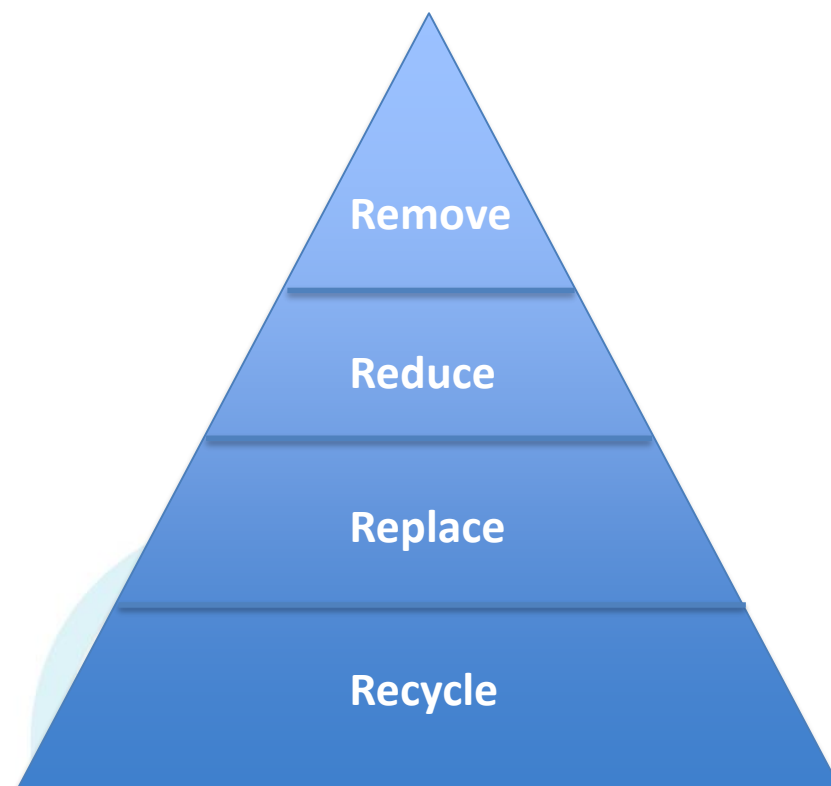
Prevent the entire lifecycle impacts (and costs) of a product



# Single-use Hierarchy

1. **Remove** – system redesign to eliminate the need for single-use items (e.g. SG and HES removed single-use drinks cups from offices)
2. **Reduce** – system redesign to
  1. Improve relative appeal of reusable alternatives
  2. Reduce excess consumption (e.g. on request, at point of demand)
3. **Replace** – when only truly unavoidable SUIs remain, use lifecycle analysis to ID best option.
4. **Recycle** – improve waste outcomes working with waste contractor and customers

Single-use Hierarchy





# Recent Developments on Cups

## Coffee cup recycling rates on the up, said PCRRG report

A report from the Paper Cup Recovery and Recycling Group (PCRRG) has claimed that recycling rates have jumped from an estimated 1:400 to 1:25 in two years.



## Starbucks introduces 'latte levy' of 5p on single-use paper cups

Coffee giant first in UK to add charge in bid to cut overuse of 2.5bn disposable cups a year



News • UK • UK Politics

## Government fails to back 'latte levy' on disposable coffee cups and rejects outright ban

Environmental Audit Committee chair Mary Creagh said: 'Our report recommended practical solutions to the disposable packaging crisis. The Government's response shows that despite warm words they plan no real action.'

Ashley Cochrane Political Correspondent (@ashleycochrane) May 9 March 2018 01:00 (20 comments)




Can Kishore @CanKishore 140 Retweets



MATERIALS PAPER

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The Paper Cup Alliance (PCA), which represents UK cup manufacturers, has claimed that a levy on disposable coffee cups could cost the economy £819 million and result in 11,000 job losses in the coffee retail sector.

