

Applying behavioural insights to drive sustainability

APSE Energy, Big Energy Summit 2024

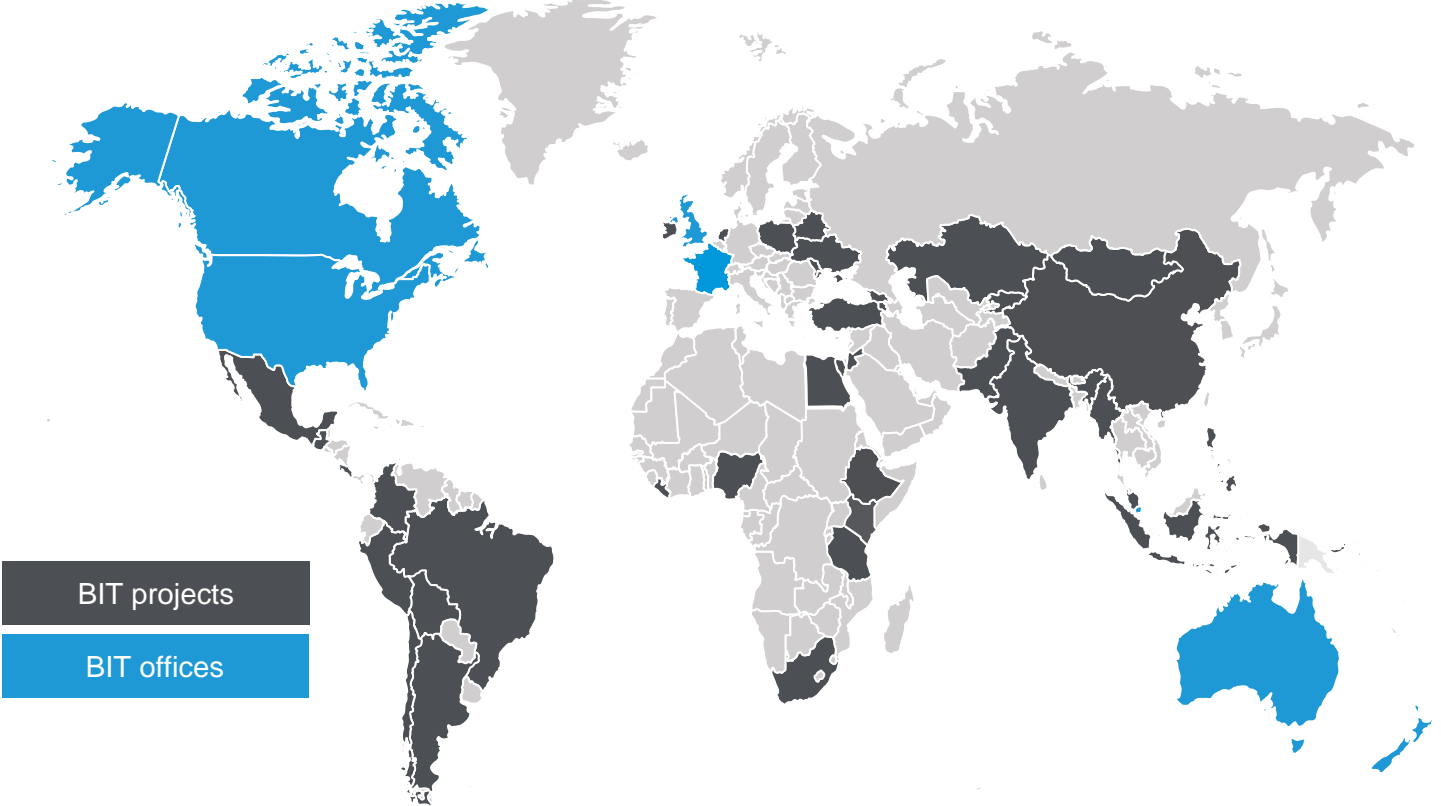
Ed Whincup, Senior Advisor, Energy & Sustainability, BIT



Introduction to BIT and behavioural insights



The Behavioral Insights Team



BIT projects

BIT offices

What are behavioural insights?



