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#### Camden Climate Alliance



Saving energy and money for businesses





SUPPORTED BY



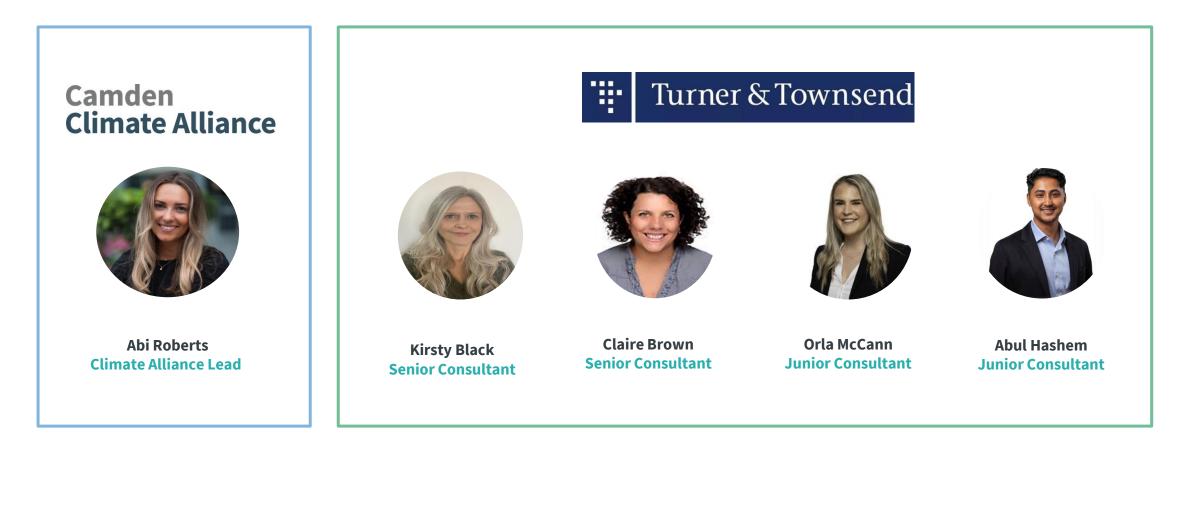
# **Welcome and Introduction**



Saving energy and money for businesses

### **Meet the presenters**







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#### Part 1 – Introduction

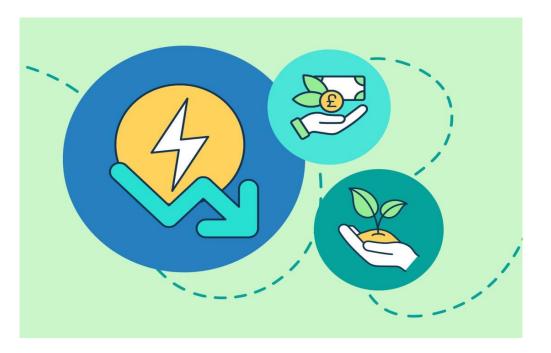
- Introduction to Camden and Brent Business Climate Challenge
- How does behaviour impact energy use?
- Behaviour change exercise

#### **Part 2 – Practical steps**

- Behaviour science energy in the workplace
- Change management ADKAR model

#### **Part 3 – Taking action**

- Developing an action plan
- Q&A





#### Agenda

# Identify employee behaviours that will reduce energy use.



Use change management to introduce and embed energy saving behaviours.

**Purpose of the session** 



Provide resources and tools to help apply change management to save energy.





amden and Brent

**Business Climate** 

Saving energy and money for businesses

Challenge

# **Part 1: Introduction**



Saving energy and money for businesses

## **The Business Climate Challenge**

#### What is the programme?

- A free energy efficiency programme to help 125 businesses reduce their energy costs and cut carbon emissions.
- It is a follow-on programme from the successful <u>Mayor of London's Business</u> <u>Climate Challenge (BCC)</u> between 2022-23, which has supported more than 200 <u>London businesses</u> which included:
  - 46 Camden Climate Alliance businesses
  - 22 Fitzrovia partnership businesses
- Brent Council successfully executed a similar programme, assisting 54 businesses through audits and grant funding opportunities.

### What can my business expect to receive in the Camden and Brent Business Climate Challenge?

- An energy audit
- A recommendation report actions, savings, ££ payback
- The opportunity to apply for grant funding in the FY 2024/25 to facilitate the implementation of recommendations from the report
- Access to an Energy Management dashboard
- Training x6 sessions over the course of the programme