## Latte levy: Scottish Budget plan for disposable cup charge

© 21 February 2019

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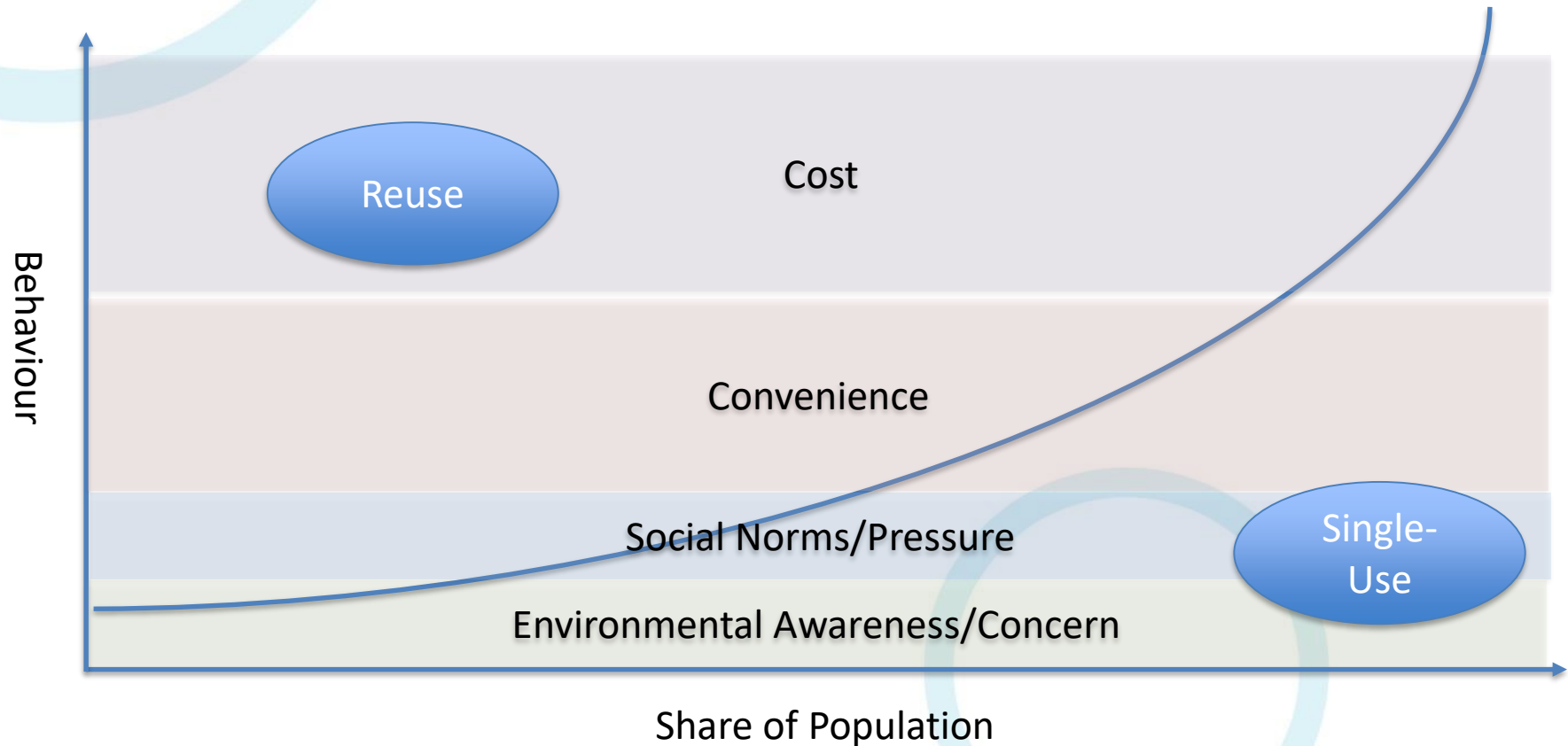


The Scottish government has committed in principle to introducing a charge on disposable drinks cups - a so-called "latte levy" - as part of its budget deal with the Greens.



