

Separate Collection:

Targets, Optimisation and Economic Incentives

**Conference on Bio-waste Recycling in
Europe**

15th February 2010

Presented by:

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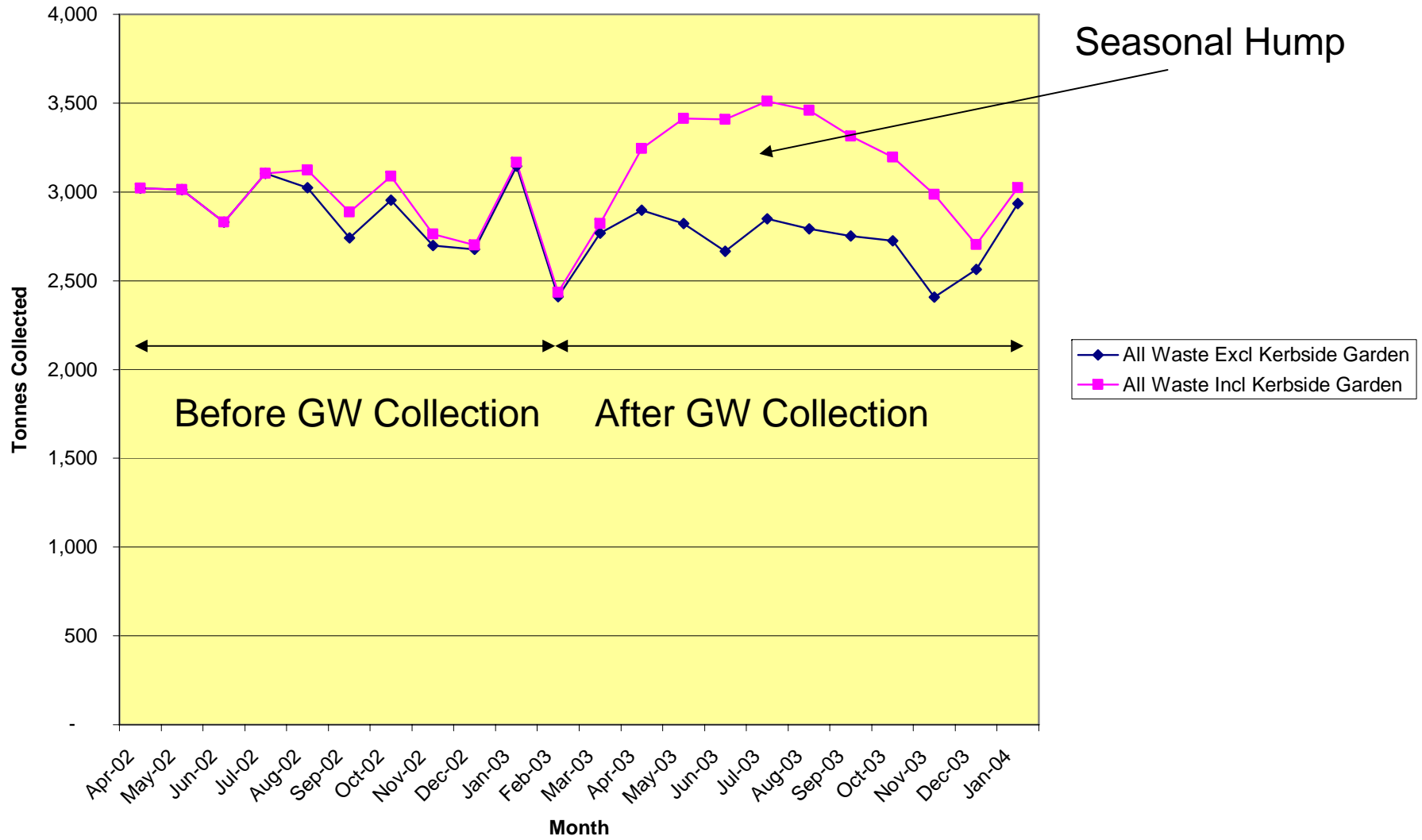
Overview

- **Biowaste as two streams**
- **Significance of separate collection of food**
- **Implications for cost optimisation**
- **Role of incentives**
- **Target-setting**