Evidence about behaviour

The study of how humans make choices and behave in real-world contexts



Practical application

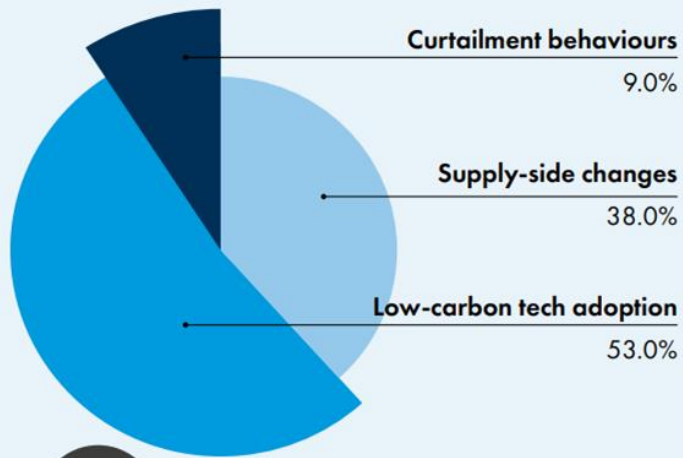
Apply this evidence to achieve meaningful change in the real world



Rigorous evaluation

Investigating the causal connection between treatment and outcomes

Reaching Net Zero heavily depends on widespread behaviour change



- According to the Climate Change Committee's 'balanced pathway' to Net Zero, 53% of emissions cuts depend on the adoption of clean heating, electric vehicles, smarter technologies and home energy efficiency improvements
- A further 9% requires the curtailment of lifestyle behaviours - less meat and dairy, more active and public transport, fewer flights and less waste
- Even the other 38% - 'supply side' changes to industry and energy infrastructure, depend on public consent for things like transmission lines, wind turbines, public expenditure and demand for strong policy

We apply behavioural science to many key sectors

Energy

- Household retrofits & efficiency
- Heat pump adoption
- Smart energy & demand side response
- Evaluation of smart meters

Water

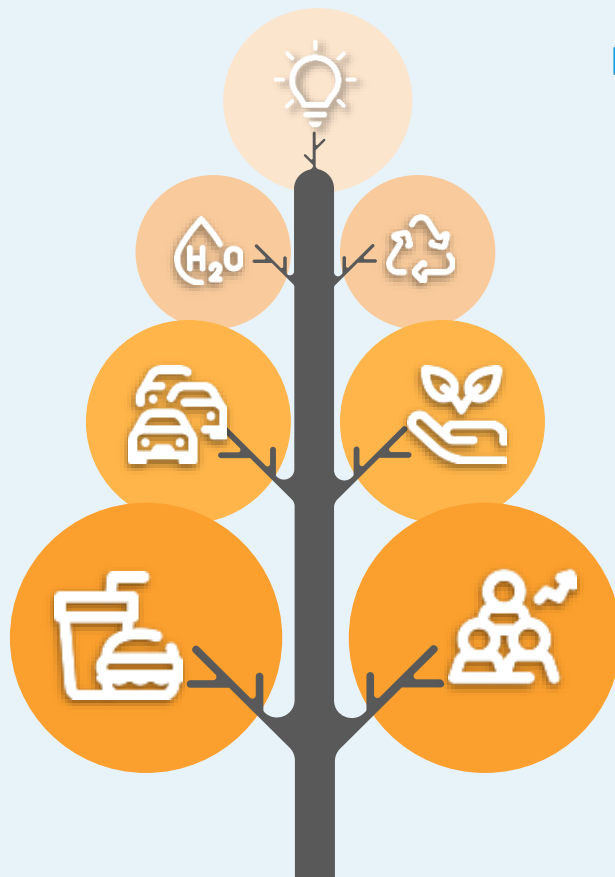
- Household water consumption
- Bill redesign & evaluation
- Metering, incentives and behaviour-change comms

Transport

- Active and public transport
- Electric vehicle adoption
- Understanding transport user needs
- Aviation demand & offsetting