# Evidence Review

## The 'Reuse Curve'



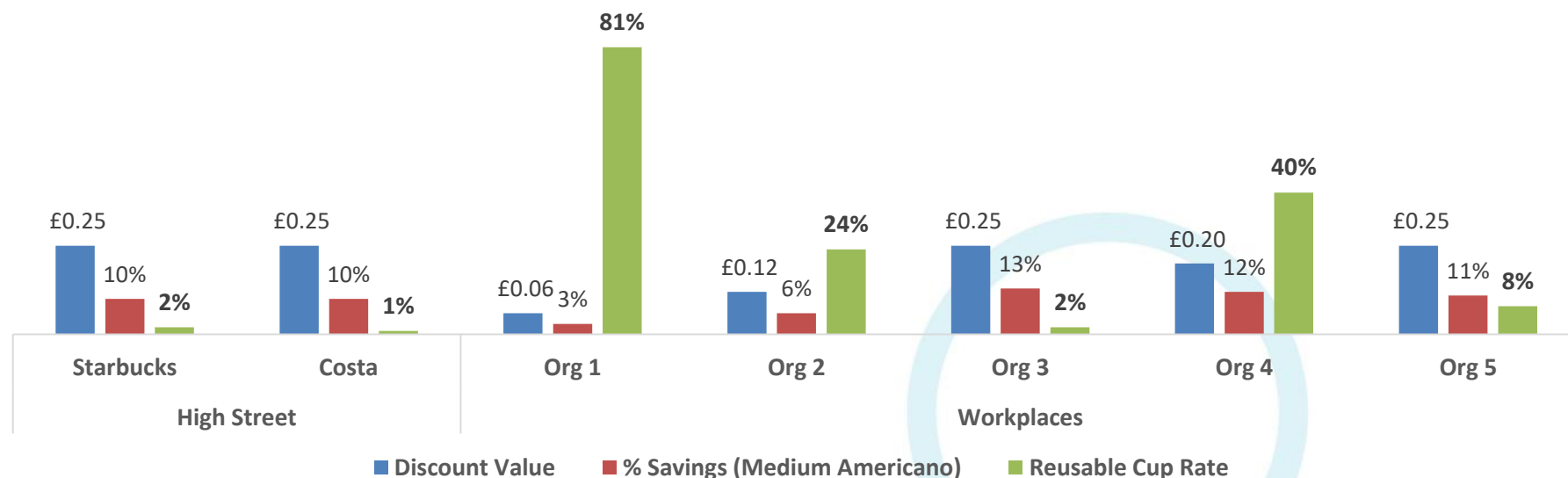
# Evidence Review

## Convenience

**Reuse rates tend to be higher at workplace cafes, irrespective of incentive value**

- More convenient – reusable cups can be stowed at desk, only carried between desk and café
- Cultural norms?

**Reusable Cup Rates: High Street vs. Workplace**



# Evidence Review

## Discounts have little/no impact on reuse rates

### Starbucks Story

2008 – Starbucks' reusable cup rate was <2%. The company set a goal of achieving 25% by 2015.

2011 – In 2011, reuse rate was still below <2%. Company lowered its goal to 5%.

2015 – Starbucks failed to achieve its objective. Reusable cup rate remained <2%.



**Loss Aversion:** individuals will do more to avoid an economic loss than they will to obtain an equivalent economic gain

# Evidence Review

## ZWS Cost-neutral Cup-charge trial

### Overview

- Existing reusable cup discounts replaced by cost-neutral, single-use cup charges of equal value at 4 café locations
- Baseline sales and reuse data from previous year, and 5-weeks pre-trial compared with trial results
- Customers survey to gauge customer sentiment

		Reusable Cup Discount System	DCC Charge System
Drink served in DCC	Drink Cost	£1	£0.90
	DCC Charge	£0	£0.10
	<b>Total Cost with DCC</b>	<b>£1.00</b>	<b>£1.00</b>
Drink served in Reusable Cup	Drink Cost	£1	£0.90
	Reusable Cup Discount	-£0.10	£0
	<b>Total Cost with Reusable Cup</b>	<b>£0.90</b>	<b>£0.90</b>