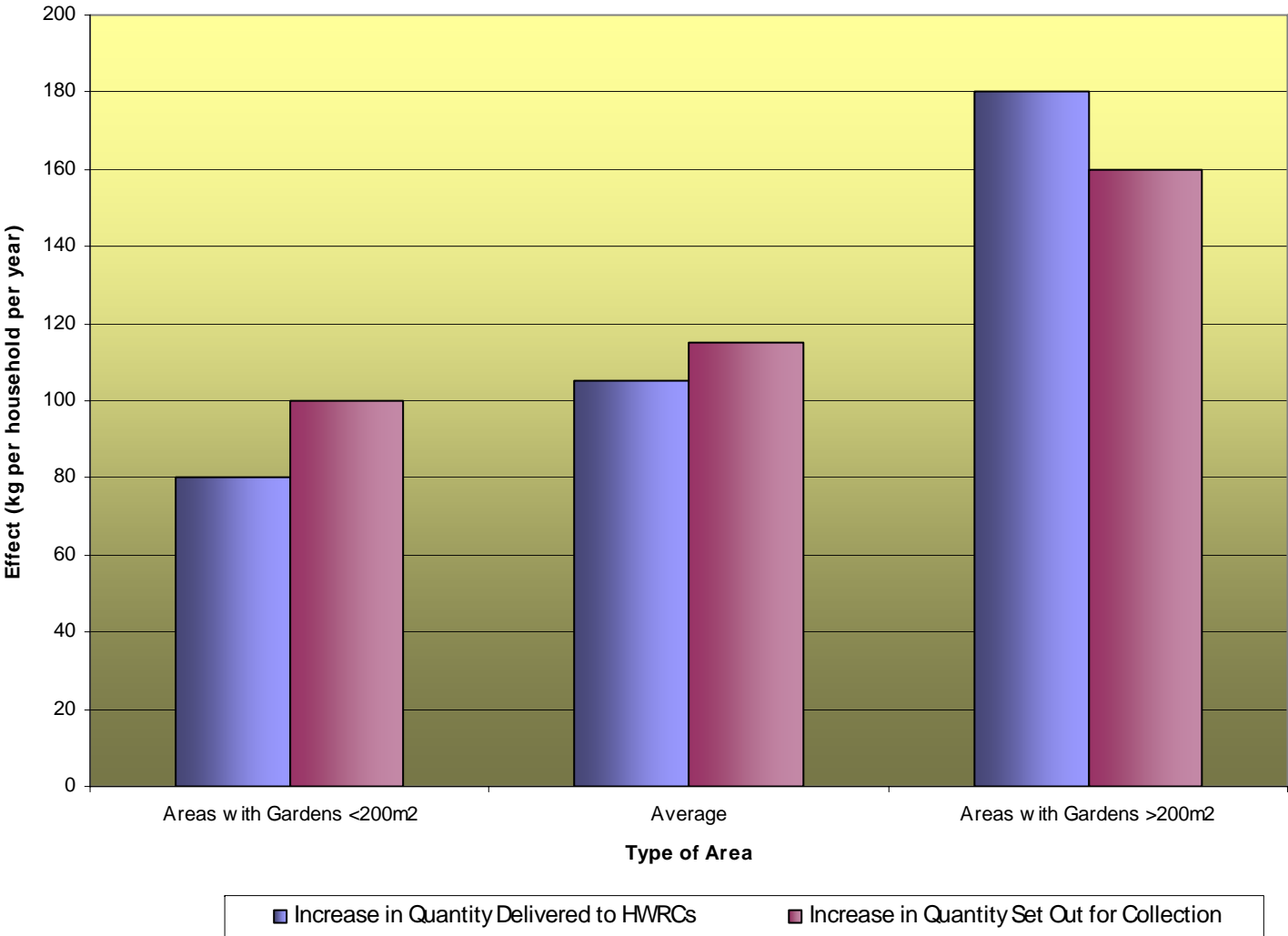
Biowaste as Two Streams

Food Waste	Garden Waste
Fermentable (odours)	Not so fermentable
Less frequent collection of refuse	Weaker basis for reducing refuse frequency
May <u>Reduce</u> Quantities Collected	May <u>Increase</u> Quantities Collected
High bulk density – no compaction	Lower bulk density – needs compaction
Collecting separately allows for appropriate mix of food : garden waste in treatment facility	If collected separately, allows for treatment in low cost open-air facilities
Separate collection allows for scheme optimisation – reductions in cost	Separate collection more likely to increase system costs
If collected together, ratio of food : garden is ‘fixed’ – less flexibility for treatment and less efficient deployment of capital	

