



EAUC Annual Conference University of Leeds 23 – 25 March 2015

CHALLENGING CONNECTIONS

Incorporating the Student Sustainability Summit, Further Education Sustainability Summit and Transformational Leadership Summit

Exchange A5: Carbon Management Planning: Financing and Delivering Success in 2015

*Paul Lewis, Energy Services Director, Carbon Credentials
Energy Services, John Taylor, Senior Energy Engineer,
Carbon Credentials Energy Services and Will Jenkins,
Engagement Consultant, Carbon Credentials Energy
Services*



@TheEAUC
#EAUCConf15

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Estates and
Operations



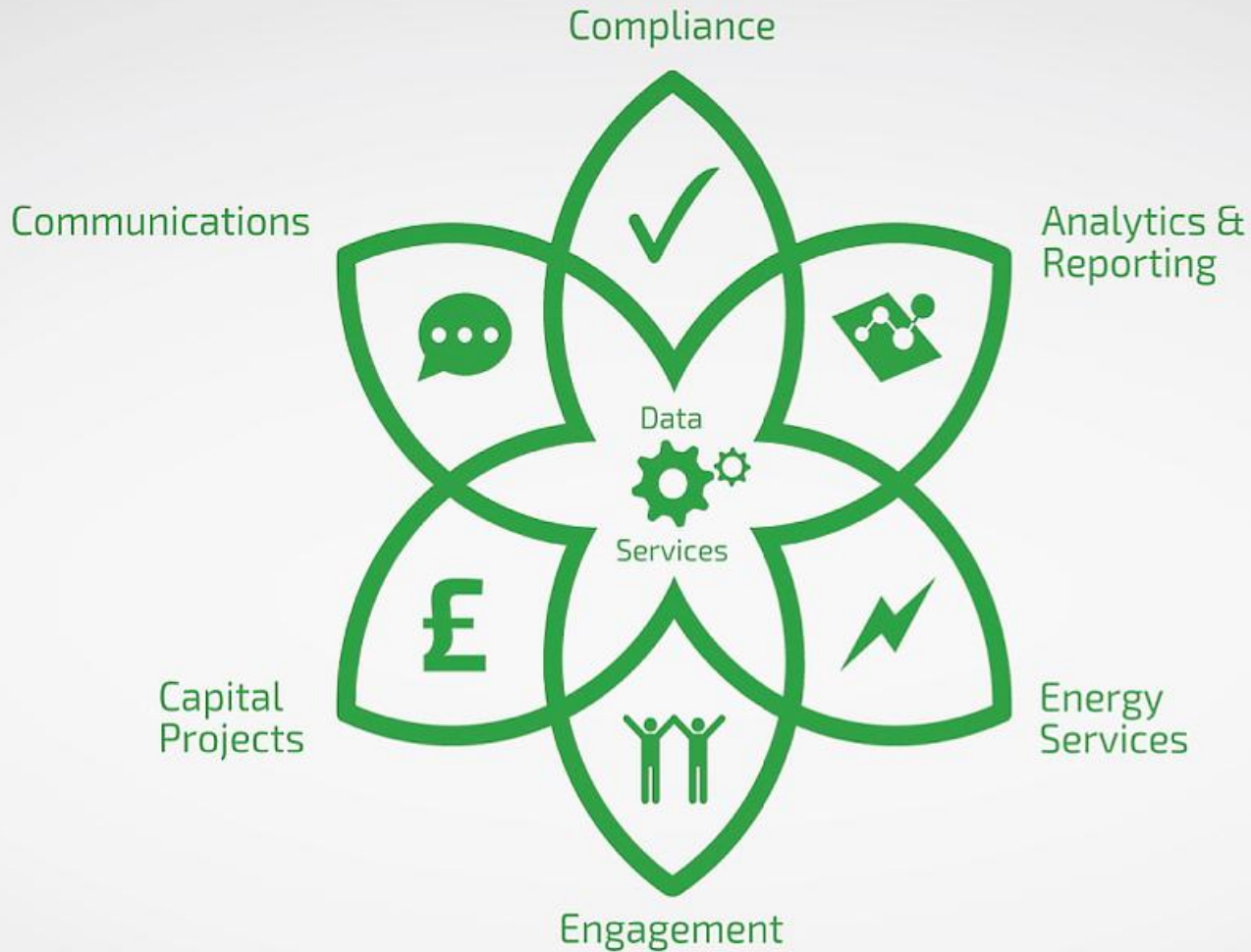
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High Impact Carbon Management Planning

Paul Lewis, Director
John Taylor, Senior Energy Engineer
Will Jenkins, Engagement Consultant