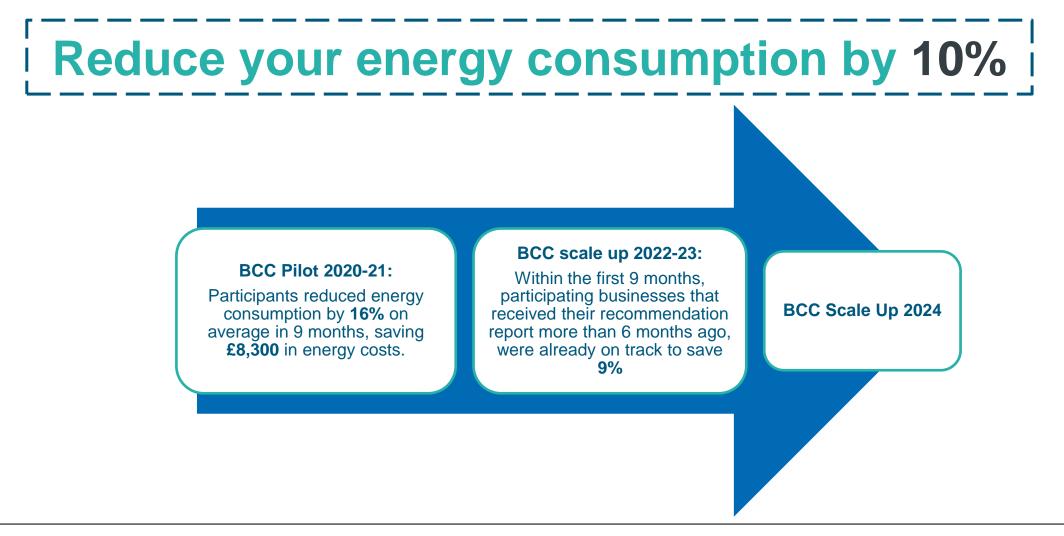
#### Camden Climate Alliance





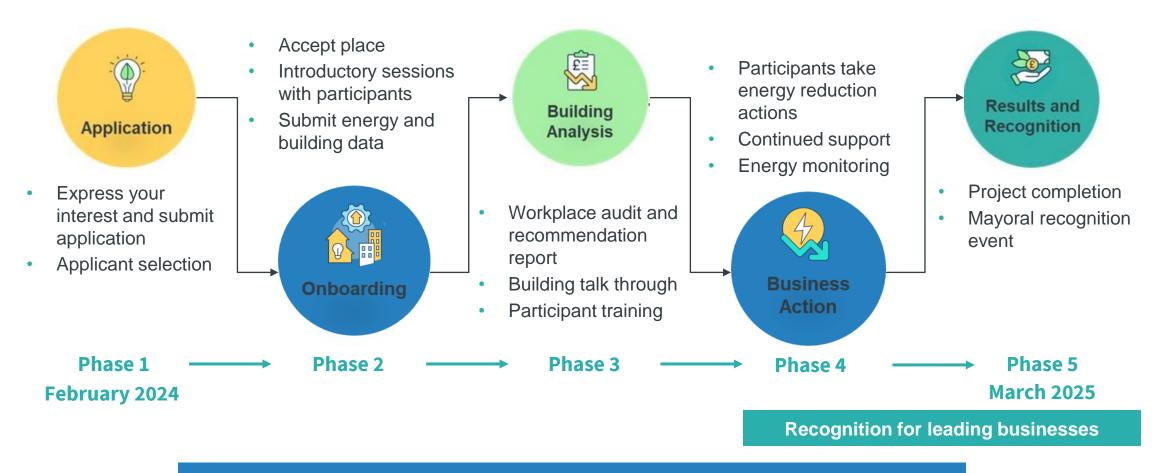
### **The Challenge**





### **Business Climate Challenge journey**

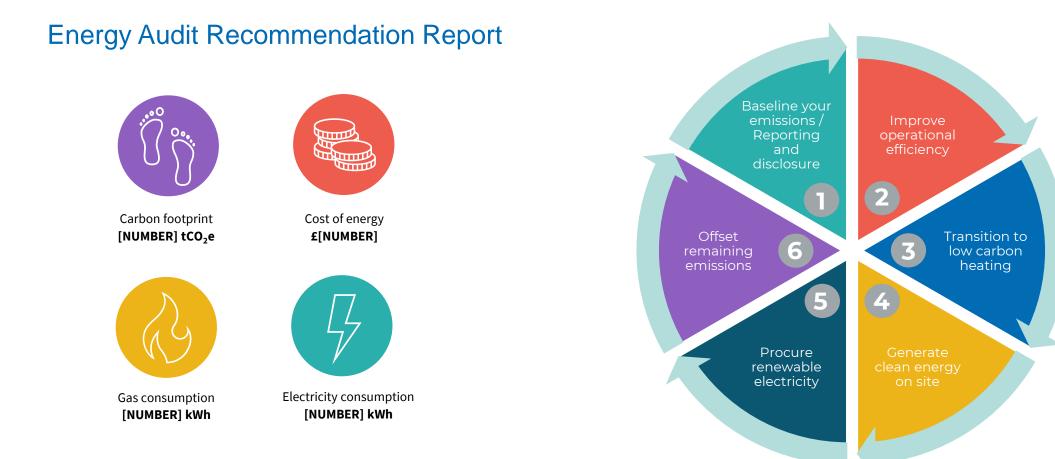




Business engagement, training sessions and knowledge-sharing activities/event

### **Business Climate Challenge Support**





Turner & Townsend

### **Behaviour change recommendations**



#### Example

Measure	Estimated savings			% energy savings	Lifetime carbon savings	Cost	Payback period	
	Energy saving (kWh/yr)	Cost saving (£/year)	Carbon saving (tCO <sub>2</sub> e) (year 1)	% kWh saving	tCO <sub>2</sub> e (over 15 yrs)	£	Years	
1. Encourage staff to adopt sustainable energy practices	4,400	£900	0.9	0.6%	5.7	-	Instant	
2. Ensure server room cooling temperature setpoint is suitable	Negligible	Negligible	Negligible	Negligible	Negligible	-	Instant	
3. Ensure controls are suitably adjusted to office usage patterns (HVAC Controls)	11,400	£2,300	2.3	1.5%	14.2	£1,500	0.6	
4. Develop policies to ensure sustainability is considered in all procurement	-	-	-	-	-	-	-	
Total	15,800	£3,200	3.1	2.1%	19.9	£1,500	0.6	