Growth in Collected Waste - Garden

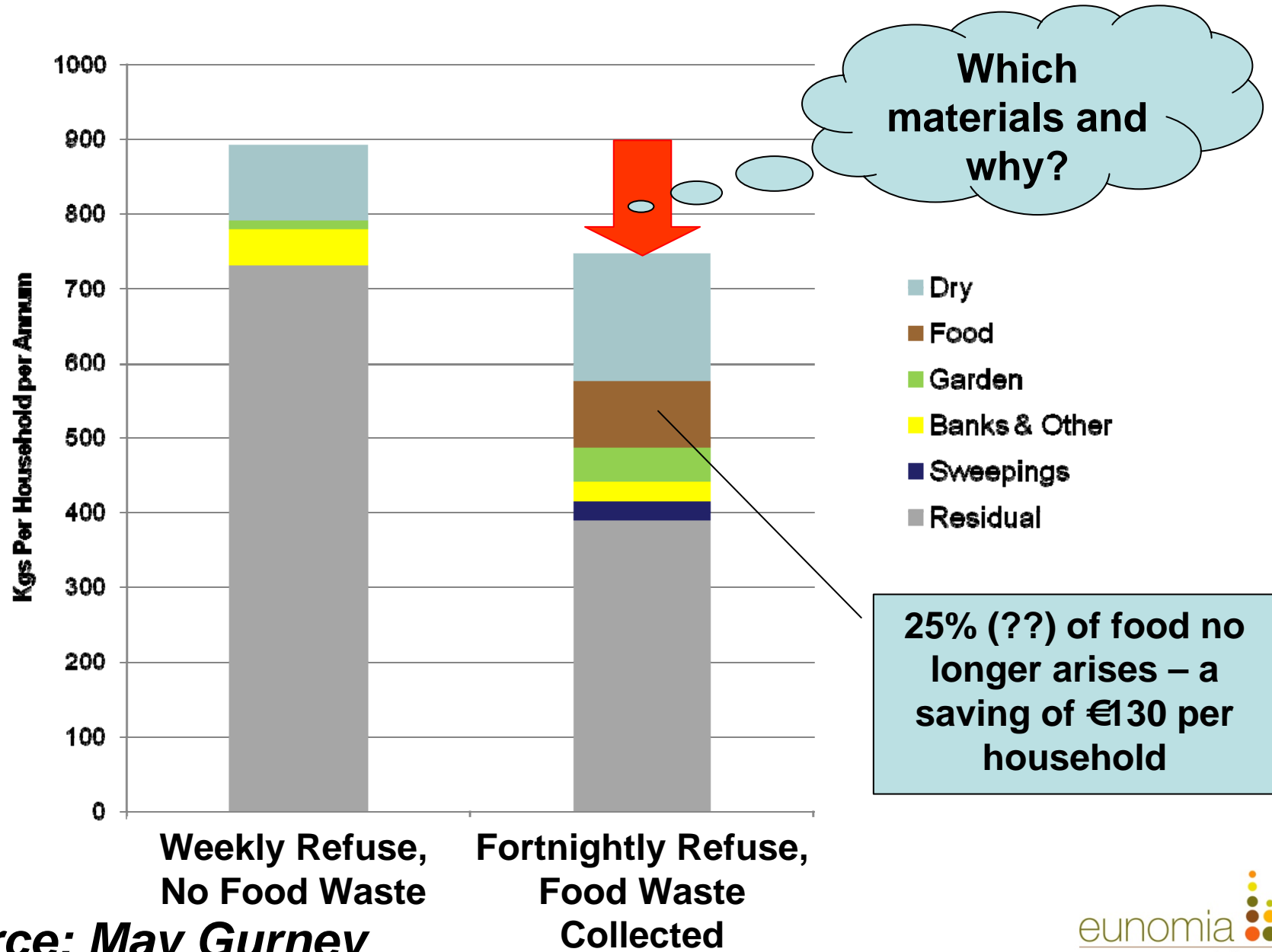


Growth in Collected Waste – Decline In Composting at Home



Source: WRAP

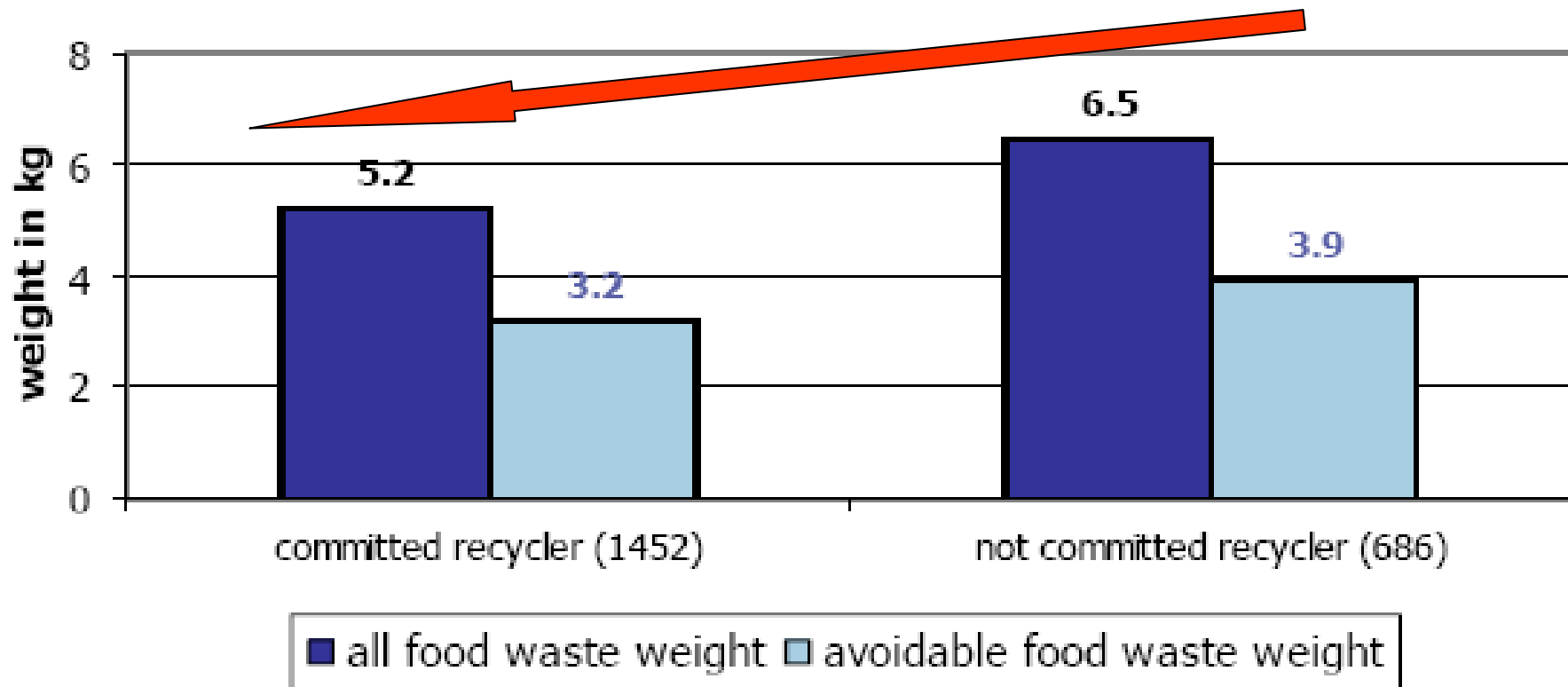