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Carbon**Credentials**

SUSTAINABLE BUSINESS **TOTALLY ENGAGED**


Private Sector Clients



Public Sector Clients

Aintree University Hospital 
NHS Foundation Trust


South Warwickshire 
NHS Foundation Trust

Nottinghamshire Healthcare 
NHS Trust

Kingston Hospital 
NHS Foundation Trust

The Whittington Hospital 
NHS Trust

Central Manchester University Hospitals 
NHS Foundation Trust

University Hospitals of Leicester 
NHS Trust

Bedford Hospital 
NHS Trust

Nottinghamshire Healthcare 
NHS Trust

The Royal Marsden 
NHS Foundation Trust

Maidstone and
Tunbridge Wells 
NHS Trust

Mersey Care 
NHS Trust

Great Ormond Street Hospital
for Children NHS Trust 

Tameside Hospital 
NHS Foundation Trust

West Middlesex
University Hospital 
NHS Trust

Moorfields Eye Hospital 
NHS Foundation Trust

University Hospitals
Birmingham 
NHS Foundation Trust

Kettering
General Hospital 
NHS Foundation Trust

 **UCLPartners**
Academic Health Science Partnership

Frimley Park Hospital 
NHS Foundation Trust

GREATER LONDON AUTHORITY

cardiff airport
maes awyr caerdydd


**NORTH
EAST
LINCOLNSHIRE
COUNCIL**
www.nelincs.gov.uk

**London South Bank
University**

 **UCA**
university for the creative arts

 **UCL**

 **UNIVERSITY OF
Hull**

**Kingston
University
London**

 **IOE**
LONDON

 **University of
BRISTOL**

 **UWE
BRISTOL** University of the
West of England

 **UNIVERSITY OF
SURREY**

**NOTTINGHAM
TRENT UNIVERSITY**

**The
Bloomsbury
Colleges**
University of London

 **Coventry
University**

**UNIVERSITY OF
WESTMINSTER**

 **The University of
Nottingham**

 **Ministry of
JUSTICE**

 **Walsall Council**

**Kingston
University
London**

LSE

**UNIVERSITY OF
EXETER**

 **northumbria
UNIVERSITY**



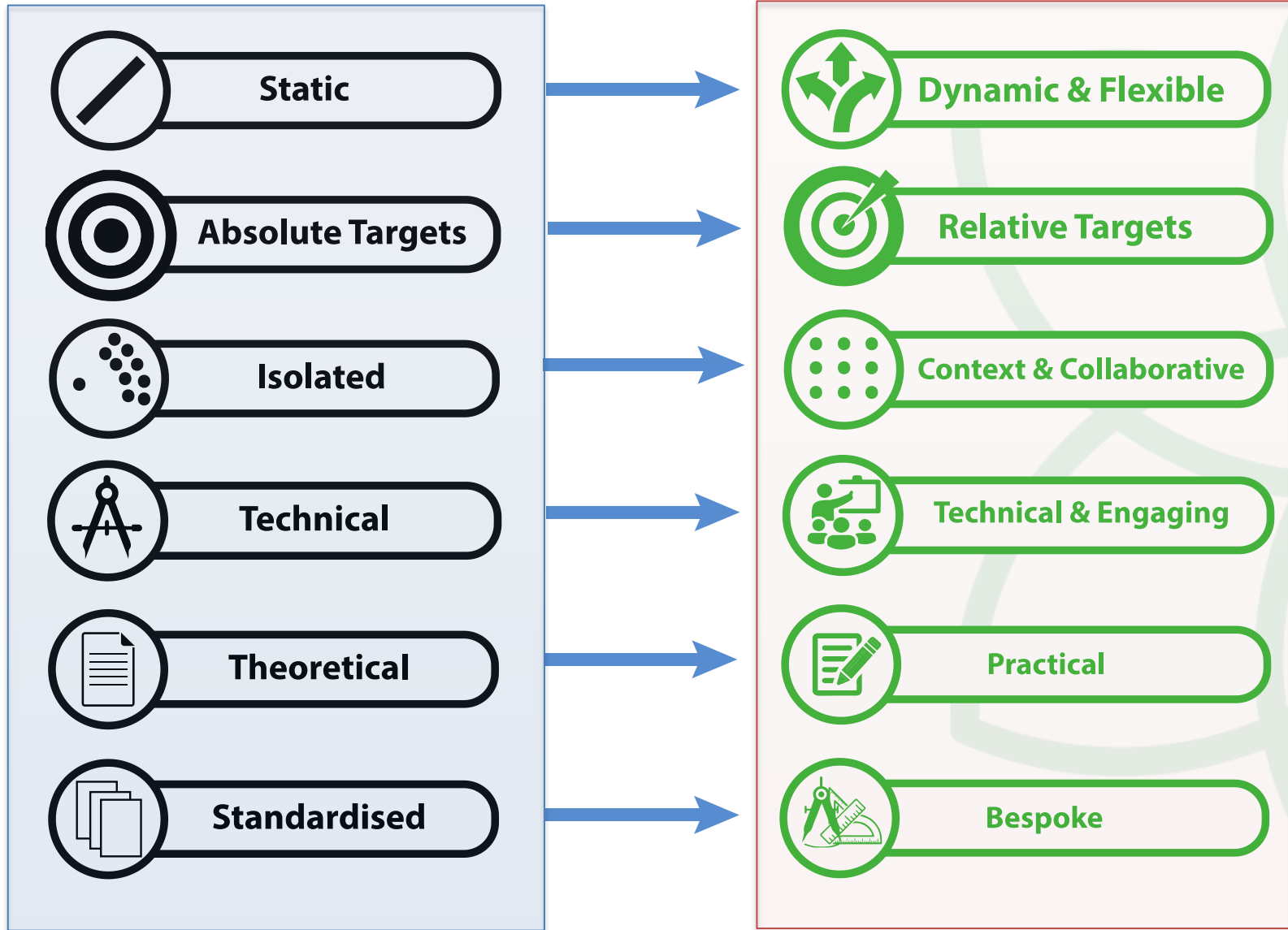
CARBON MANAGEMENT PLAN REPORT

CARBON MANAGEMENT PLAN REPORT

CARBON MANAGEMENT PLAN REPORT



Trends in Carbon Management



A night-time photograph of the London skyline. St Paul's Cathedral is prominent on the left, its dome illuminated. To the right, several modern skyscrapers are lit up, including the Gherkin. In the foreground, the River Thames flows with several boats, including a large white ferry. A decorative graphic of three overlapping circles is on the left side of the image.