### **Behaviour change recommendations**



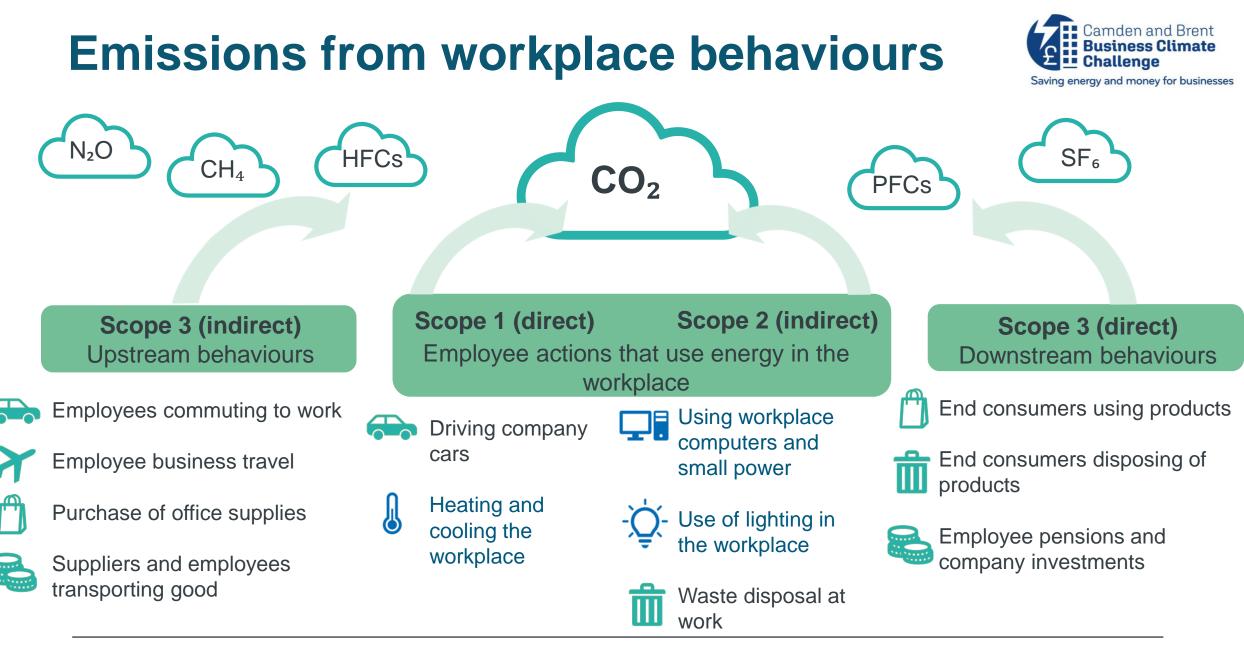
#### Example

Recommendation 1: Enable sustainable energy practices								
	Potential annual savings			Implementation cost	Payback period			
4,400	£	2900 /year 0.9 tonnes		-	Instant			
<b>kWh/year</b> Details	•	CO <sub>2</sub> e/year When staff use the office, they use energy. Whilst electrical equipment such as laptops and monitors are not large energy users, lots of small energy users adds up to a surprising amount.						
	•	Often people do not notice energy waste until it is brought to their attention. For example, when leaving a meeting room many people will turn off the lights as they present a visual reminder – but it's easy to forget to turn off the air conditioning because you can't see it. Raising awareness of these tendencies can help people to adopt more sustainable practices.						
	1	It was brought to the auditor's attention that TV screens and computer monitors are all controlled manually and do not have an automatic shut-off or sleep mode activated. This presents the twinned risk of excess use, and human error during shutdown operations.						
	1	The calculations were based on screens having their sleep functions enabled or brought forward, which would save an estimated 10% of screen time due to the removal of human error.						
Benefits	1	Reduction in emissions and energy use at zero cost. Enabling sustainable practices is likely to be one of the most cost-effective solutions to reducing energy use and emissions in the office.						
Risks	•	There is a risk that whilst experimenting with sleep modes, monitors and TV's go to sleep whilst still in use.						
	1		-		y not be fully engaged with the new practice. However, studies have shown the be more environmentally friendly.			
Next Steps	1	Set laptops/PCs TV's and monitors to automatically sleep or hibernate after a certain period. Sleep functions use around 80% less pow than normal, and a computer in hibernation uses no power.						
	<ul> <li>Install energy consumption monitoring software on incoming electricity supplies and monitor changes to energy use.</li> </ul>							
Energy Saving Calculations	1	It is not uncommon for measures of this nature to reduce energy use by 10% or more. This is the figure that has been estimated in the calculations based on television and monitors alone. The actual saving could be higher once other pieces of						

# CBBCC recommendation report summary

Six steps to building decarbonisation	Recommendation	Cost	Estimated savings			Lifetime carbon savings	Payback period	
		£	kWh/year	% of total	£/year	tCO <sub>2</sub> e in year 1	tCO2e (over measured lifetime)	Years
1. Baseline your emissions	Request your supplier fits automatic half hourly meters to enable real-time monitoring of energy use.	Likely covered by provider	-	-	-	-	-	-
2. Improve operational efficiency	1. Encourage staff to turn off lighting and IT equipment when not in use.	Free	438	1%	£140	0.04	0.5	Instant
	<ol><li>Increase the temperature setpoint of cooling equipment in the server room.</li></ol>	Free	352	1%	£120	0.03	0.4	Instant
	3. Install secondary glazing where single glazed windows are used.	£18,200	4,165	3%	£260	0.8	11.4	>25
	4. Develop policy to ensure sustainability is considered in all procurement	-	-	-	-	-	-	-
3. Transition to low carbon heating	Install a low carbon air source heat pump heating system and electric instant hot water heaters.	£52,000	Elec: - <mark>44,899</mark> Gas: 155,593	Elec: - <mark>137%</mark> Gas: 100%	-£4,900	19.6	372	None
4. Generate clean energy on site	Install a solar PV array (not considered feasible).	£7,500	1,504	5%	£490	0.3	1.9	11.4
5. Procure renewable electricity	Procure renewable electricity.	Not estimated	-	-	-	-	-	-
6. Offset remaining emissions	Purchase offsets to 'neutralise' your remaining emissions.	Not estimated	-	-	-	-	-	-
Total		£77,700	117,200	62%	-£3,900*	20.7	386	None

for businesses



### **Behaviour and energy use**





Our energy use is shaped by ingrained habits that are hard to change, due to subconscious preferences for the status quo.



Changes in our everyday habits can help to reduce energy bills, lower carbon emissions and ease pressure on the power grid.



Using change management methods can help us reduce energy use by fostering good behaviours.

## **Technology and behaviour change**



#### Lighting

- Sensors
- Timers
- Too much, too little

#### **Appliances and equipment**

- Energy saving mode
- Timers
- Efficient equipment easy to use

#### **Energy Management**

- Smart meters/Meter reading
- Energy management platforms
- Reporting requirements

#### Refrigeration

• Temperature controls/Thermal Comfort

#### **Heating controls**

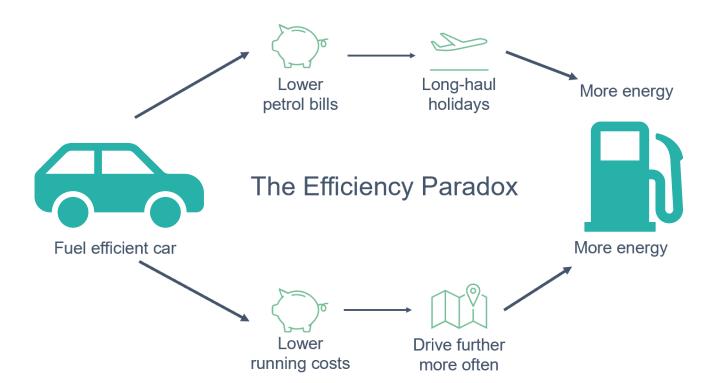
- Temperature controls
- Timers/On too long/Not enough



### **Rebound effect**



The paradoxical outcome of energy use increasing rather than decreasing, in response to improved energy efficiency.



### Activity: Behaviours that save energy







## What behaviours save energy?



#### Lighting, appliances and equipment

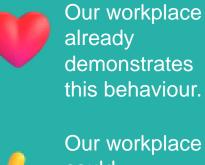


Switching equipment and lighting when not in use.



Establishing a process with assigned responsibilities, to turn equipment and appliances on and off when closing and opening the building.

Maintaining regular maintenance and servicing.







Including energy efficiency in procurement decisions.

Our workplac could implement this!

## What behaviours save energy?



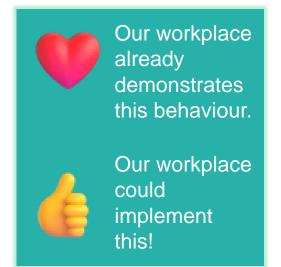
#### Heating and cooling



Empowering employees to select warmer or cooler parts of the building to work from, based on their preference.

Optimising building occupancy, to limit spaces needing heating and cooling.

Drawing blinds to keep rooms cool in hot weather.



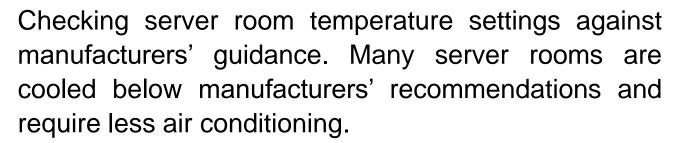


Keeping a gap between the heating and cooling set points, so both systems do not work in competition and discouraging employees from overriding controls.

### What behaviours save energy?









Switching off computers, printers, scanners at the end of the day.



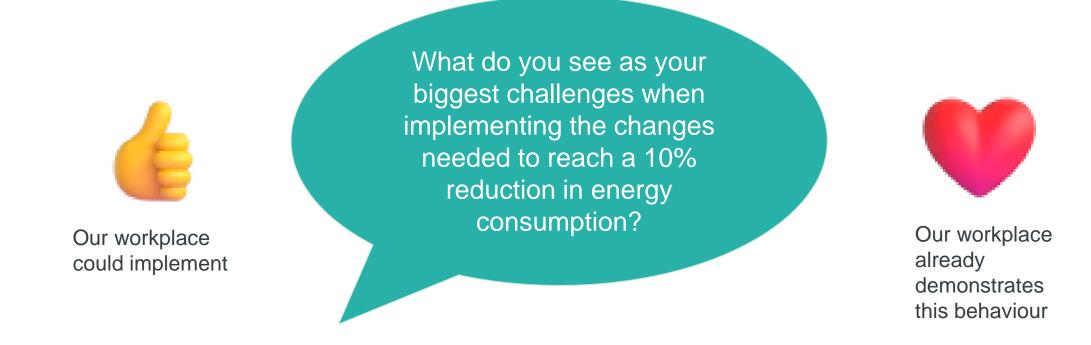




Reducing the size of email inboxes and attachments to lower processing demands on servers.

