



**natural
scotland**
SCOTTISH GOVERNMENT

ZERO WASTE SCOTLAND

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Programme Manager - Recycling

What's coming up

- **What is Zero Waste Scotland**
- **The Construction Commitments**
- **Why take action / drivers / policy**
- **Financial benefits**
- **A couple of examples**
- **How can you start the process**
- **Support from ZWS & our partners**
- **Questions**



About ZWS

- **Unified single delivery body**
- **Incorporating**
 - WRAP
 - NISP
 - ReMade Scotland
 - Waste Aware Scotland
 - Keep Scotland Beautiful
 - CRNS

The Resource Efficiency Loop



Total controlled waste arisings in Scotland (tonnes)

Source	Year			
	2005	2006	2007	2008
Household	2,773,339	2,866,064	2,975,823	3,002,332
Commercial and Industrial	9,119,560	8,568,653	7,774,963	8,230,321
Construction and Demolition	6,146,311	10,614,260	8,032,415	9,455,925
Total Waste Arisings	18,039,210	22,048,977	18,783,201	20,688,578

The next steps...



Implementing the Waste to Landfill Commitment:

- corporate level
- project level

...by asking for good practice,
measuring and reporting

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Construction Commitments: Halving Waste to Landfill



“We commit to playing our part in halving the amount of construction, demolition and excavation waste going to landfill by 2012. We will work to adopt and implement standards for good practice in reducing waste, recycling more, and increasing the use of recycled and recovered materials.”

Clients

Contractors

**Designers &
Consultants**

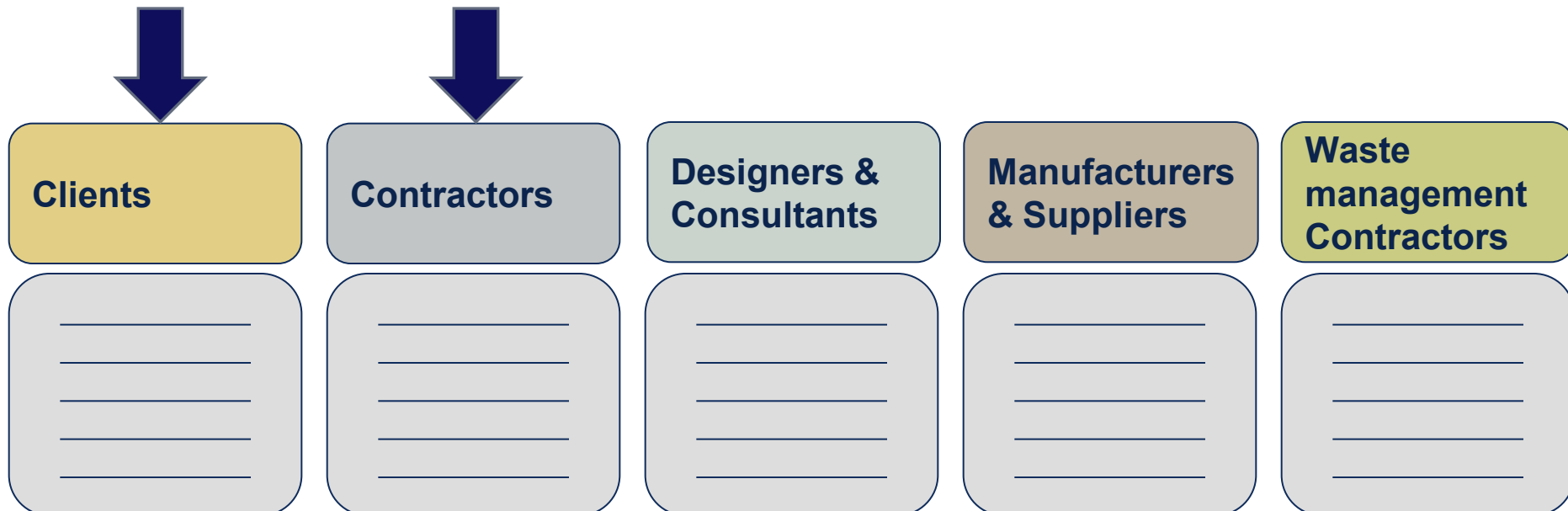
**Manufacturers
& Suppliers**

**Waste
management
Contractors**

Commitment actions:

We will:

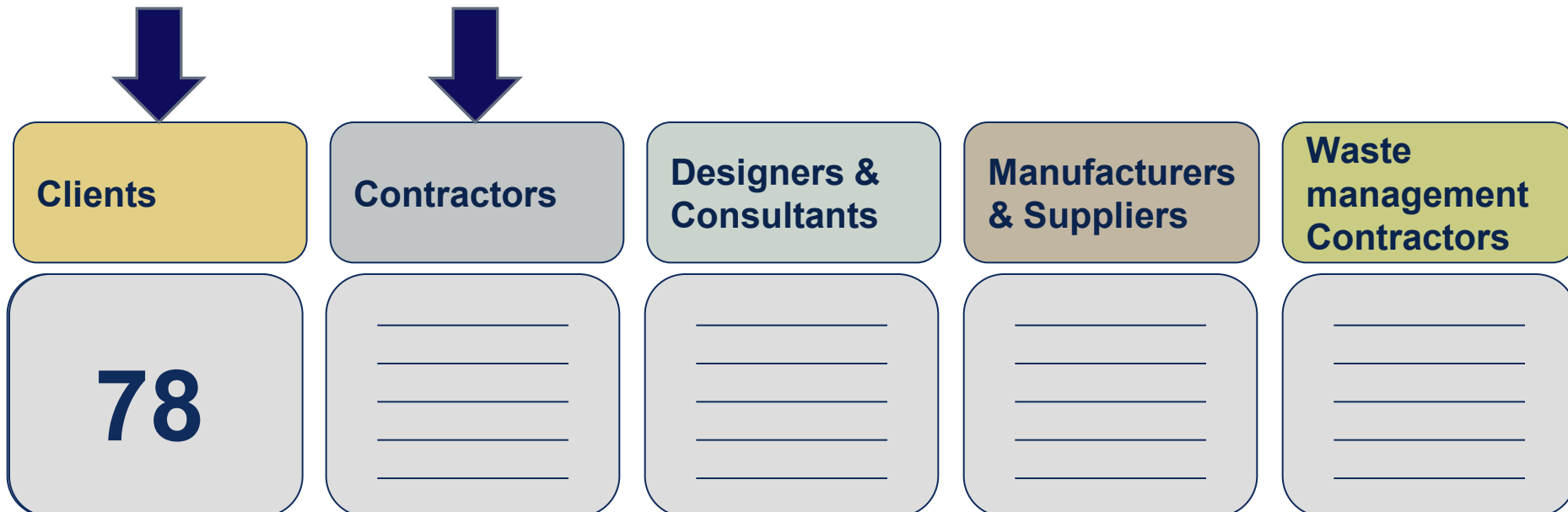
- set a target for reducing waste to landfill
- embed the target within corporate policy and processes
- set corresponding requirements in project procurement and engage with our supply chain
- measure performance at a project level relative to a corporate baseline
- report annually on overall corporate performance



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Who's signed up already? – Clients



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Contractors



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Designers & consultants, manufacturers & suppliers, WMCs



Why are signatories taking action?



Policy

Meet programme
level standards

Finance

Achieve real cost
reductions

Reputation

Demonstrate clear
environmental credentials

Policy-driven programme requirements



SWMPs	Go beyond regulatory compliance by setting project-specific targets for waste reduction and recovery and measuring performance
KPIs	Measure and report waste and waste to landfill per £100k
Waste recovery hurdle rate	Construction and demolition materials: 80% minimum
Hurdle rate for reused and recycled content	10% minimum and adopt top (5-10) cost-neutral improvements