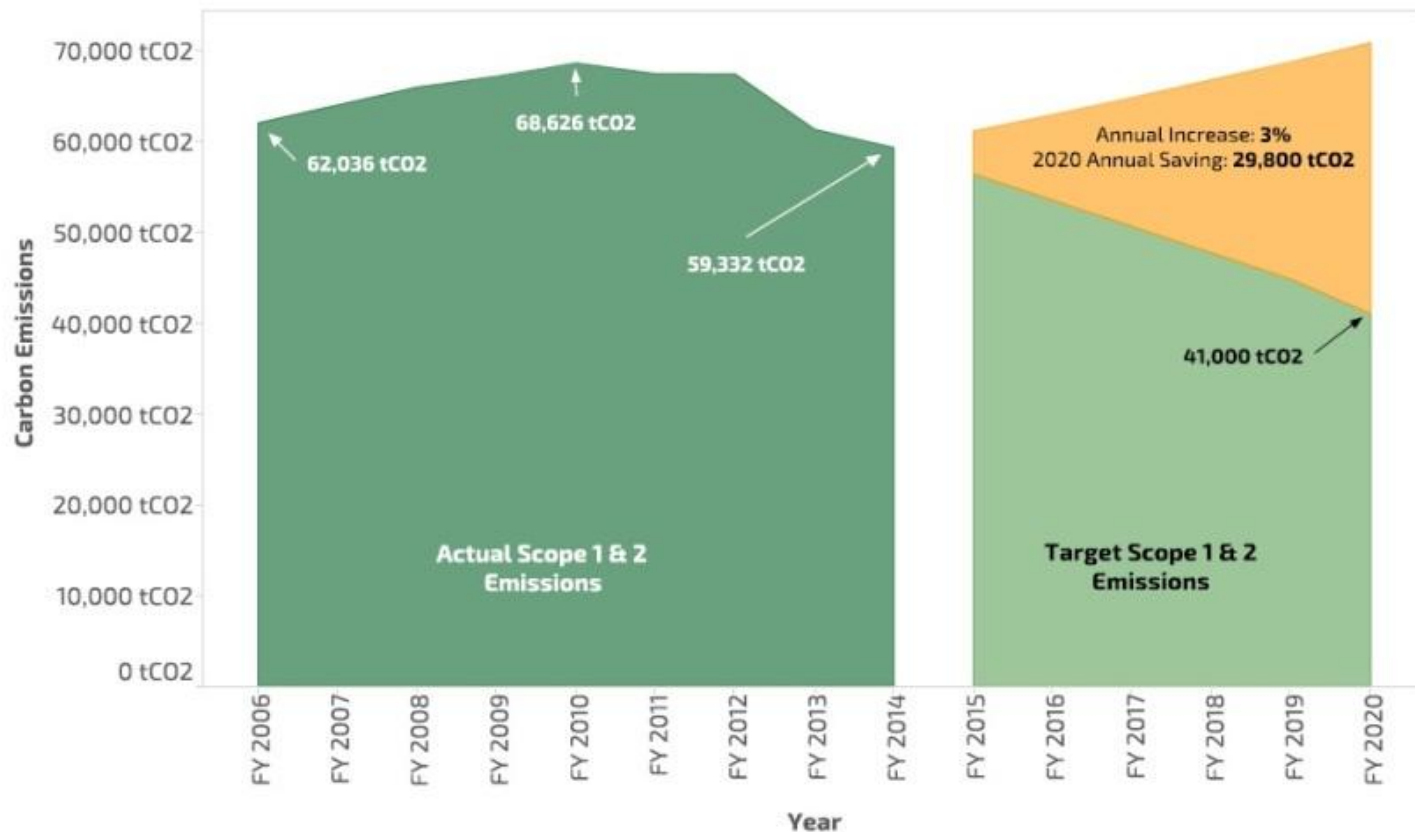
Live CMP Case Study from the University of Nottingham



**Current
Approach to
Carbon
Management**

**Phase 1:
CMP
Diagnostic**

**Phase 2: Building of a High Impact Carbon
Management Plan by completing Stage 1
Actions defined in the CMP Diagnostic report**