# ACTIVITY: Understanding your challenges



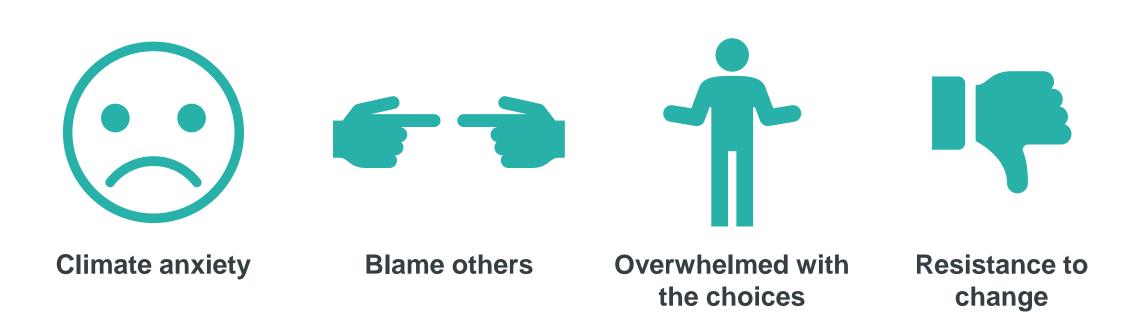


We would like you to use the chat function to share your biggest challenges with us.

You can submit multiple answers and please use the icons to interact with responses.

#### What are the challenges?







# Part 2: Practical steps to change behaviours



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### **Organisational motivation**





Smaller businesses account for around half of UK business greenhouse gas emissions.



58% of SMEs plan to upgrade energy efficiency of their premises and 54% intend to invest in more energy efficient processes.



53% of small businesses are not ready to prioritise decarbonisation

舞

The most commonly perceived barriers to action are around cost and feasibility. Rising energy costs and cost of living is a further barrier.

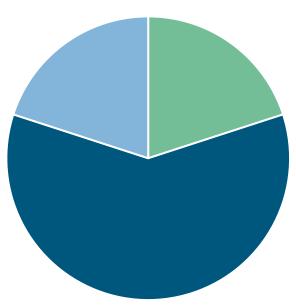
Sources

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### **Power of employee behaviour**







Enthusiastic energy saversAspiring energy saversEnergy non-engaged



### Stakeholder engagement





#### Why should I care?

Think of the big picture Cost of living – bring it closer to home

Company culture – it matters to us.



#### What's In It For Me?

Business impact – securing your future Developing good habits



#### Will I need to contribute?

Small acts lead to big impact Build into KPIs

#### What is a Change management framework?





A change management framework is a structured approach to manage organisational changes effectively



When it comes to energy efficiency, using change management frameworks helps the adoption of energy-saving practices throughout the organisation



Many change management frameworks are available. We have identified the **ADKAR model** as a good approach to improve energy efficiency

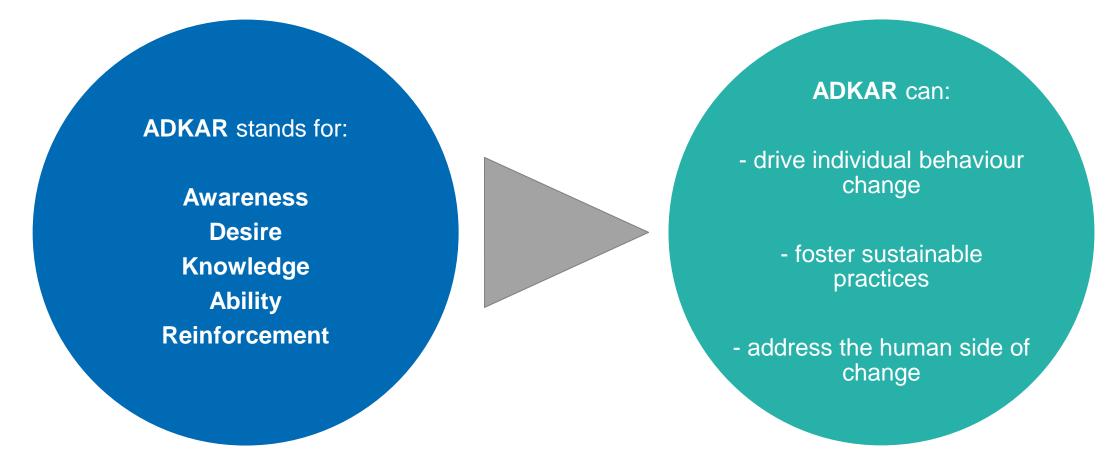
#### ADKAR:

- Provides a holistic and structured approach to implementing energy efficient behaviours
- Engages stakeholders
- Manages resistance, promotes acceptance
- Supports communication
- Facilitates continuous improvement

### **ADKAR Change management model**



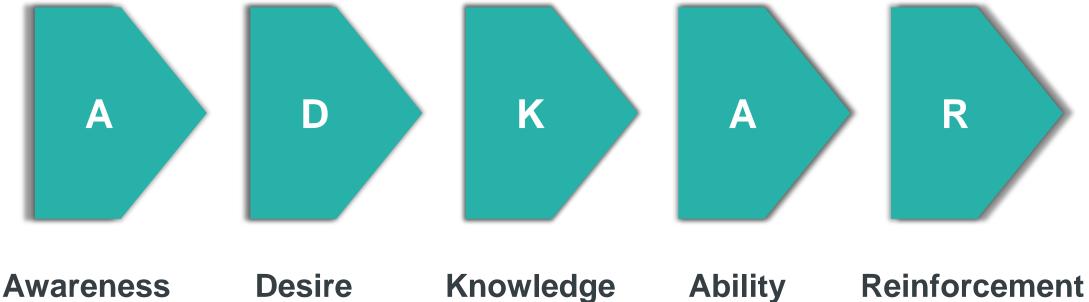
**ADKAR – Theory: Drive sustainable individual behaviour change** 





Why ADKAR works







# Awareness



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Do your employees know that the business has a target to reduce energy use?



Employees who are aware of their organisation energy practices, are more likely to act.



Do your employees know what they are expected to do, to save energy?



Employees who are aware of the expectations to save energy, are more likely act.



Do your employees receive prompts to save energy?



Workplaces with posters and reminders to turn off computers and lights, were more likely to change behaviours.





#### How do you make your employees aware?



Visible senior leadership and line management endorsement.



Visibility of energy use and reduction target. Posters, intranet, meeting, newsletters.



Dialogue with employees. Harness their views, degree of support, ideas. Meetings, roundtables, survey.

