



UN SDG Goal 7

Ensure access to affordable, reliable, sustainable and modern energy for all

The goal of this project is to promote the United Nation's Sustainable Development Goal 7: Affordable and clean energy, by focusing on one of its primary targets to double the global rate of improvement in energy efficiency. To achieve this goal, we have tried to reduce the domestic energy consumption of cash-rich families as researches suggest that the top 10 per cent of UK earners use as much as three times the energy as the bottom 30 per cent.

Target 7.3

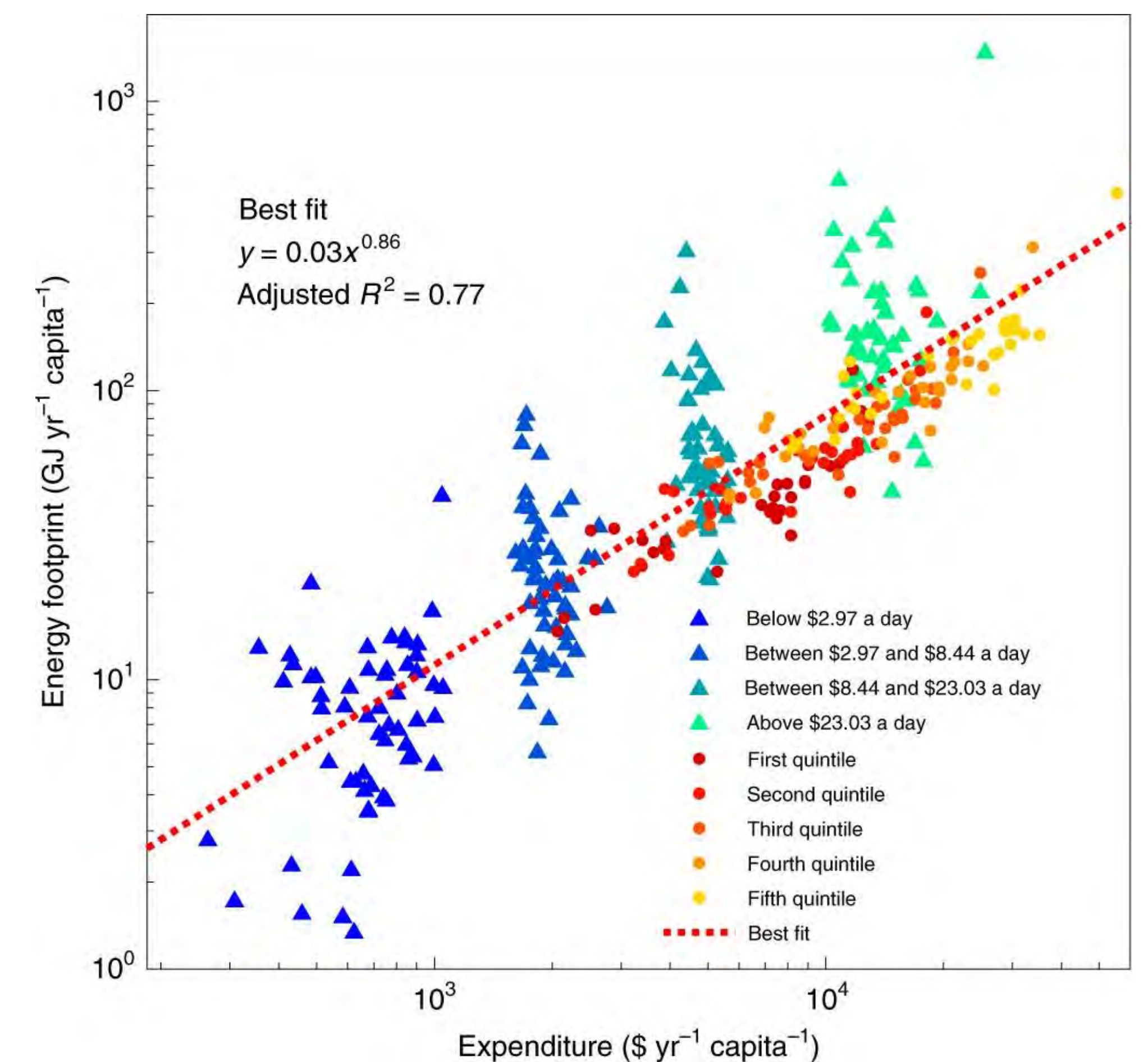
By 2030, double the global rate of improvement in energy efficiency

Area of Focus

The energy intensity of goods and services used by higher-income groups leads to higher energy footprints when compared to that of the lower-income groups (Oswald, Owen and Steinberger, 2020).