# Evidence Review

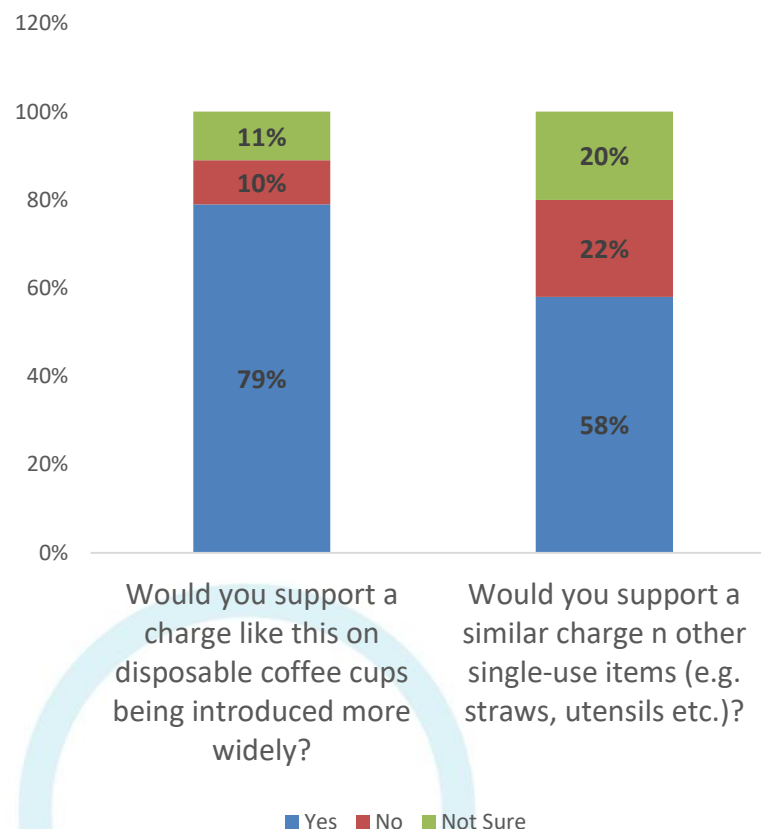
## ZWS Cost-neutral Cup-charge trial

### Findings

- Significant increase in reuse rate across all 4 sites (avg. 185%).
- 79% of survey respondents supported cup charge
  - Marine Conservation Society found 74% support among Brits ([2017](#))
- No significant impact on sales

### Conclusion

- By simply replacing existing reusable cup discounts with an equivalent, cost-neutral cup charge, retailers can significantly increase reuse rates without impacting sales or increasing costs for consumers.



# Evidence Review

## Discounts have little/no impact on reuse rates

### Starbucks Story

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The company set a goal of achieving 25% by 2015.

2011 – In 2011, reuse rate was still below <2%.  
Company lowered its goal to 5%.

2015 – Starbucks failed to achieve its objective.  
Reusable cup rate remained <2%.

2018 – Starbucks partnered with Hubbub to trial  
5p cup charge at select London  
locations.

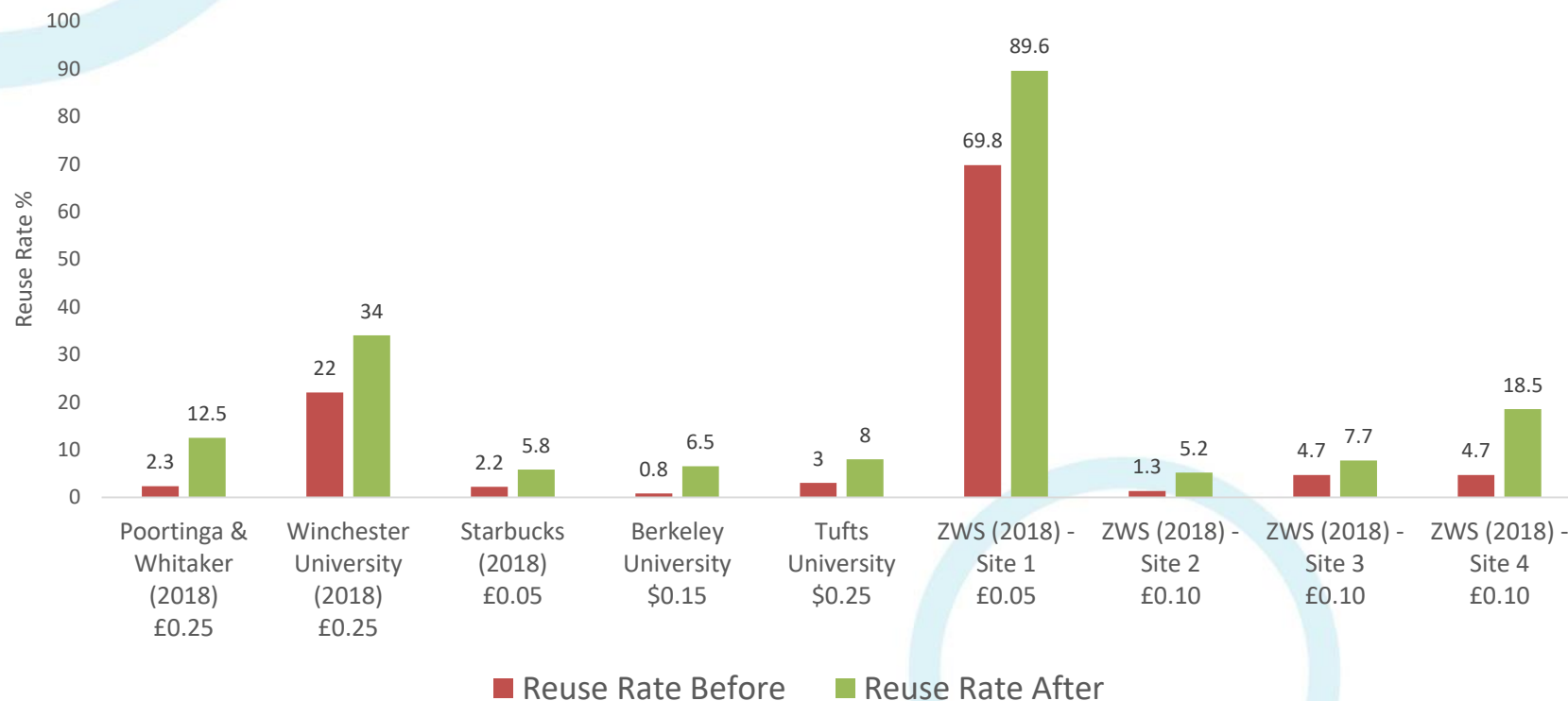
Reuse rate more than doubled to  
5.8%, leading to UK-wide rollout.