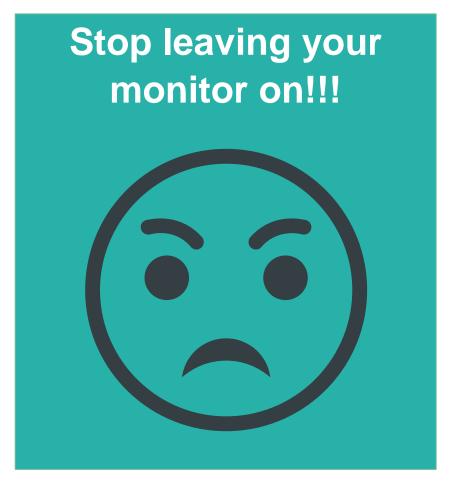


Use local and national campaigns to amplify awareness e.g. London Climate Week, Earth day.

Positive communications.

### **Effective communication**





Thank you for switching off your monitor at the end of the day.

95% of our employees switch off monitors when not at their desk.

Switching off our monitors has saved 2 tonnes of carbon.





Case Study

#### Awareness

#### **Furniture manufacturer**

#### The challenge:

• Energy audit identified high electricity baseload at night and over the weekend and predicted 16% reduction by daily shutdown.

#### The action:

- Manufacturing team leaders reviewed the energy efficiency recommendation report together.
- Each manager identified all electricity using equipment in their area, and considered when each piece of equipment could be switched on and off.
- Used a spreadsheet to record safe switch on and off times.
- Delegated responsibility and authority to individuals to action the agreed plan.

#### The result:

 Saved 25.4% of energy use and over £100,000 per annum from energy costs with no capital investment cost.







# Desire



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## How to CREATE desire





Incorporate energy/sustainability into job progression, roles and performance measurements.



Incorporate reward into existing reward structures e.g. bonus.



Align to employee values.



Encourage competition e.g. between floors, shifts, departments, buildings.



**Enabling desire** 





Ensure employees understand their contribution Acknowledge feedback Incorporate feedback into your change design

te nto



Follow up!



Camden and Brent Business Climate Challenge

Saving energy and money for businesses

Continuous improvement

# Knowledge



## Why knowledge is important





Knowledge is power.



Knowledge helps employees understand the importance of energy conservation.



Identifying energy-saving opportunities.



Making informed decisions.

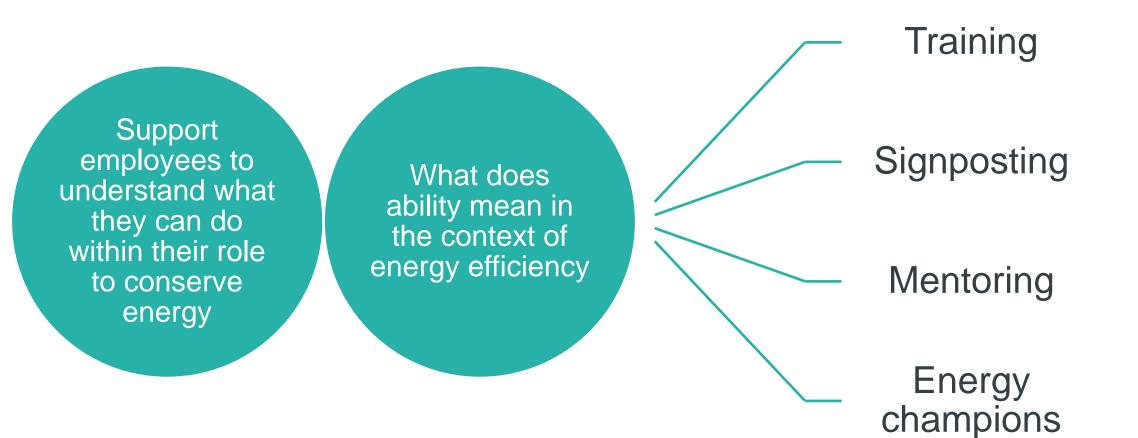


# Ability



## **Enabling ability**







## How to build ability







## **Prompts to develop ability**



#### Labels

Most people will not take the risk of making the wrong decision and will leave lights and equipment on rather than switching off by mistake. Labelling switches is a no cost, simple solution.



#### **Checklists**

These are prompts to ensure all employees follow the same sequence of tasks at the start or the end of the day. They can help take away the mental load and avoid equipment being left on by accident.

CLOSE DOWN CHECK LIST	COMPLETE Y/N			
Display fridge turned off	Y			
Coffee machine turned off at wall	Y			
Bathroom lights turned off	Y			
Fans turned off	Y			
Meter reading taken	Y			

## Forming a green team



If your business's environmental drive needs a turbo boost, then you need a green team. A dedicated task force of individuals from across your organisation can work to channel all the ideas and energy you need to deliver real practical change.

#### A green team can:

- Take ownership of energy efficiency and waste reduction ideas
- Set achievable, yet ambitious, targets and see that they're met
- Keep staff on board, and motivated with regular progress updates
- Keep your business competitive, attractive to customers, and ahead of the legislation

## Successful green teams have:

- the right people
- senior buy-in
- enthusiasm
- structure and governance

## **Choice architecture**



- Directing employees to make better energy choices.
- Energy intensive activity is more inconvenient
- Energy efficiency activity is more desirable/convenient/default

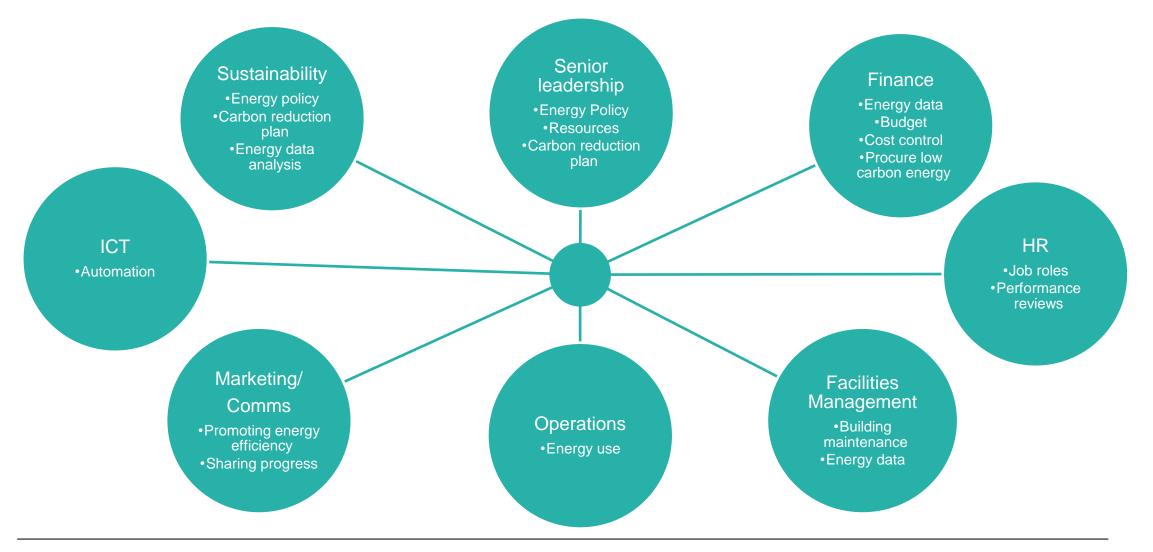
#### e.g.