Recommended Approach

1. Governance & Engagement

2. CMP Financial Strategy & Plan

3. GHG Basis of Reporting

**4. Communicating
the CMP**

**5. Support
Delivery of CMP**



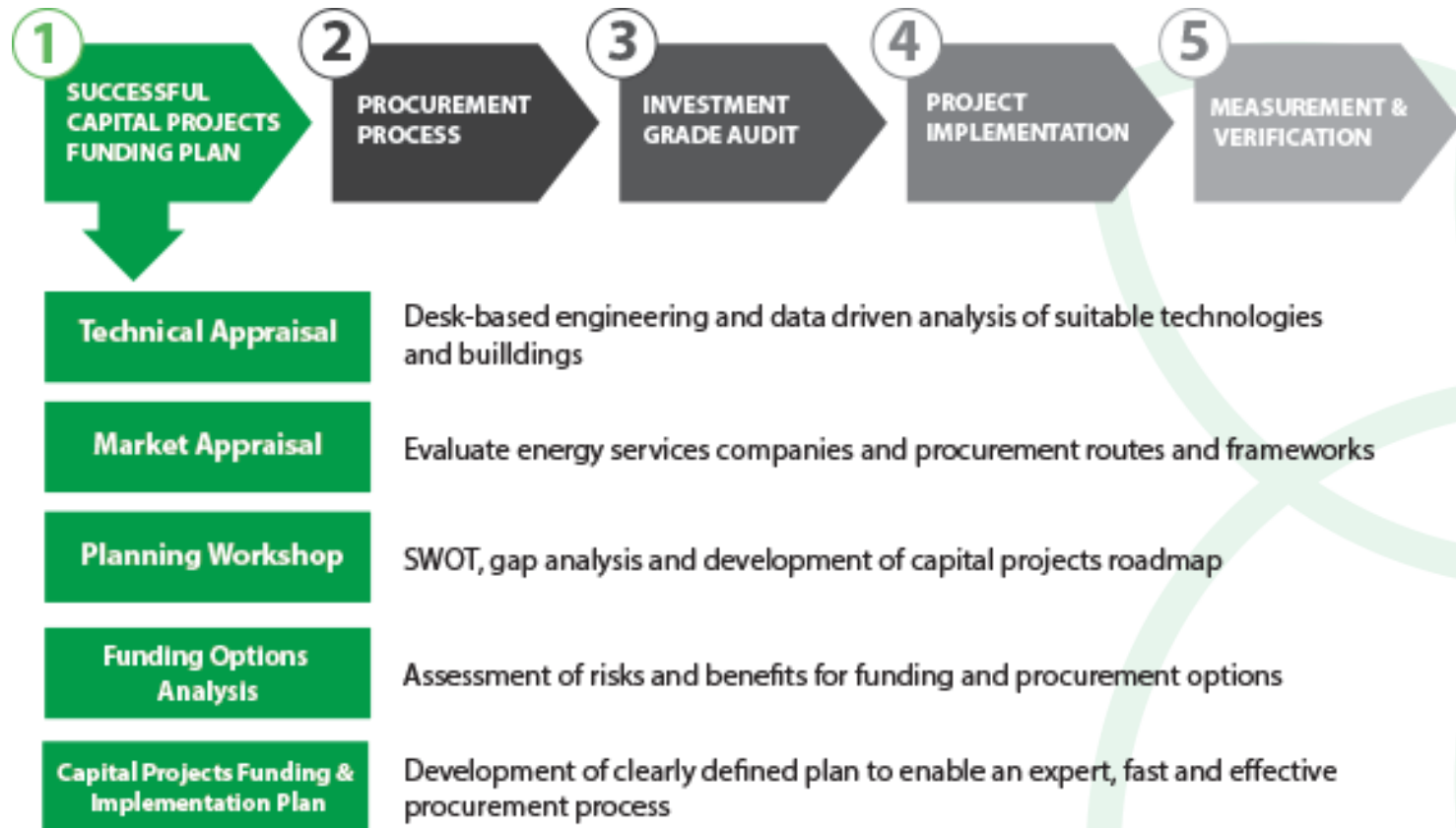
1. Aggregate projects into a programme approach
2. Qualify the risks, opportunities and benefits associated with various funding routes
3. Build a funding plan that defines the optimal route for procurement and is appropriate for the scale of the carbon management programme
4. Build a project implementation plan to understand the likelihood of delivering sufficient projects to meet the 2020 target

“The strategic work that Carbon Credentials is doing enables us to quickly and efficiently move forward, with all the right people on board and knowing it is the perfect solution for us.”

Andy Nolan, Director of Sustainability



Capital Projects Funding & Delivery



“By working together to develop the ideal technical and financial strategy we are ensuring we will hit ambitious carbon reduction targets, as well as saving money and creating resilience in the process.”

Andy Nolan, Director of Sustainability





The background image is a nighttime photograph of the London skyline. On the left, St. Paul's Cathedral is brightly lit, its golden dome and spire prominent. To the right, several modern skyscrapers are illuminated, including the Gherkin. In the foreground, the River Thames flows, with several boats and ferries visible. A large, green, semi-transparent banner is positioned across the middle of the image, containing the title text. On the far left, there is a decorative graphic consisting of three overlapping circles in shades of blue and teal, with white outlines.

Defining the CMP Boundary

Successful carbon management planning relies on the effective quantification, monitoring, reporting and auditing of organisational GHG emissions

1. Institutions are not accounting for their full Scope 1 and 2 impact and are unable to justify the choice of boundary for their CMP
2. Institutions often use the most convenient/established measurement method
3. Limited documentation is available on policies and procedures (incl. controls)
4. Limited evidence is usually available to support GHG disclosures, particularly baseline emissions
5. Institutions are not regularly reporting publicly on progress towards targets (in tCO₂e)



Setting Your CMP Boundary

On site
natural gas
combustion

On-site diesel
combustion

Petrol
combustion
in owned
vehicles

Diesel
combustion
in owned and
leased
vehicles

Fugitive
emissions

SCOPE 1

Electricity purchased
for own consumption

Purchased steam,
heating and cooling for
own consumption

SCOPE 2

Waste
disposal

Water
consumption

Wastewater
treatment

Supply
chain
emissions

Business
Travel

SCOPE 3



Reducing Carbon Emissions: Frequently Asked Questions

www.hefce.ac.uk (Updated June 2012)

*“From 2012-13 **there will be provision** in Estates Management Statistics (EMS) for the calculation of all Scope 3 emissions ”*

*“All institutions **are required** to have a carbon management plan (CMP) that contains...an implementation plan to achieve carbon emission reductions in scopes 1, 2 and 3 including timescales and resources”*

*“HEFCE **expects** carbon management plans to include arrangements for managing scope 3 emissions”*