Intensive Food Waste Collections



Source: May Gurney

Food Waste and Commitment to Recycling

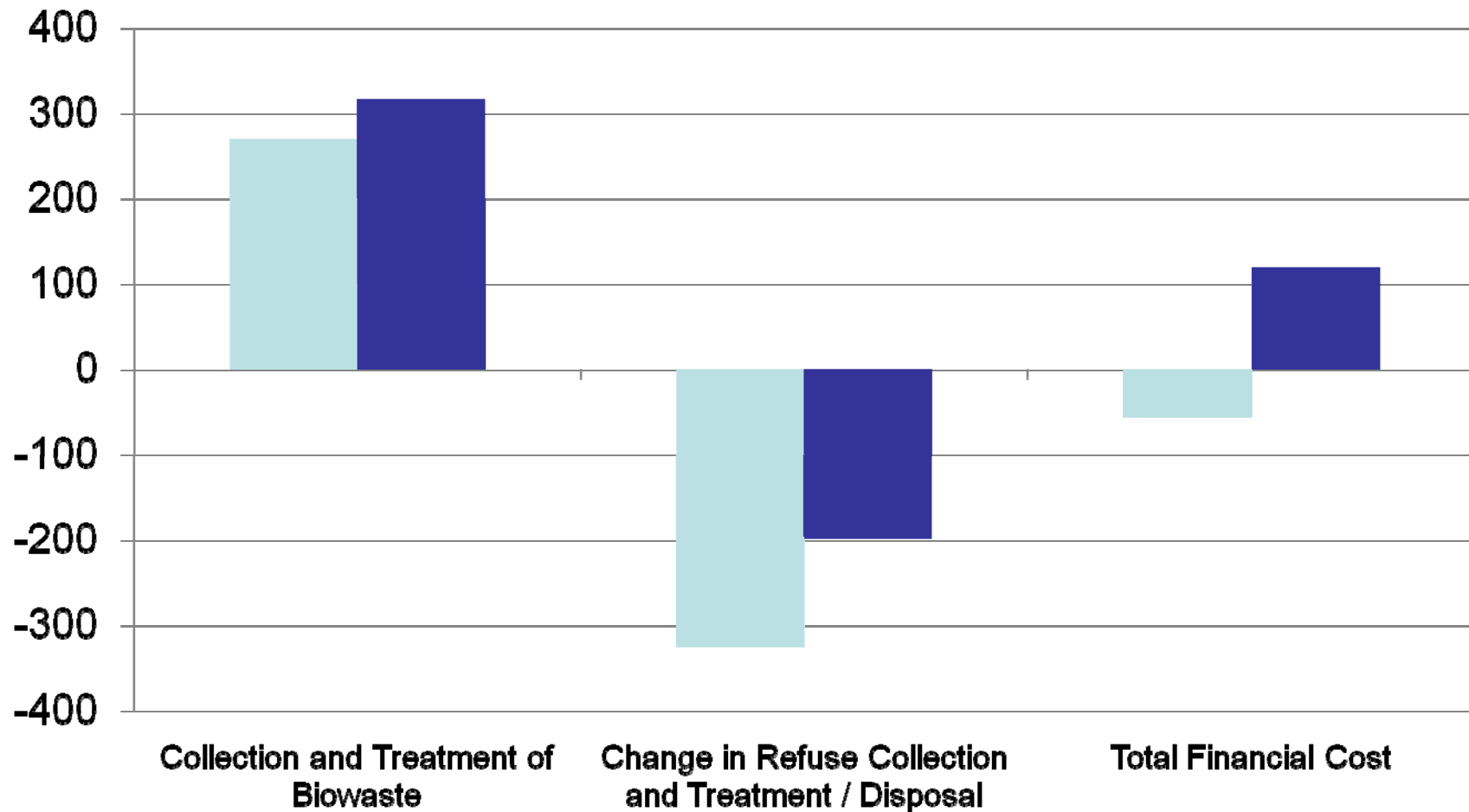
mean average weight (kg) of food waste by 'commitment to recycling'



Source: Exodus Market Research (2008) The Food We Waste, Report for WRAP, April

Financial Costs (€million for English Roll-out)