The graph laid out between expenditure and energy footprint showcases that people's energy footprint rises along with their income and their ability to spend more. This inequality in spending capacity leads to the energy crisis which again affects the lower-income group.

This problem provided our group with the opportunity to design a solution which encourages the high-income group to reduce their domestic energy usage.



Reference:

Goal 7 | United Nations Department of Economic and Social Affairs. <https://sdgs.un.org/goals/goal7>

Oswald, Y., Owen, A. & Steinberger, J.K. Large inequality in international and intranational energy footprints between income groups and across consumption categories. *Nat Energy* 5, 231–239 (2020). <https://doi.org/10.1038/s41560-020-0579-8>



Primary Research

The primary research data of our targeted user group was taken from the LEEDR (Low-Effort Energy Demand Reduction) research project conducted at Loughborough university which has integrated energy monitoring and social anthropological understanding of household energy use.

The Young Good Life Family

“We might have the money to make changes, but just don’t have the time.”

Secondary Research

While conducting secondary research, we have identified that our target user group falls under Established Liberals which is one of the seven British segments of families formulated by Britain Talks Climate. This classification helped us find the core beliefs of this group and how to positively encourage them to change their behaviour.

Characteristics of Established liberals who contribute to 12% of British public are:

- Comfortable, trusting and untroubled perspective due to their financial security
- Value compassion and compromise and are highly civically engaged
- Worry about climate change



Data analysis

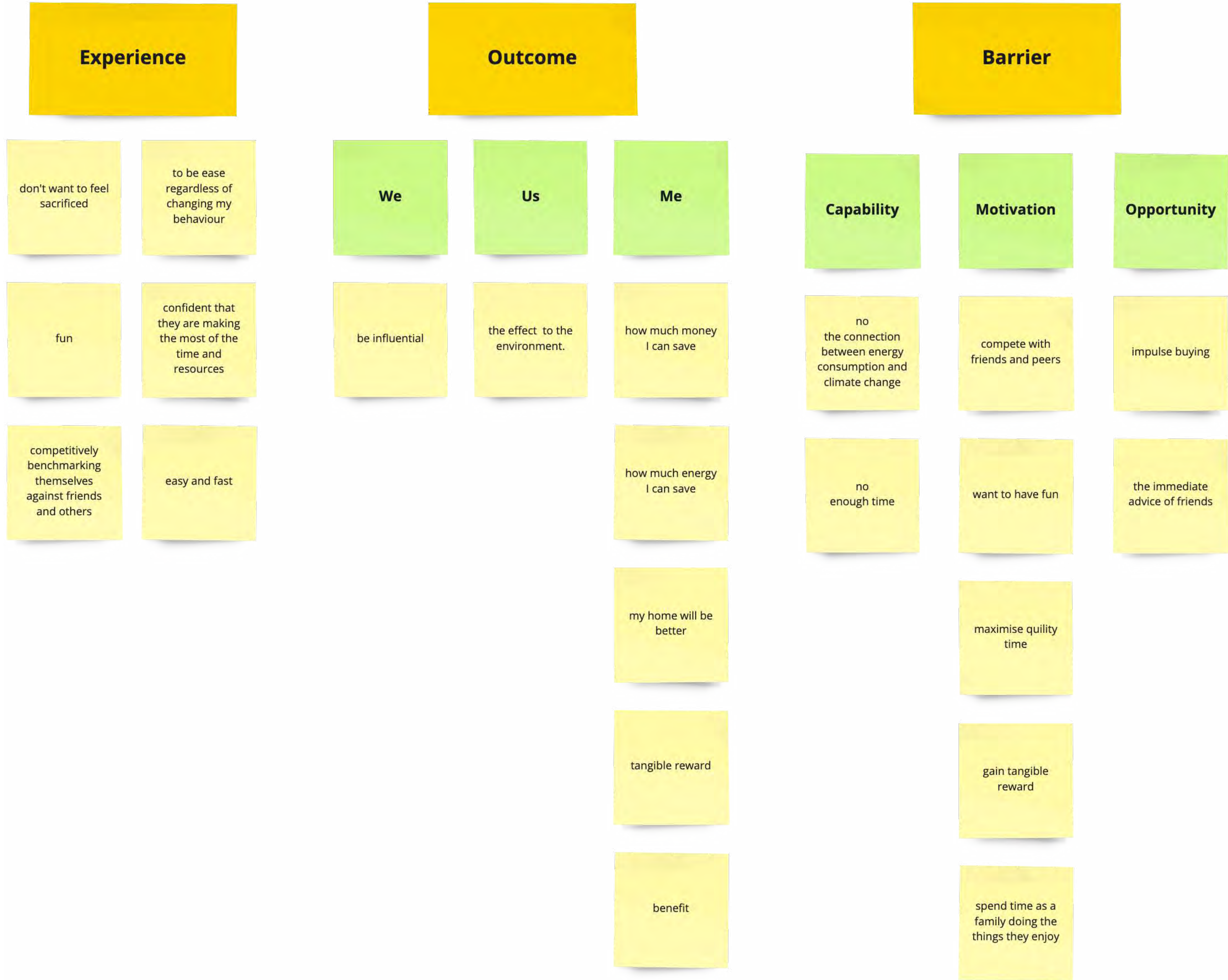
The key challenges in encouraging behaviour change was identified using the COM-B model which identifies the capabilities, opportunities and motivational barriers in changing their behaviour. Affinity map was created laying down the experience goals, end goals and barriers which helped us make the needs and pain points of the user more clear to develop the user persona.