- locating desks in well-lit areas.
- having a single printer



## The ability for every role to save energy



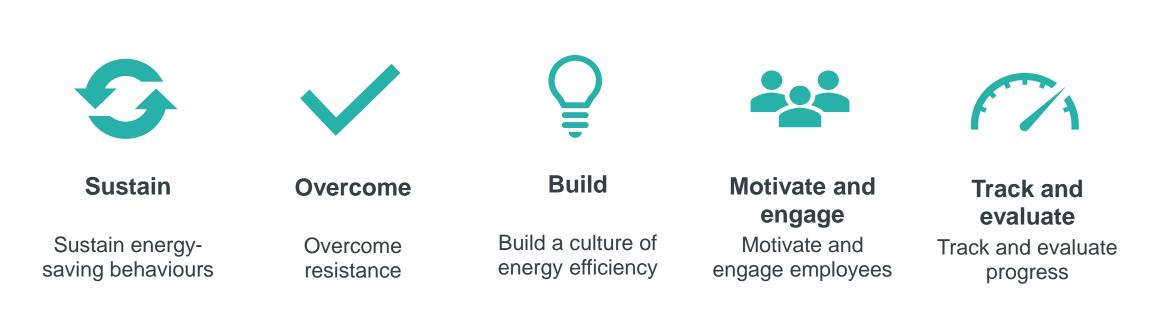


## Reinforcement



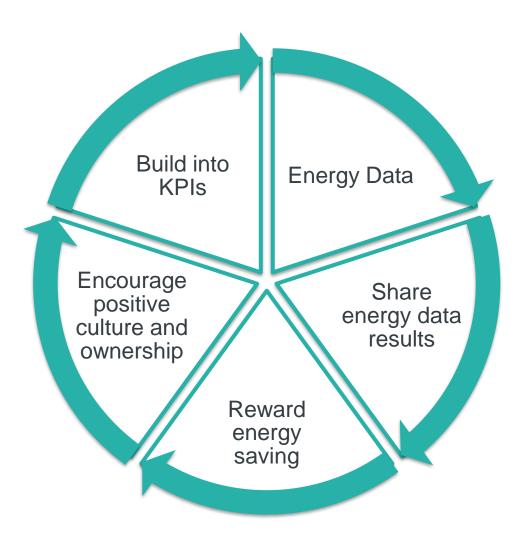
## Why reinforcement is important





## How to deliver reinforcement

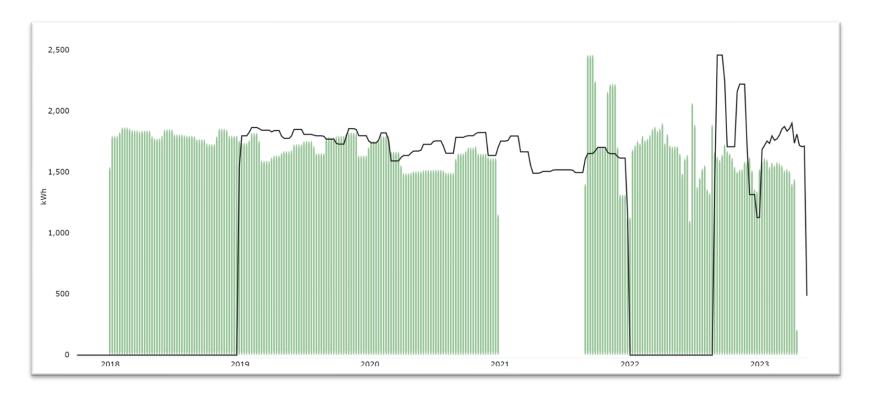






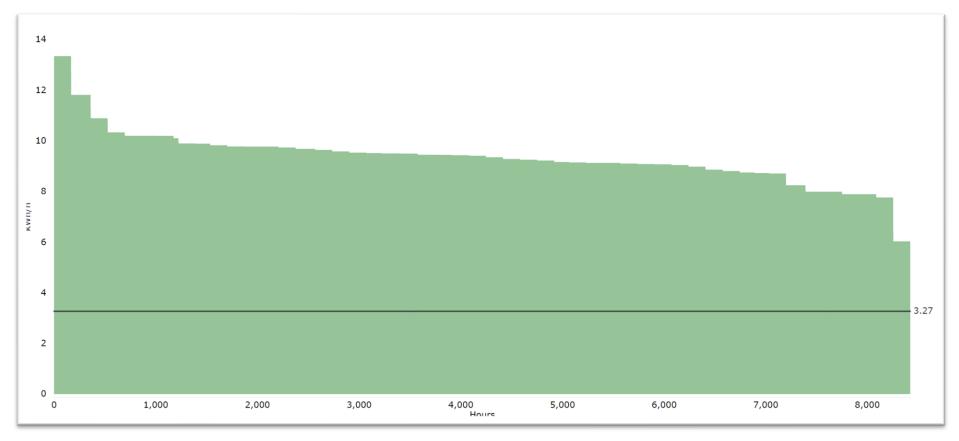


• IO-Gen platform – energy profile





• IO-Gen platform – load duration curve



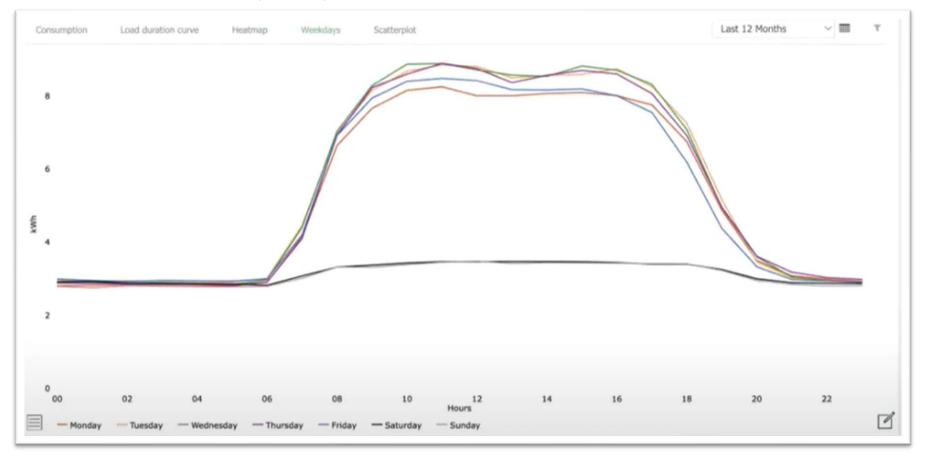


• IO-Gen platform – heat map





• IO-Gen platform – weekday analysis



## **IO-Gen summary dashboard**

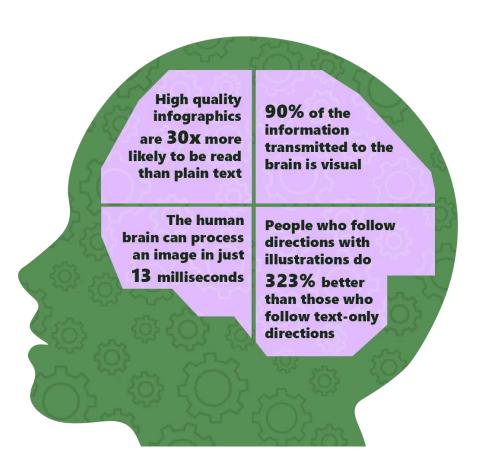


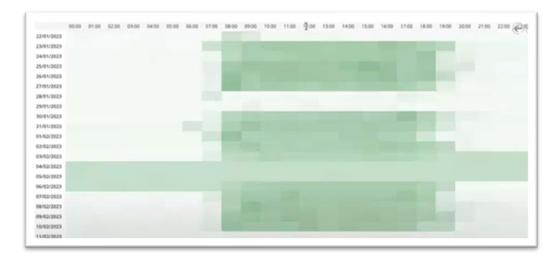


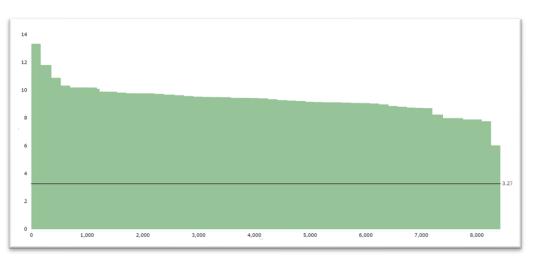
## **Reinforce behaviours**



• Energy Data

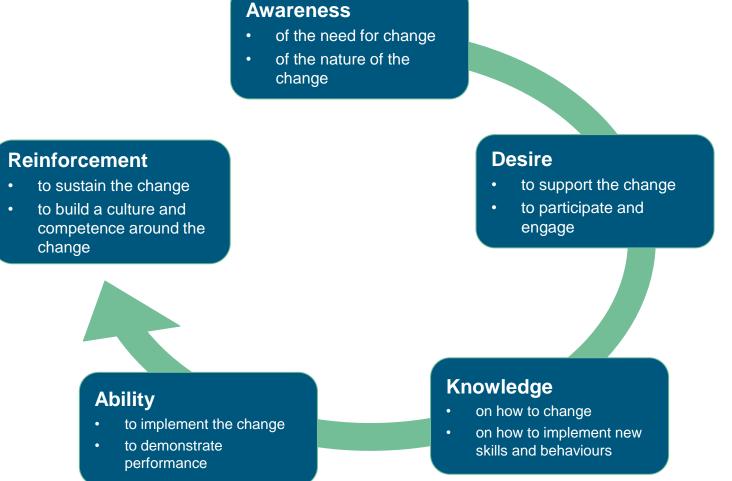






## Reinforcement



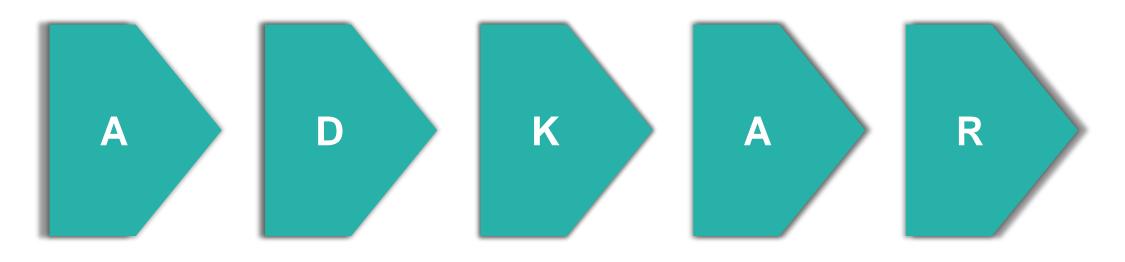


Source: https://www.researchgate.net/publication/334736458/figure/fig2/AS:785889659740160@1564382104272/5-stage-Adkar-model-i-Awareness-of-the-need-to-change-For-the-employees-to-easily-buy.jpg









Awareness Desire Knowledge Ability Reinforcement

# What behaviour changes have you implemented?



# Part 3: Taking behaviour change back into your business



## **Next steps: Action Plan**



1) Revisit CBBCC recommendation report

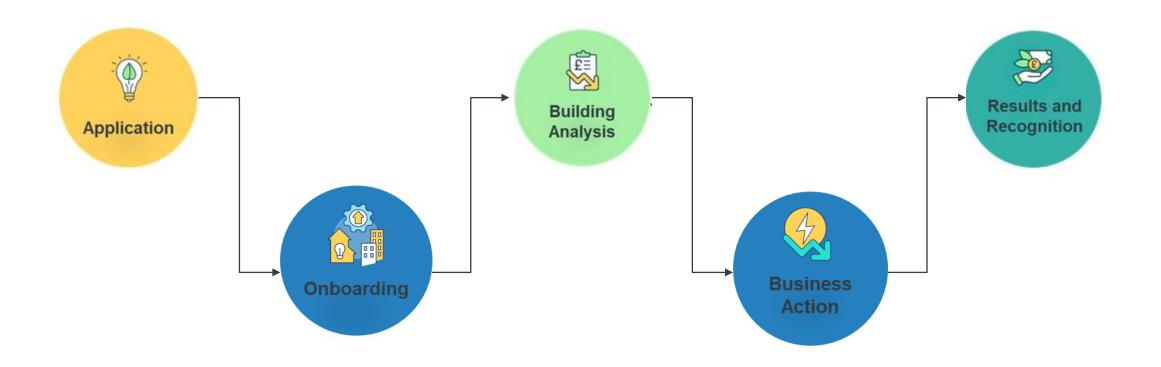
- 2) Think about potential questions such as
  - does the recommendation require any behaviour change?
  - what behaviours require changing?
  - is this behaviour change measurable?
  - does the person have the knowledge?
- 3) Use an action plan template (example below)



Behavioural Change Action Plan Template								