# Evidence Review

## Literature review of other cup charge trials

In every case, the implementation of a cup charge resulted in a higher reuse rate







# Evidence Review

## University Hospital Crosshouse

8-week trial delivered by NHS Scotland and Zero Waste Scotland, with support from Amaray, REACH and Borealis.

### Overview

1. **Recyclable single-use PP cups** replaced non-recyclable single-use hot drink (paper) & soup cups (PS).
2. **Reusable, recyclable PP cups** provided to hospital staff.
3. **A cost-neutral 10p cup charge** introduced with hot drinks.
4. **Reuse card** gave staff 10<sup>th</sup> drink free when using reusable cup.
5. **Dining room waste area redesigned** and equipped with cup recycling bins.
6. **Staff survey** to gauge sentiment on the trial.

\*Combination of 'push' and 'pull' measures.



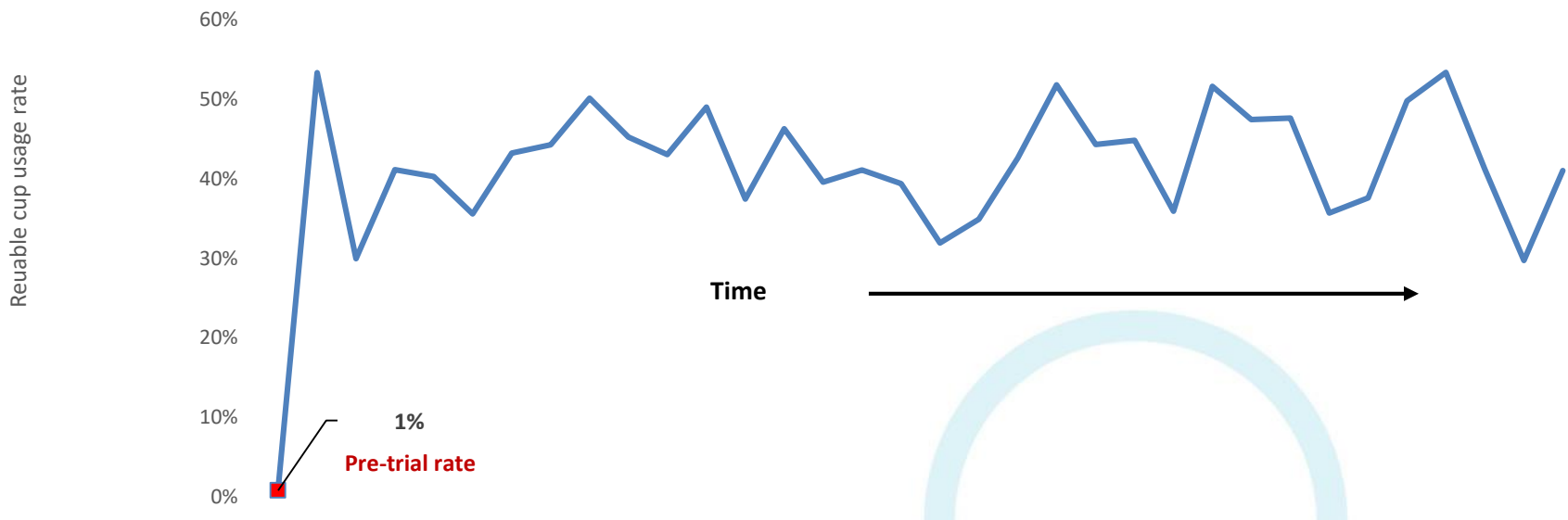
**Figure 1.** Examples of some of the posters created for the trial.