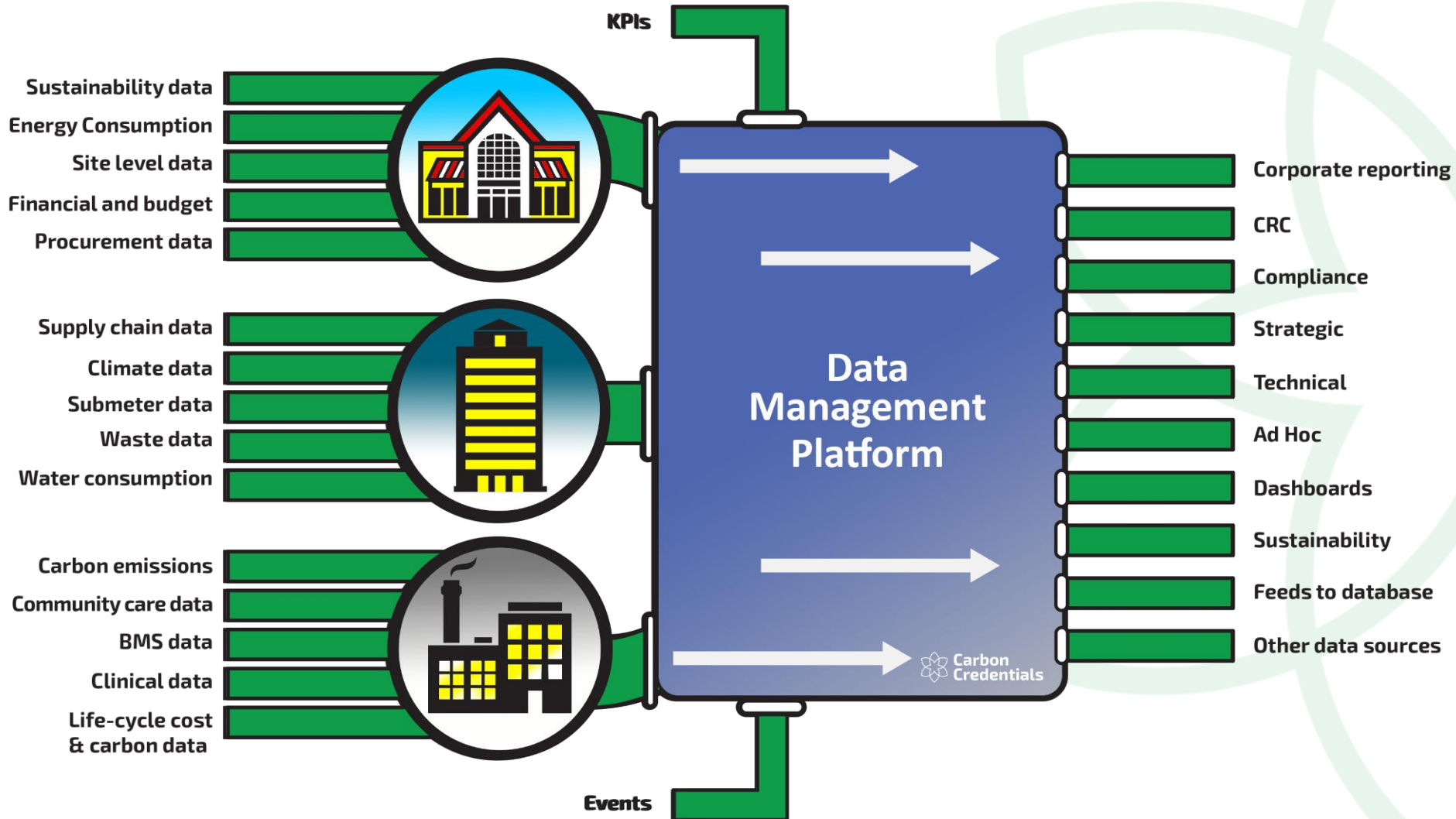
HEFCE's Scope 3 Requirements

GHG Source/Line Item	Mandatory	Emissions calculations undertaken by
Water Supply	✓	Higher Education Statistics Agency
Wastewater Treatment	✓	Higher Education Statistics Agency
Waste	✓	HEIs (provision of the emission figures is not mandatory)
Travel	✗	HEIs
Supply Chain (<i>Procurement</i>)	✗	Procurement consortia – and provided to HEIs for inclusion in EMS returns