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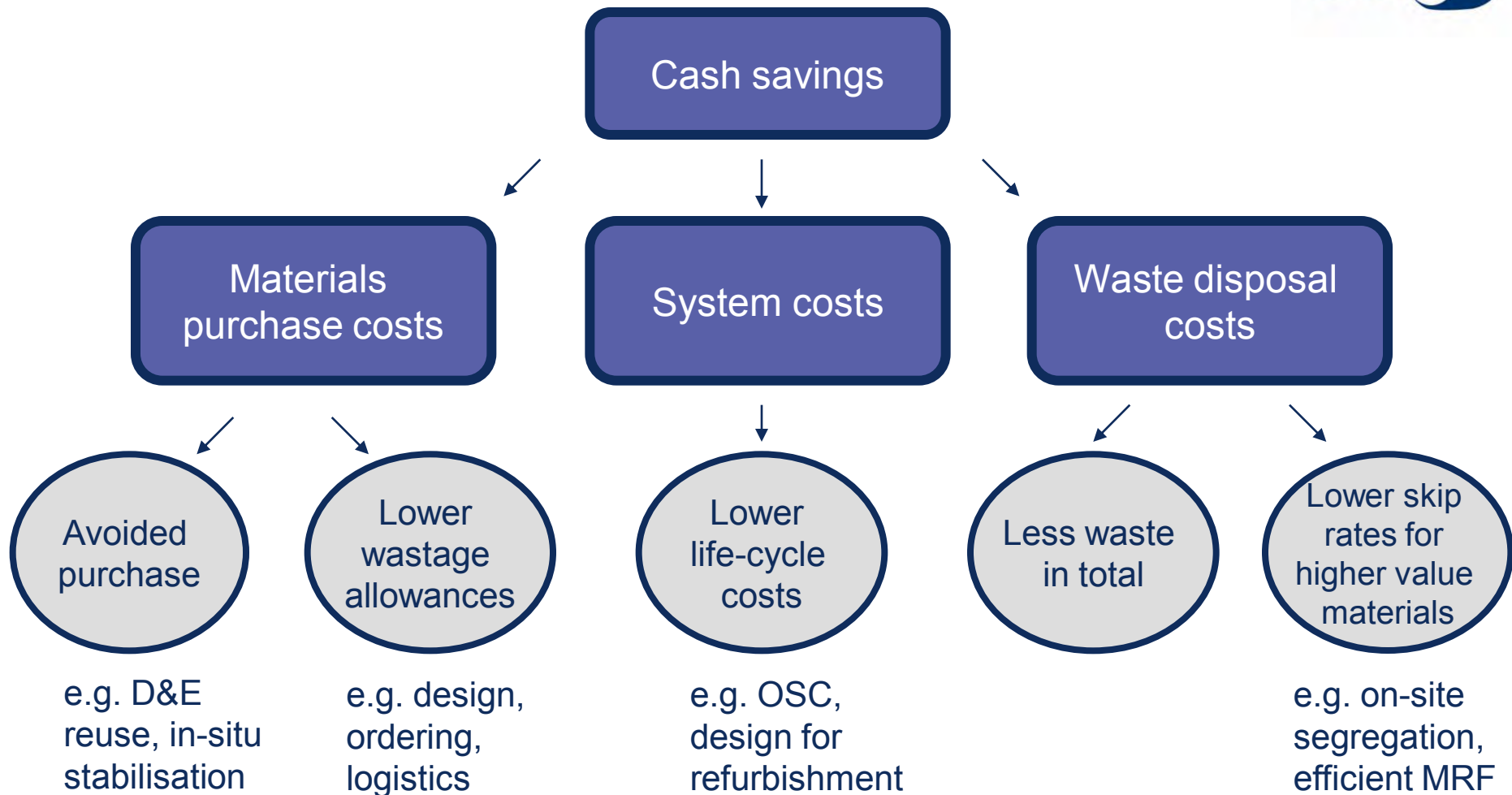
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Opportunities to reduce costs



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Waste disposal costs are only the tip of the iceberg.....