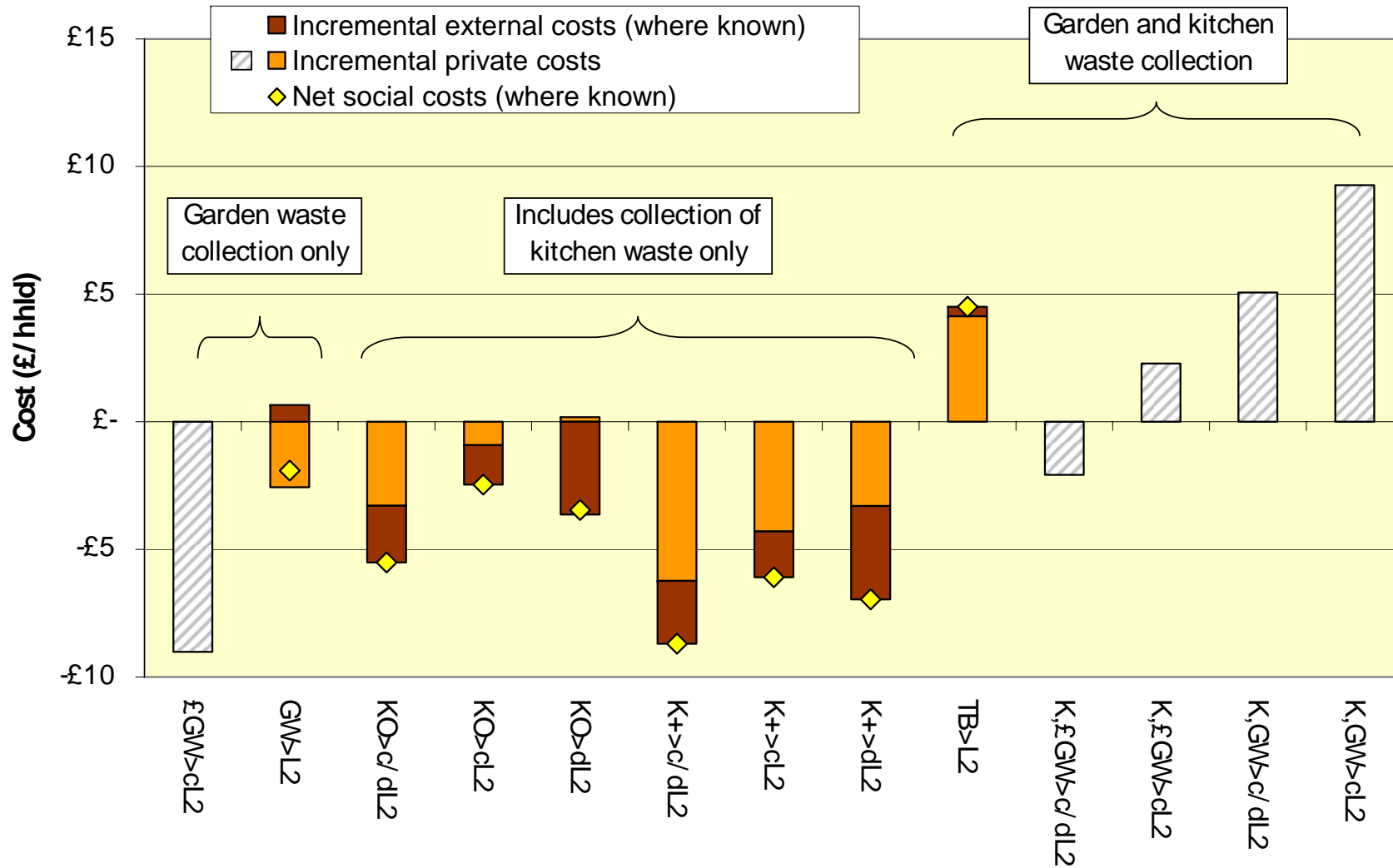
Treatment Costs: Refuse €105/t, AD €73/t, IVC €55/t



■ With Reduction in Refuse Collection Frequency ■ Refuse Collection Frequency Unchanged