					Α	D	К	Α
Reference	Measure Recommended by the CBBCC audit	Does this require any behaviour change?	Teams affected 🚽	Who is responsible for implementing the change	How will we raise awareness to support the behaviour change	How will we build desire to support the behaviour	How we will improve knowledge to support the behaviour	How will we improve ability to support the behaviour
EXAMPLE #1	Record and track energy use	Yes, will require manual motor readings, tracking motor readings, notifying energy company, following trends, feeding back data to management and operational teams, investigating unusual trends.	Facilities team, operational teams, data team, comms team.	Office manager	Explain that the business is taking part in BCC and wants to reduce its energy use by 10% in year 1.	Introduce energy management into professional development plan.	Watch the CBBCC Energy management training.	Check with office manager that they can carry out the task, seek additional help from CBBCC or peers if necessary.
[e.g. 001]	[Enter a recommendation from the CBBCC audit]	[Check with your auditor during your walk around meeting if any behaviour change is required]	[Provide the names of the employees/ teams/ departments/ functions that will be affected by any behaviour change implementation]	[Identify who will be responsible for the day to day management of the behaviour change being implemented]	use to raise awareness of the	[Capture all measures you will use to build desire to support the change]	[Capture all measures you will use to improve knowledge to support the change]	[Capture all measures you will use to improve ability to support the change]