The original purchase price and transportation costs of the materials

+

The cost of their handling, storage, transport and disposal

+

The loss of income from not salvaging the materials

e.g. For 8 cu yd skip:

Skip hire	£ 85
Labour to fill skip	£ 163
Cost of materials put in skip	£1095

TOTAL TRUE COST
£1343

(Source: AMEC)



Skanska Bristol schools Project



Cost of waste disposal:

- £42/t well segregated
- £238/t poorly segregated

Cost of waste:

- £274k estimated value of materials wasted at one school



"Reducing waste became part of the way we did construction"



£90
packaging
paper &
cardboard

£90
inert

£0
metal

£258
Mixed waste

£90
wood

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New build secondary school – potential saving from reducing wastage rates



	Value	Percentage of £8.6M construction cost
Cost saving potential (top opportunities)	£165,300 (£117k materials cost)	1.92%
Additional costs to achieve these savings	£21,000	0.24%
Potential cost savings	£144,300	1.68%

Also reduce waste to landfill by 540t (65% saving), and carbon by 500t

Why are signatories taking action?



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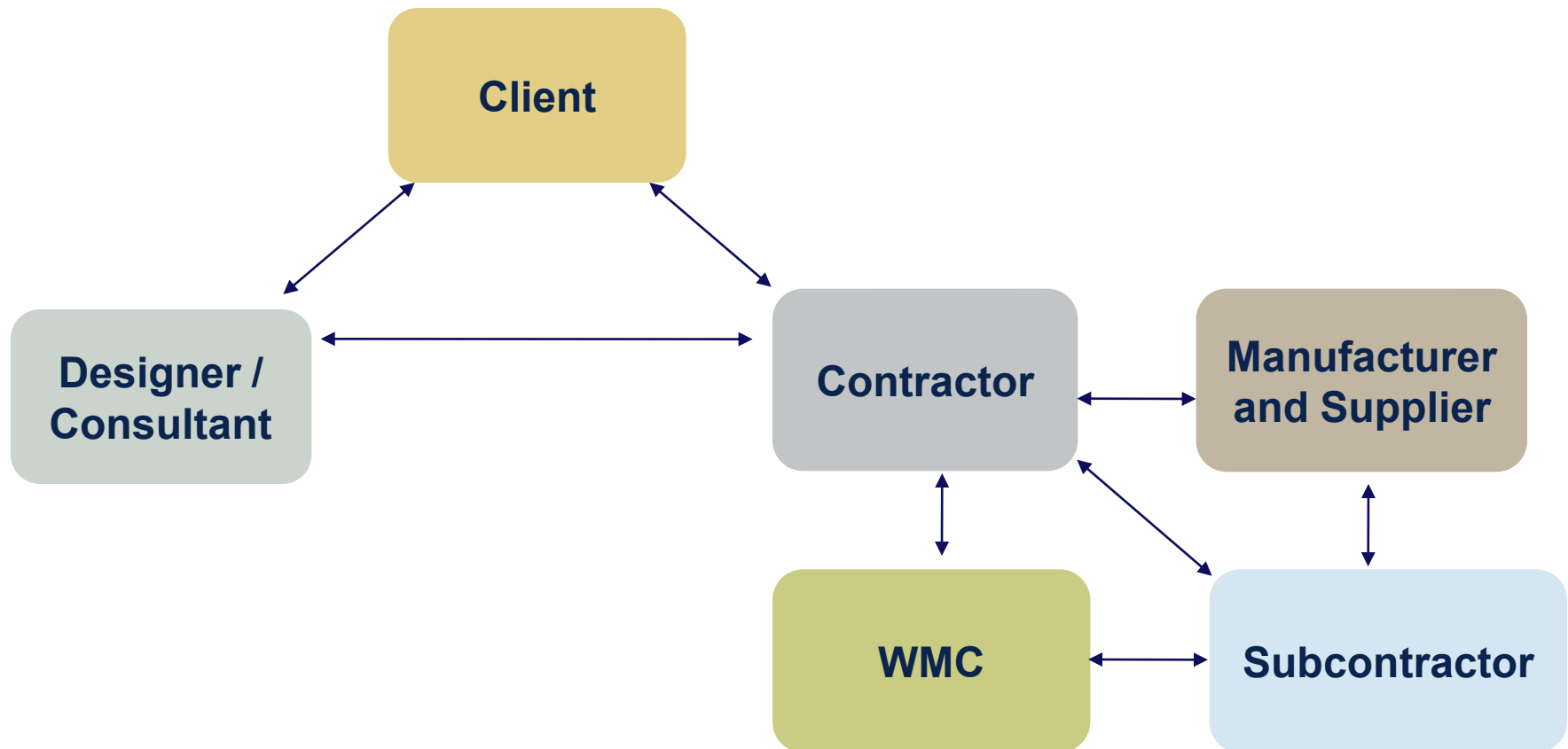
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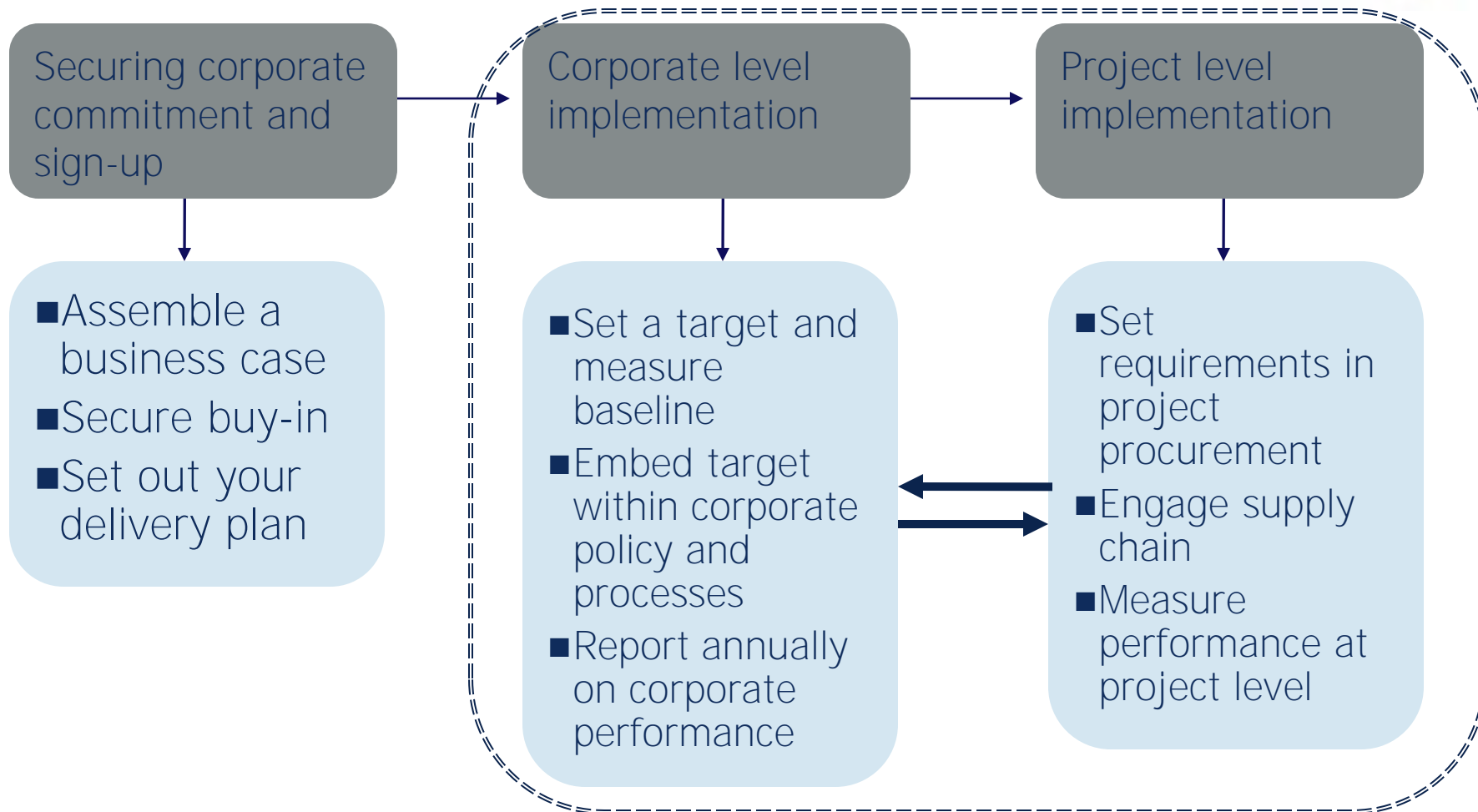
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Implementation across the supply chain