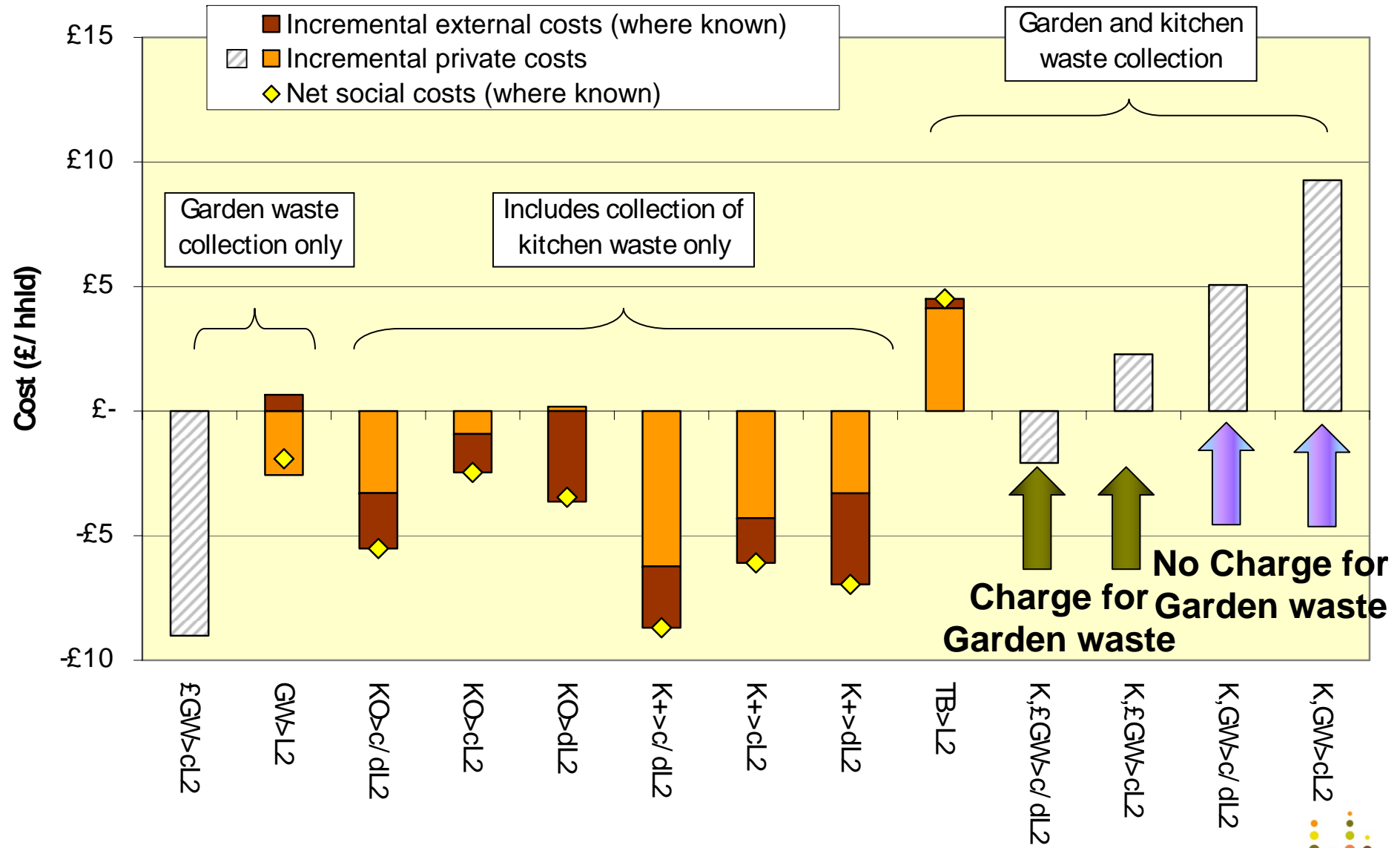
Source: Eunomia

Financial and Environmental Costs (£/hhld)