## **Business Climate Challenge journey**







## Thank you for joining





## Contact us: businessclimate@turntown.com

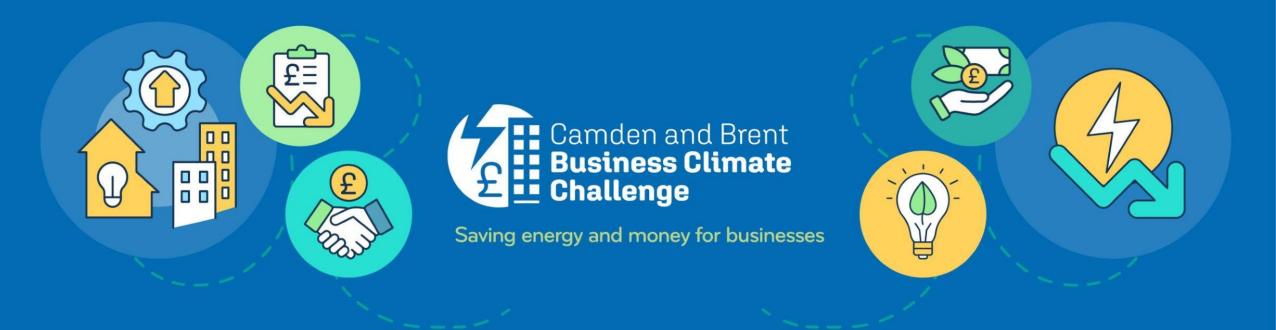






## **Additional information**







## **Case studies**



Case Study

### Awareness

#### **Furniture manufacturer**

#### The challenge:

• Energy audit identified high electricity baseload at night and over the weekend and predicted 16% reduction by daily shutdown.

#### The action:

- Manufacturing team leaders reviewed the energy efficiency recommendation report together.
- Each manager identified all electricity using equipment in their area, and considered when each piece of equipment could be switched on and off.
- Used a spreadsheet to record safe switch on and off times.
- Delegated responsibility and authority to individuals to action the agreed plan.

#### The result:

 Saved 25.4% of energy use and over £100,000 per annum from energy costs with no capital investment cost.







### Desire

### Hospitality chain (All Bar One, Toby Carvery, Harvester)

**The challenge:** Set a target to reduce energy use by 5% without impacting customer experience. Little prior experience of energy efficiency and high staff attrition.

#### The action:

- Competitions between sites, £25k of prizes e.g. iPads, days out.
- Security and cleaning staff empowered to leave 'treats' for employees who had switched off at the end of their shift.

#### The result:

Case

Study

• Campaign saved £1m within the first three months.







## The action:

Case

Study

Mandatory annual behaviour change workshop led by the onsite Energy Champion.

Target set to reduce energy use by 1% per annum across 54 sites.

- Workshop focuses on shared values, doing the 'right thing' for guests, the team and local communities.
- Training was targeted to the specific site.
- Employees made personal pledges.

#### The result:

The challenge:

- Savings in year 1 were 6.7% on the baseline.
- All savings attributed to behaviour change as no technical measure were implemented in this period.



**Butlins, Haven, Warner Leisure** 









## Ability

### **Opera North Climate Literacy Training**

#### The challenge:

- Opera North is a national opera company in Leeds that has joined the Music Declares • Emergency.
- With a switch to a renewable energy provider, it was the springboard for additional carbon • savings through behaviour change.

#### The actions:

- Measured carbon footprint and wider environmental impact. ٠
- Developed an environmental policy. •
- Invested in LED lighting, PIR sensors and PV installation as part of a £18m renovation. ٠
- Collaborated with Julies Bicycle and Carbon Literacy Project to deliver 1 day of training to all 250, to develop the ability to take action on climate (and energy) within their job and at home.
- Established a green team to keep momentum. •

#### The result:

- Data to demonstrate 23% reduction in energy use. •
  - Include all employees in the training to embed company culture

Lessons learnt

- Use an event/change as a catalyst to introduce energy efficiency behaviours
- Collaborate with other organisations





opera

north



Case Study

## Reinforcement

### **University of London – Reduce the Juice campaign**

#### The challenge:

• To reward residents in halls of residence for reducing their energy use to encourage continued and sustained effort.

#### The actions:

- Energy use data shared with each hall.
- Energy reduction performance shown compared to other halls.
- Halls with the largest energy win a 'pizza party' for all residents
- Students encouraged to generate carbon saving ideas.

#### The result:

- Campaign cost £5k but saved £18k in its first year.
- Carbon saving ideas taken forward, resulting in chefs receiving training on preparing vegan meals





Case Study





## **Resources to raise AWARENESS**



- Sample slides to raise awareness of Camden and Brent Business Climate Challenge, the 10% energy reduction target and recommendations to employees.
- Sample questions for an employer survey.
- Awareness raising days (e.g. <u>World Environment</u> <u>Day</u>, <u>London Climate Action Week</u>).
- <u>Chapter Zero Board Toolkit</u>
- <u>WWF: Our Planet: Our Business Climate talks</u> toolkit.
- Do The Green Thing posters.
- <u>Carbon Footprint Calculator | Compare Your</u> <u>Footprint</u>



## **Resources to gain DESIRE**



- Daily employee competitions with the offer of a small reward e.g. free doughnut or tree planting for energy saving.
- Competition can help to engage employees some healthy competition is always good!
- Employee league table with energy savings KPIs







## **Resources to build KNOWLEDGE**



- <u>Camden Climate Alliance</u>
- Brent Council
- CBBCC recommendation report and follow up meeting
- BCC Guides, training
- IO-Gen energy management tool
- Business Improvement District
- UK Business Climate Hub
- SME Climate Hub
- Trade groups







## **Training KNOWLEDGE**





- a day course
- accredited
- prompts individual and group action
- used by over 1200 organisations



- low-cost training platform
- no prior knowledge needed
- can be tailored to sector
- 30-minute commitment



- a free online training course for SMEs
- one hour commitment
- six modules: governance, operations, supply chain, design, finance, people, storytelling.

## **Resources to improve ABILITY**



- Training
  - Carbon Literacy Project
  - Climate Fit
  - Energy Aware
- Links to Green Team
- Links to Energy Treasure Hunt
- Sticker templates





## **Resources to support REINFORCEMENT**



- CBBCC recommendation report and follow up meeting
- Energy Audit recommendation report
- Energy Savings Trust Resources
   <u>https://energysavingtrust.org.uk/busin</u>
   <u>ess/employee-engagement-resources/</u>





#### **CBBCC training sessions**





#### Don't forget to turn off anything you're not using

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## Close

- Please complete the training feedback form that will be circulated after the training
- Sign up to future trainings, next training is end of Sept
- If your business is not yet signed up to the Camden & Brent BCC, apply by 31 July
- Businesses on our programme:
  - Supply any outstanding information
  - Attend next week's IO-Gen dashboard demo 18/07 10-10.45am
  - Explore your dashboard
  - Upload 2024 energy data to your dashboard (if not on a smart meter)