# Evidence Review

## University Hospital Crosshouse

### Results

- **Reuse rate increased from 1% to 43%**, preventing 157 single-use hot drinks cups being wasted/day (~57k/year).
- **Recycle rate for single-use cups rose from 0% to 75%.**



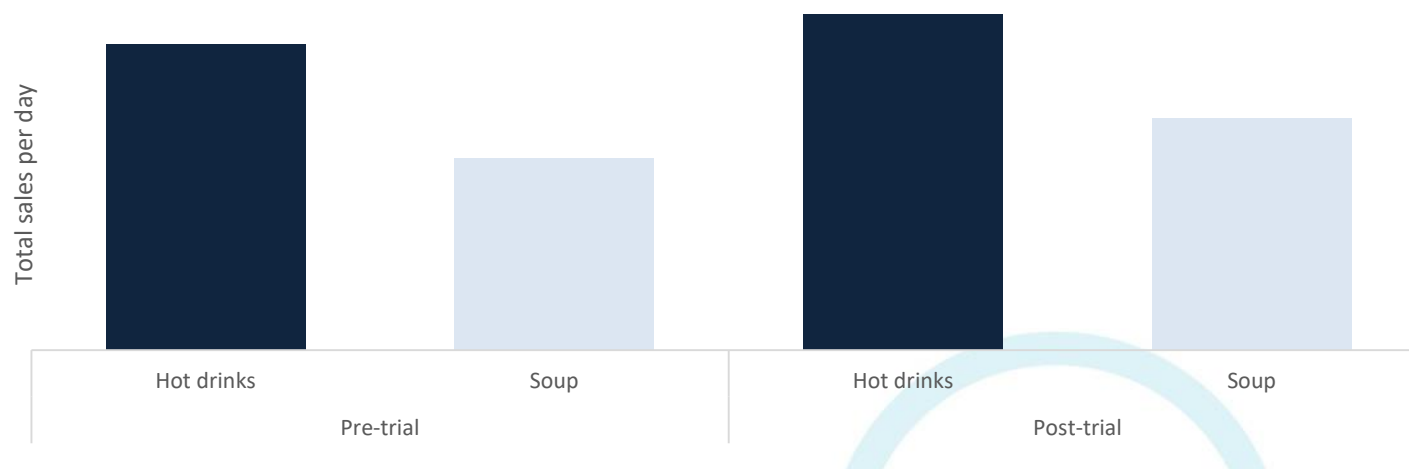
Change in cup reuse rate after the trial's implementation.

# Evidence Review

## University Hospital Crosshouse

### Results

- Hot drink sales increased by 10%, and soup sales by 21%



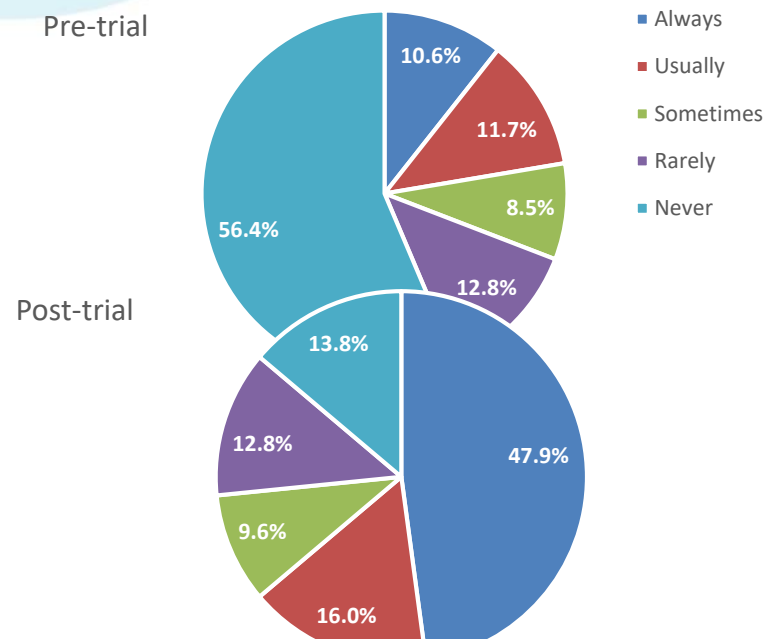
The number of hot drinks sold before and after the implementation of the trial. The post-trial increase in hot drinks sales was statistically significant, with a 9.54% increase.