Diets & agriculture

- Sustainable diets
- Food waste
- Sustainable agriculture & biosecurity



Public engagement & comms

- Climate comms strategy & design
- Public support for policy
- Public attitudes, knowledge, awareness, consent

Consumption, circular & waste

- Consumer labeling
- Recycling
- Promotion of sustainable consumption choices

Nature conservation

- Illegal wildlife trade
- Responsible recreation in nature
- Fisheries, forestry & habitat conservation
- Eco-tourism

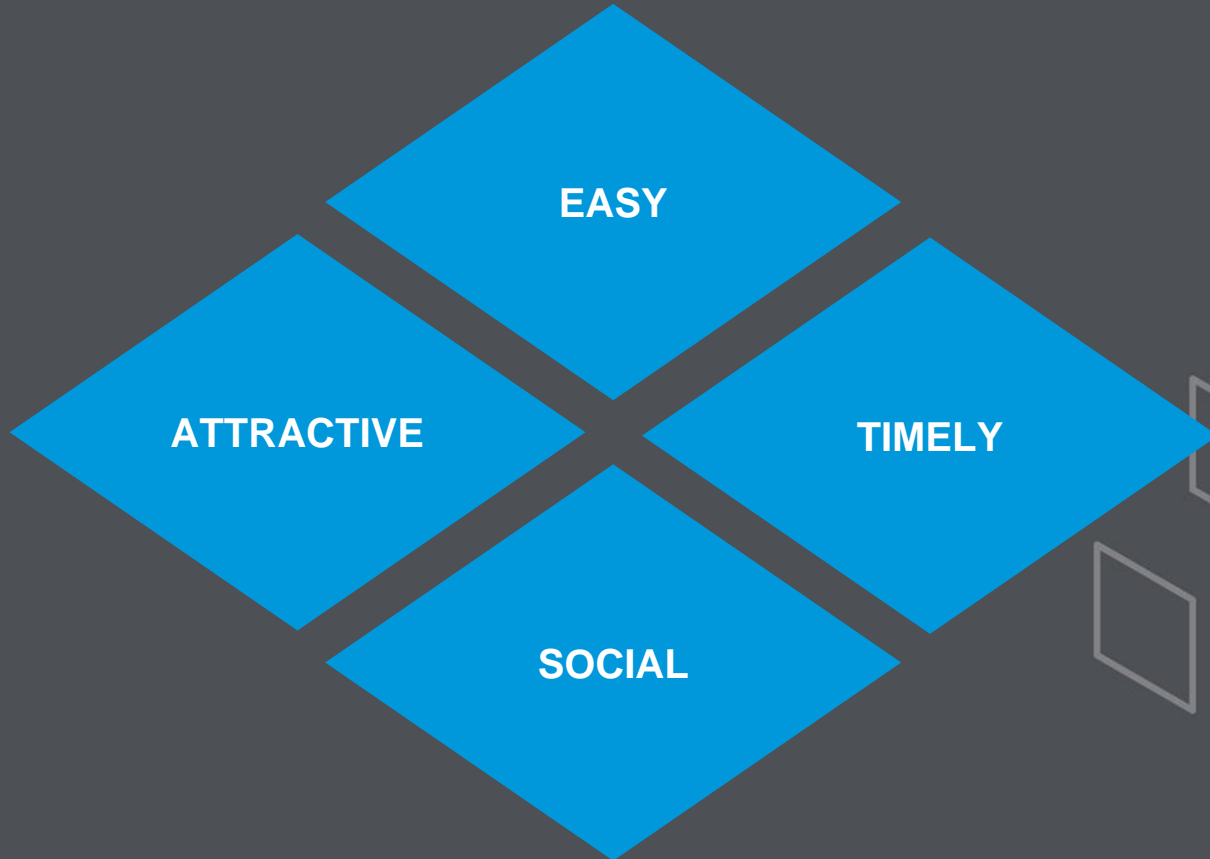
Climate resilience & adaptation

- Flood resilience
- Climate adaptation
- Green finance and labour markets