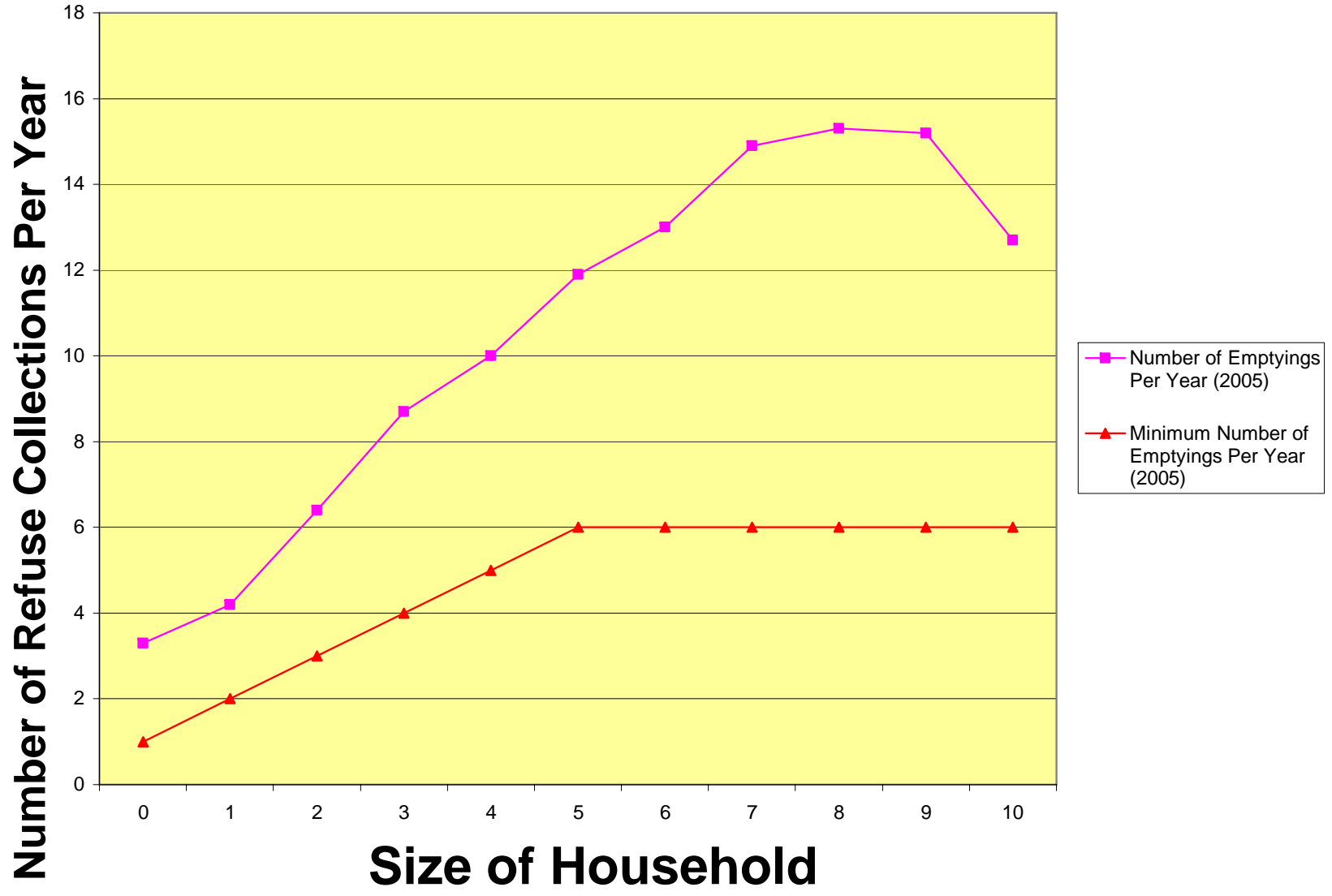


Source: Eunomia

Incentives (£/hhld)



Incentives Alongside Food Waste Collection



Source: *Consorzio Intercomunale Priula*

What Drives Performance

- Food waste should be collected frequently and *more frequently* than residual
 - Odour
 - Convenience
 - Practical incentive to participation
 - Establishing habits
- It is better to charge for garden waste (to prevent “over-performance”)

Targets

- **Food waste prevention**
 - Quantity per inhabitant? (declining schedule)
 - Quantity per household? (declining schedule)
 - Percentage reduction? (over time)
 - What is fair? What can be ‘tracked’?
- **Waste recycling**
 - Garden waste – how to set a target that does not ‘grow’ the collected waste stream
 - Include home composting?
 - How?
 - Food waste – recycling targets useful
 - May also stimulate food waste prevention
 - How to set recycling targets for specific materials?
 - Percentages? Absolute values?
- **Alternative option**
 - Residual waste per inhabitant / per household

What Prevention Might Do

- **Growing body of ‘anecdotal’ evidence**
 - People sensitised to food they waste
- **Average UK household**
 - 200 kg food waste per annum
 - 5% reduction – 38 kg CO₂ saved per hhld
 - 10% reduction – 76 kg CO₂ saved per hhld
 - 25% reduction – 190 kg CO₂ saved per hhld
- **No waste treatment comes close to this level of benefit (for food)**



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