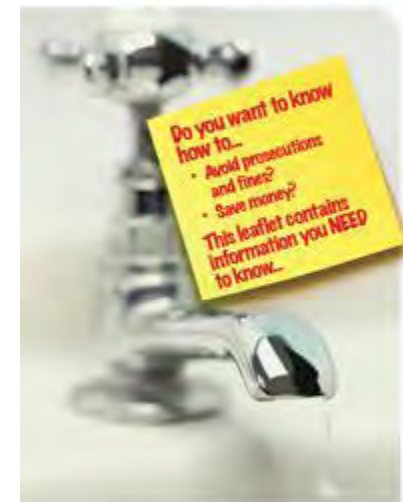


Overview of the process



So what about the practicalities?

Good Environmental Practice Guides





The DIY Resource Efficiency Review

- No need for direct consultancy
- Become self sufficient in terms of reviewing how your resources are used on a project by project basis

> Construction

> Halving Waste to
Landfill

> Tools and Guidance

How Do I Reduce Waste

Sectors

Construction
Procurement

Design Solutions

Waste Minimisation and
Management

Off Site Construction

Construction Logistics

Waste recovery

> Minor works

Office waste

> Construction Materials

> Case Studies

> Events & Training

You are here: [Home](#) / [Construction](#) / [How Do I Reduce Waste](#) /

Reducing waste in smaller projects and programmes of minor works

A large majority of construction projects are less than £1m in value. Only a moderate time and effort can be devoted to reducing waste on these smaller projects before the implementation costs exceed the benefits. The critical success factor is to focus on a limited set of the most significant actions.

This WRAP guidance identifies how repeat clients with a sizeable portfolio (including developers and estate managers) can ask their consultants and contractors to reduce waste cost-effectively in minor works. The guide covers:

- > regulatory requirements for different project sizes;
- > cost savings from going beyond typical baseline practice;
- > improving project performance; and
- > model wording for appointing project teams (including designers, contractors and maintenance/facilities managers).

By following the practices outlined here, you will be better able to report performance on waste across your portfolio and reduce waste from one project to the next.



wrap

Material change for
a better environment

Case study: Recycled content in construction

Opportunities in housing refurbishment

Social housing, Glasgow Housing Association.



Typical block of flats
for refurbishment

Davis Langdon's estimates for recycled content (as a % of total value of materials used)

- Base case: **1%**.
- Readily achievable at equivalent cost: **21%**.
- Potentially achievable cost but requiring additional research: **46%**.

Measuring and improving the percentage of recycled content used on a construction project is a simple way of demonstrating sustainability and materials efficiency.

Across the UK, there is massive public investment to refurbish social housing to "Decent Homes" and equivalent national standards. Government funding bodies and Registered Social Landlords are keen to achieve environmental benefits as part of their policy on Sustainable Communities.

Registered Social Landlords can take forward their sustainability agenda by quantifying project performance and adopting the top 5-10 product substitutions that deliver higher recycled content at no extra cost. This will help to satisfy local planning and development authorities, and closes the loop in recycling and site waste management.

Clients are increasingly asking for good practice on recycled content, and Government bodies including the Scottish Executive have recommended setting requirements (10% or higher) in procurement practice and legislation.

This desk-based study gathered information



Sustainability In Action Practice Guide

WHAT IS SUSTAINABILITY?

"It is a difficult concept..."

"It is just for those environmentalists..."

"It is too abstract..."

"It doesn't have any connection with everyday life..."

Questions?

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