Case studies: applying behavioural insights to drive sustainability



Behavioural solutions: EAST framework



Easy

EASY

ATTRACTIVE

TIMELY

SOCIAL

Make it easy



Set intelligent
defaults



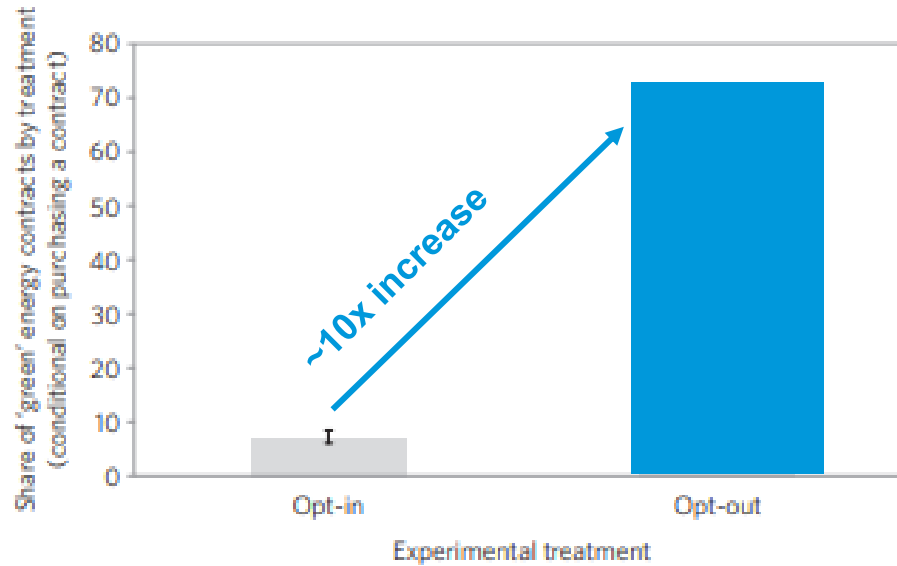
Reduce the
hassle



Simplify



Defaulting people into using renewable energy



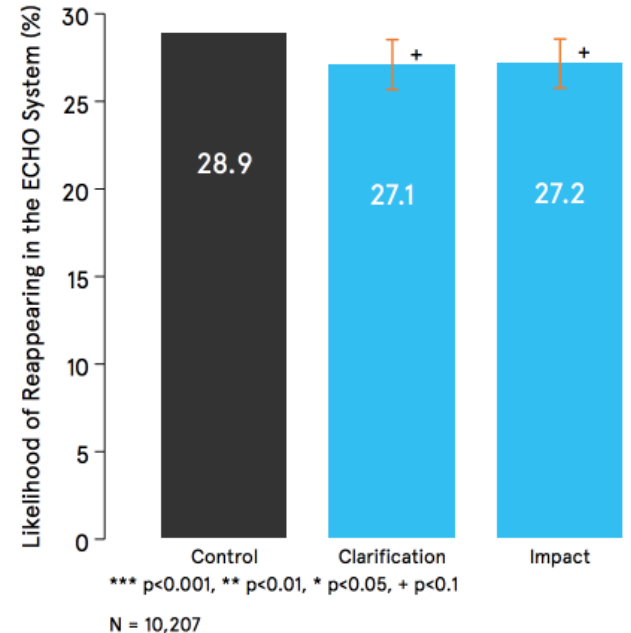
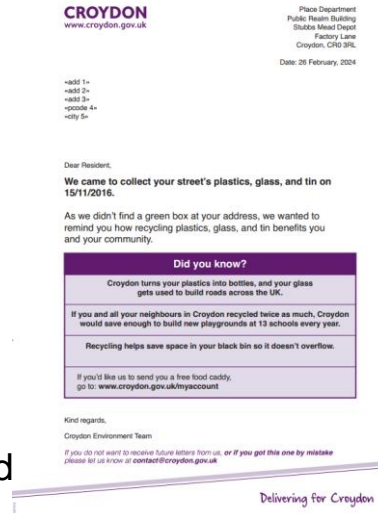
Defaults / auto-enrol the green choice led to **~10x increase** in customers using renewable electricity

Increasing recycling participation in Croydon

What we did: We worked with the London Borough of Croydon to test whether behavioural science could help to improve recycling rates.