# Evidence Review

## University Hospital Crosshouse

### Results

- Survey respondents strongly supported the trial, and cup charging more generally.



Frequency respondents claimed to use reusable cups before and after the trial.

Would you like to see more retailers in Scotland charge separately for disposable cups?

78.7%

Would you like to see similar schemes elsewhere in the NHS?

88.3%

Would you like to see this trial becoming permanent at University Hospital Crosshouse?

86.2%

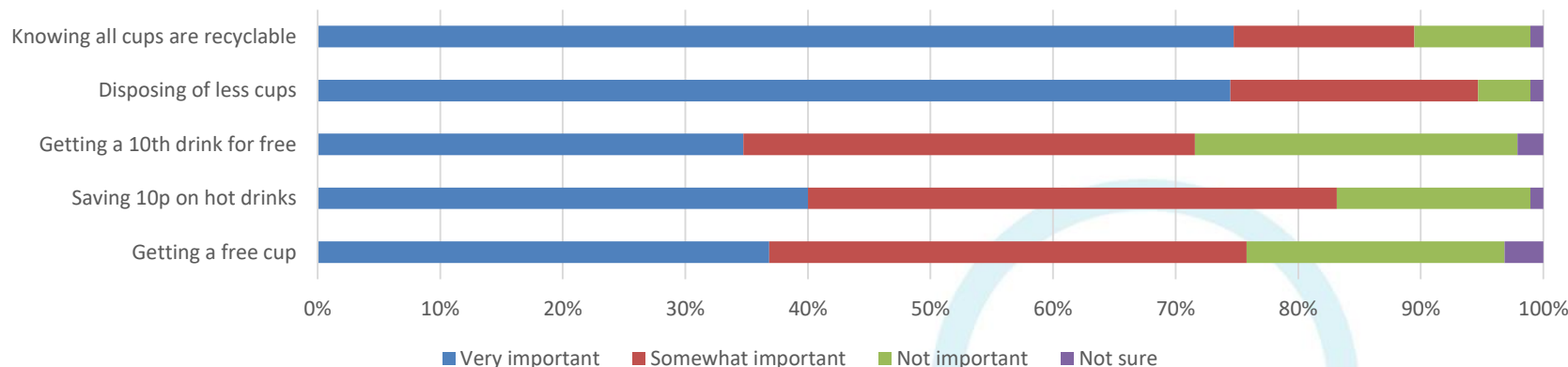
Share of respondents who answered "Yes".

# Evidence Review

## University Hospital Crosshouse

### Results

- Staff ranked environmental benefits more important than personal financial benefits
- While customers may not consciously identify financial benefits as a key motivator, they nonetheless provide an important nudge towards more sustainable behaviour.



The staff's ranked importance for different aspects of the trial.

# Evidence Review

## University Hospital Crosshouse

### Summary

- A combination of 'push' and 'pull' measures.
- Reuse rate increased from 1% to 43%, preventing 157 single-use hot drinks cups being wasted/day (~57k/year).
- Recycle rate for single-use cups rose from 0% to 75%.
- Hot drink sales increased by 10%, and soup sales by 21%
- Survey respondents strongly supported the trial, and cup charging more generally.
- Staff ranked environmental benefits more important than personal financial benefits, however evidence clearly shows financial benefits are a driver of change

# Conclusion

- **Recycling does not reduce SUI consumption** – it is important but the bare minimum.
- **‘Biodegradables’ replace one SUI with another**
  - they do not reduce SUI consumption
  - before buying them, ensure waste can be properly managed
- **Prevention is best because it eliminate whole impact of SUI**
- **Single-use Hierarchy:** Remove, reduce, replace then recycle
- **Reuse Curve:** value, norms, convenience, cost
- **Loss Aversion:** people will respond more to avoid a loss than obtain and equivalent gain
  - Simply replacing discounts with cost-neutral charges will increase reuse rates at no cost to consumer or retailer.
- **Use of push and pull measures can drive reuse behaviour**

Evidence work continues...



# Thank you.

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