Source: hefce.ac.uk



Data Management



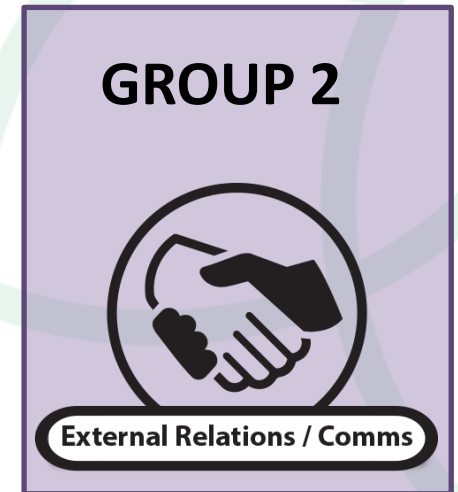
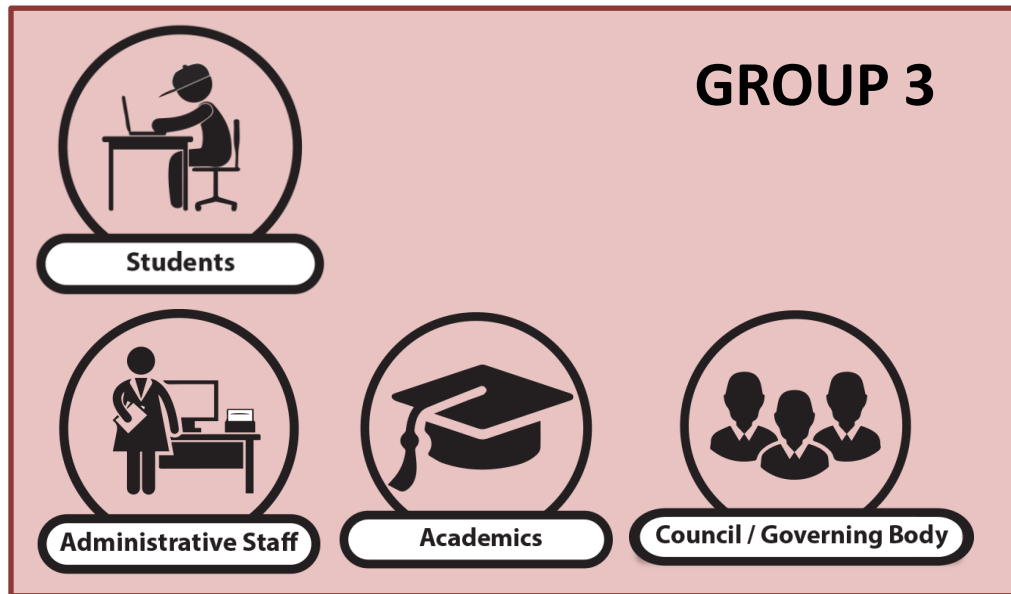
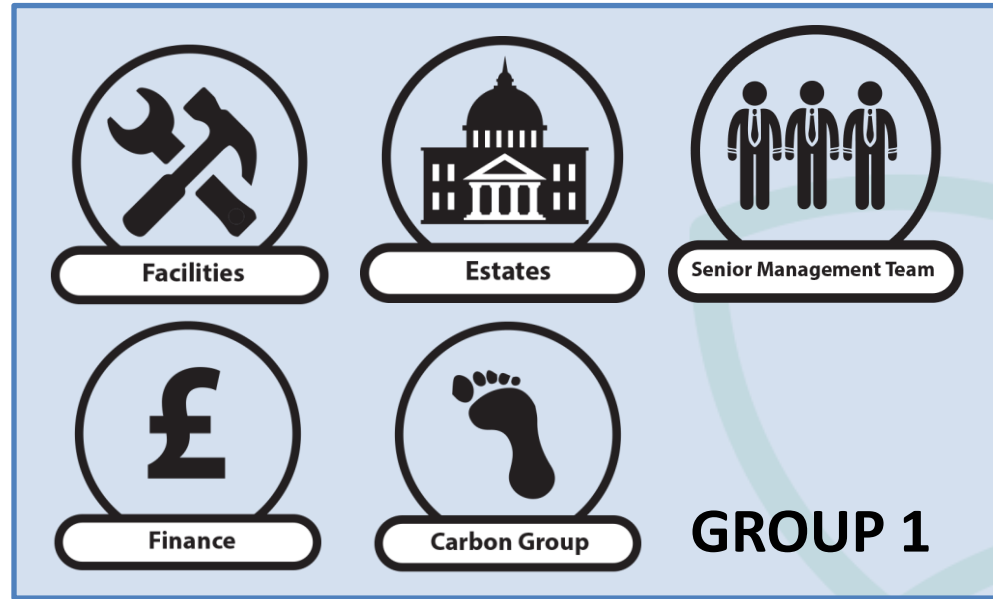


A nighttime photograph of the London skyline. On the left, St. Paul's Cathedral is illuminated, its dome glowing. To the right, modern skyscrapers like the Shard and the Gherkin are lit up. In the foreground, several boats are on the River Thames. A green rectangular box is overlaid on the right side of the image, containing the text 'Stakeholder Engagement'. On the far left, there is a decorative graphic consisting of overlapping white circles.

Stakeholder Engagement

Impact on carbon emissions

Stakeholder Mapping



Influence on other people






Visualising Data for Engagement

Living our values *everyday* 

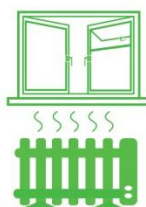
 **CarbonCredentials**

Kingston Hospital 
NHS Foundation Trust

October 2014 – December 2014		Compared to last year	
	2,925,409 kWh	↓	-6%
	12,641,720 kWh	↑	+10%
	Recycled Waste	40 (tonnes)	↑ +66%
	Clinical Waste	119 (tonnes)	↑ +1%
	Waste to Landfill	114 (tonnes)	↓ -11%
	Recycled	26%	↑ +64%

How could you help us to reduce our costs + environmental impact?

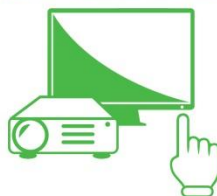
Close windows when the heating is on



Switch off lights when you leave the room



Turn off computers, screens and projectors when not in use

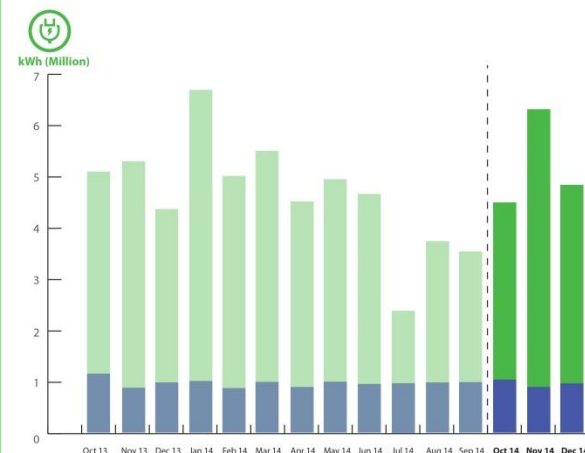


Use the new recycling facilities

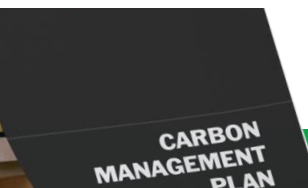
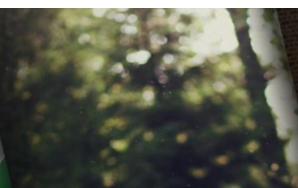


In the last 3 months we spent £590,000 on energy.