We sent residents who missed a recycling collection one of two feedback letters, to encourage putting recycling out. The first used social impact messaging, detailing other ways that Croydon could spend the money it currently spends on landfill tax. The second clarified what could be recycled and when it was collected.

What we found: Both letters reduced the likelihood that people missed a collection the by about **6.2%**.



Attractive

ATTRACTIVE

EASY

TIMELY

SOCIAL



Make it attractive



**Attract
attention**



**Personalise
experience**



**Provide
incentives**

Incentive design: it's not just about money

- In 2015, the UK introduced a 5p charge for plastic bags (more recently increased to 10p)....



Did it work?



**97% drop in plastic bag
usage**



*140 bags per year per user before
vs
Just 3 bags per year per user after!*

...So how can such a small
incentive be so effective?

SOCIAL

EASY

ATTRACTIVE

TIMELY

SOCIAL


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In partnership with



Cabinet Office

Make it social



Highlight helpful
social norms



Leverage networks



Use reciprocity
effects



Social comparisons in energy bills



UtilityCo
1515 N. Courthouse Road, Floor 6
Arlington, VA 22201-2959

0014437 0823-C104 J#14851-730065
*****AUTO**DIGIT 12345

JANE JOHNSON
3434 WAVERLEY STREET
CITY, STATE 12345

Home Energy Report
May 20, 2015
Account number 8249865991

We've put together this report to help you understand your energy use and what you can do to save.

Find a list of rebates and energy-saving products and services you can buy.
www.utilityco.com/rebates

Here's how you compare to neighbors

Category	Usage (kWh)
Efficient neighbors	485
Average neighbors	602
You	648

Apr 21, 2015 - May 20, 2015
This is based on 87 similar homes within approx. 4 miles. Efficient neighbors are the 20% who use the least amount of electricity. See back for details.

Neighbor comparison over time

Month	You (kWh)	Average neighbors (kWh)	Efficient neighbors (kWh)
Dec	450	400	300
Jan	480	420	320
Feb	450	400	300
Mar	500	450	350
Apr	650	550	450
May	700	600	500

Tips from efficient neighbors

- Unplug electronics when they're not in use. Save up to \$75 per year.
- Replace your inefficient light bulbs. Save up to \$30 over the bulb life.

Turn over →

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We motivate millions to become more energy efficient

HOME ENERGY USE

- GREAT 😊
- GOOD 😊
- MORE THAN AVERAGE

8% more electricity than average neighbors

Over the last 6 months, you used 182 extra kWh than your neighbors.

Sustained 1.5-3.5% energy saving, and 3-5% peak reduction.

Household rooftop solar contagion



Adding rooftop solar panels increased average installations within a half-mile radius by 0.44 in Connecticut – replicated similar findings in California and Europe.

Research in Europe indicates **visibility** drives effect – panels integrated into side of building lead to more new adoptions than panels attached to roof.

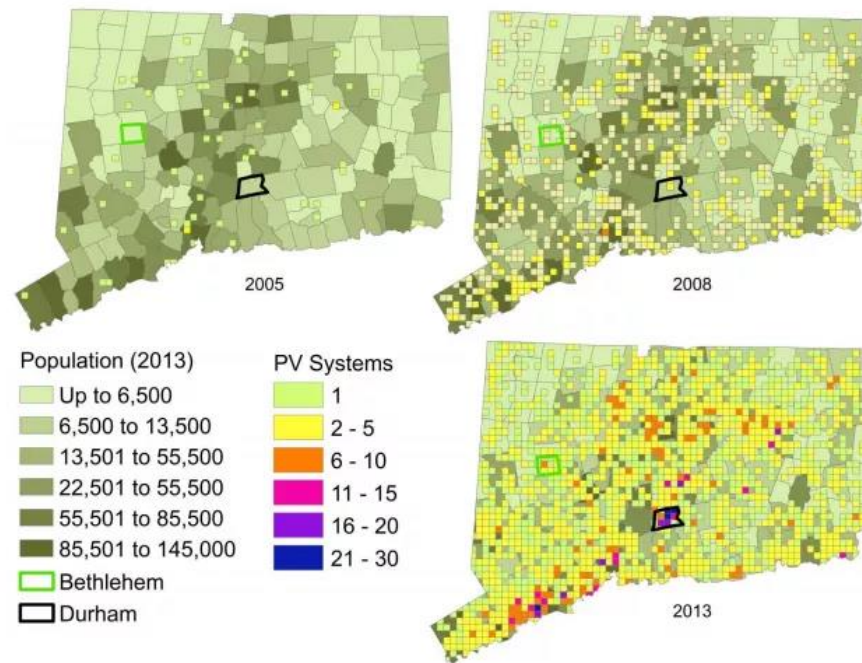


Figure 6. The spatial pattern of adoption does not simply follow the population distribution; even at early stages of adoption solar PV systems diffuse from small- and medium-sized centers.



TIMELY

EASY

ATTRACTIVE

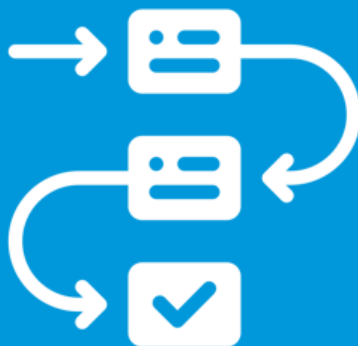
TIMELY

SOCIAL

Make it timely



Consider the
immediate costs and
benefits



Help people plan



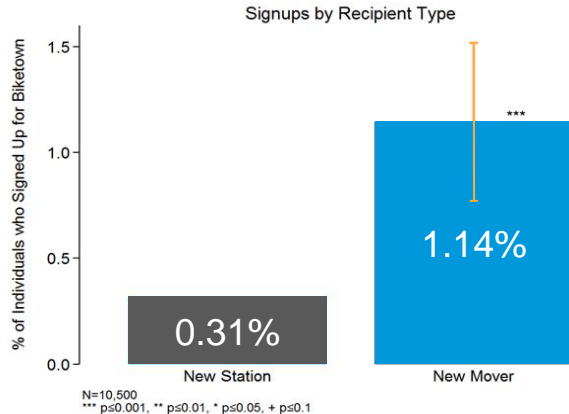
Prompt people when
they are most likely
to be receptive



We encouraged active travel by leveraging timely moments

What we did: With the US city of Portland, we conducted a randomised controlled trial to encourage modal shift among commuters. Specifically to encourage them to sign up to a bike sharing scheme - testing leaflets and a promotion code.

What we found: We found that those who had just moved houses were about 4 times more likely to sign up - showing the value of encouraging habit change at moments of disruption.



The city transportation bureau have subsequently used these findings to help encourage municipal bike sharing.

Final comments

Where can LAs play a role?



Where can LAs play the biggest role?

- A key advantage is **access** to consumers & businesses through existing touchpoints:
 - Written communication channels e.g. council tax letters, local updates, planning etc.
 - Council websites/online portals
 - Particularly relevant when it comes to leveraging **timely** moments
- Areas of potential focus:
 - **Simplifying processes:** E.g. planning permission, applying for funding, connecting people to trained installers, one stop shop services? etc.
 - Relevant for heat pump adoption, home energy efficiency improvements, battery energy storage systems etc.
 - Local show homes/EV test drives
 - Collective purchasing agreements
 - Creating the right financial incentives through funding and grants

We'd love to speak to your experience in applying BI

- Collaborating with Energy Systems Catapult (ESC) on a project to assess the key needs of LAs and where support is most needed regarding behavioural insights and behaviour change, commencing in March 2024
- We'd love to speak with LAs about your experience, pain points, and ambitions of applying BI to tackle Net Zero challenges
- Please visit the ESC stand in the exhibition area if you'd like to sign up.

Q&A



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