Electricity & Gas Consumption October 2013 - December 2014



Kingston Hospital
Sustaining our future



A nighttime photograph of the London skyline. On the left, St Paul's Cathedral is illuminated, its dome glowing. To the right, modern skyscrapers like the Shard and the Gherkin are lit up. In the foreground, several boats are on the River Thames. A green rectangular box is overlaid on the right side of the image, containing the text 'Sustainability At Birkbeck'.

Sustainability At Birkbeck



www.bbk.ac.uk
greenthing@bloomsbury.ac.uk
www.bloomsburygreenthing.com

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CarbonCredentials



Financing Your CMP

Funding the CMP

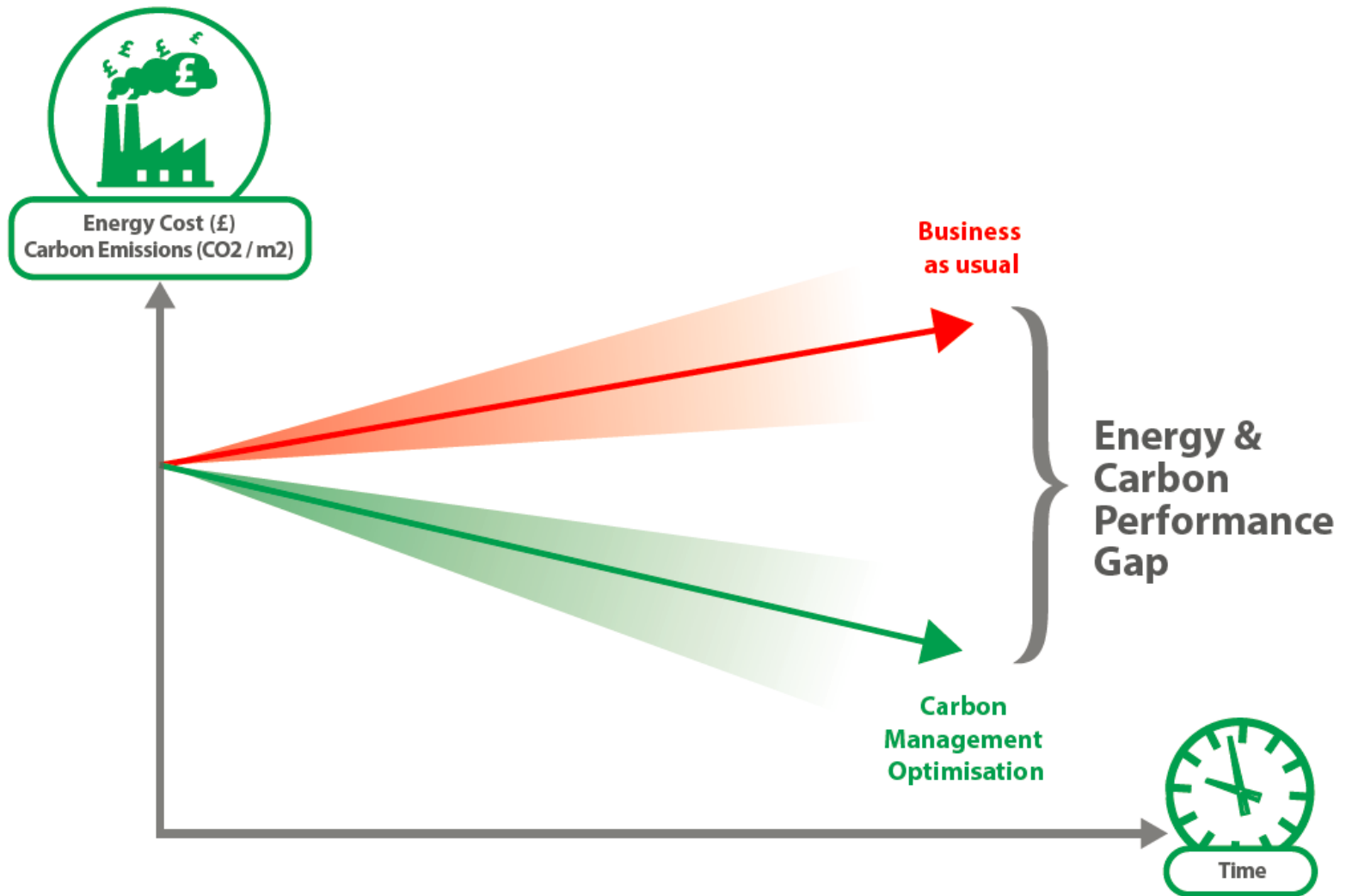
My main challenge in delivering the Carbon Management Plan is lack of available funding...

My Finance Director wont sign the cheques.

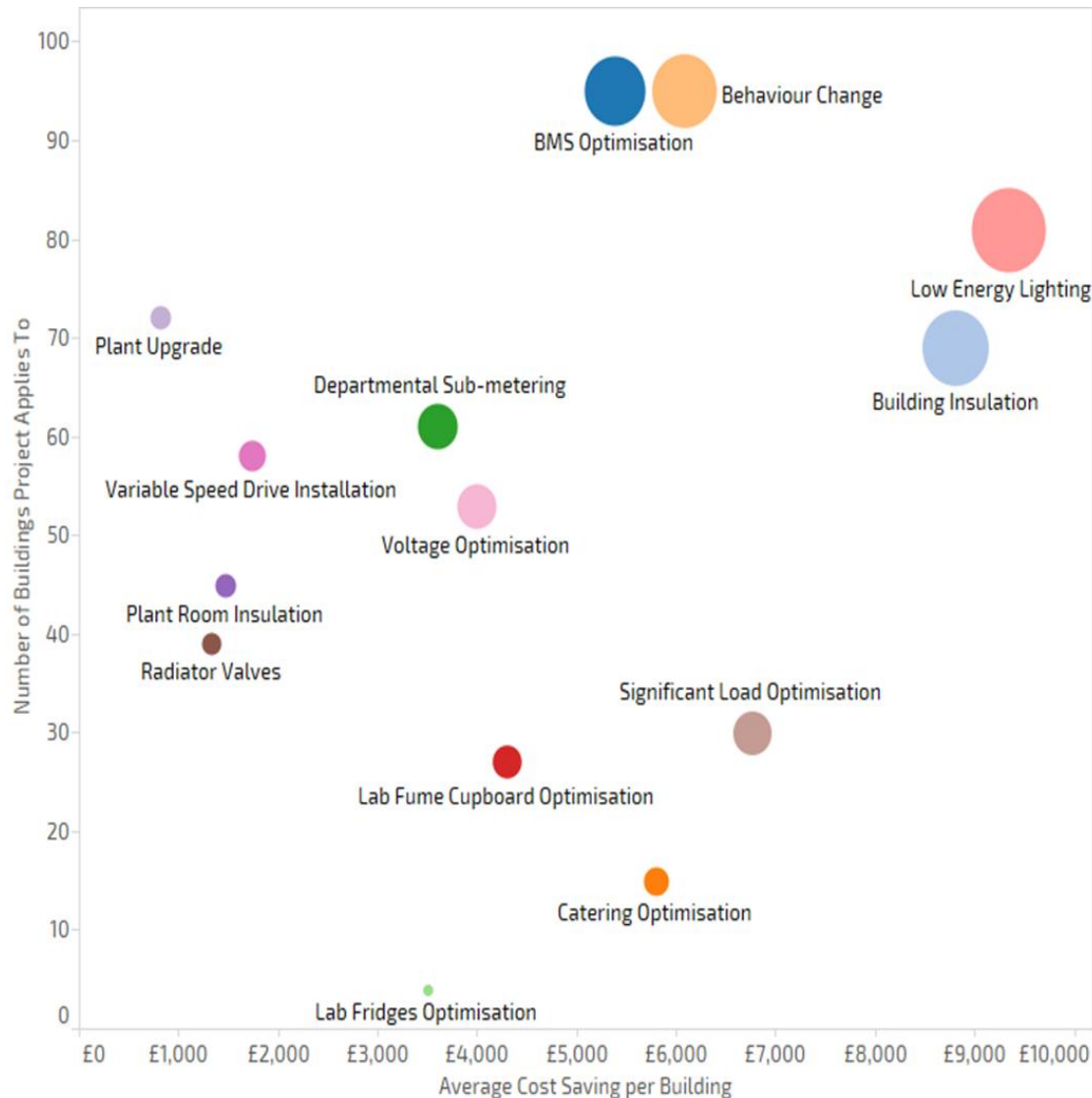
I need low risk projects and plans to invest in that will deliver good cash-flows, a strong Return on Investment & Net Present Value



The Value at Risk



Funding



Total CapEx:
£15.9m

Total Annual Cost Saving:
£3.6m

15 Year NPV:
£30.1m

Internal Rate of Return:
26%

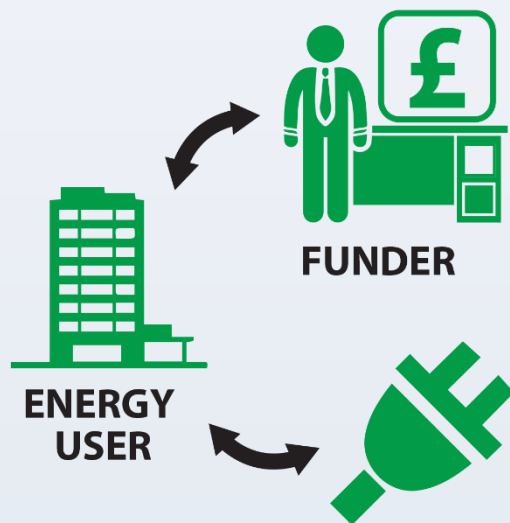
Simple Payback:
4.4 years

Carbon Saving:
20.4%



Energy Performance Contract Model

Model 1: Funder has relationship with the energy user



Model 2: Funder has relationship with the ESCo



Finding the Best Investment Source

- ❁ Internal funding routes
- ❁ Energy Service Companies (ESCOs)
- ❁ Technology Suppliers
- ❁ HE specific funding routes
- ❁ On-balance sheet funding options
- ❁ Off-balance sheet funding options





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TIME TO REFRESH YOUR

CARBON MANAGEMENT PLAN?



FREE HALF-DAY WORKSHOP

THURSDAY 23rd APRIL
9.30am (Registration)
CENTRAL LONDON

Following the delivery of four successful Optimised CMP workshops over the past 12 months, we will be running another one on **THURSDAY 23rd of April**.

Come along to learn from our experts and discuss best practices with your peers in this free half-day interactive workshop.

To register for this event contact Russ Avery:
russell.avery@carboncredentials.com
0203 053 6655

PREVIOUS CMP WORKSHOP ATTENDEES