Sources:

LEEDR research project - <https://www.lboro.ac.uk/research/avrrc/research/currentprojects/energy/low-effort-energy-demand-reduction.html>

The seven British segments - <https://climateoutreach.org/britain-talks-climate/seven-segments/established-liberals/>

Research Methodologies



Affinity Diagram


User Persona

Key insights were extracted as a result of the data analysis process and user persona was developed which focuses on the goals and pain points of the user.

Key insights - User's point of view

- I want to know the **effective behaviour I can achieve** to decrease the energy consumption
- I want to **feel confident** that I am making the most of the time and resources I have
- I want to **change my behaviour of using energy** in a easy and fast way
- I want to visually see the **effects of changing my behaviour** towards using energy

Persona

 <p>Janna (32)</p>	<h3>Key Demographics and Behaviour</h3> <ul style="list-style-type: none">• 2 kids at primary school• 30's part-time manager• Has decent income• Focus on the family's health and wellbeing
<h3>Goals</h3> <ul style="list-style-type: none">• To be more confident using energy efficiently• To spend money on the health and happiness of family <h3>Needs</h3> <ul style="list-style-type: none">• Management tools to make the most of her limited time• A way to clean home more efficiently• Long-term challenges for her to do with friends	<h3>Pain Points and Frustratuion</h3> <ul style="list-style-type: none">• The housework takes too long to be together with her family and friends• Worries about climate change and how it will affect the health of the family and their outdoor activity• Listen to friends' opinions and suggestions, having no time to confirm if they are good or not

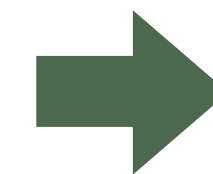
UX Vision Statement

Insights from the persona was used to generate User Need Statements which links the user goals and the pain points connected to those goals. These statements were summarised together to form the UX vision statement.

User Need Statements

Insight 1

- A mother who cares about her family
- Worries about the environment
- Engage in climate change action
- Worries about the climate change and how it will affect the health of the family

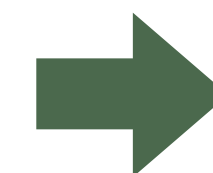


Statement 1

As a parent who worries about the environment
I need to positively engage in the clean energy actions
so that my kids can have a safe and secure future

Insight 2

- Part-time worker
- Does not have enough personal time
- Reliable suggestions on taking action rapidly
- Follows immediate advice of friends and is accustomed to acting on impulse

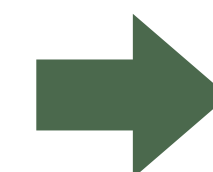


Statement 2

As a working parent who doesn't have enough personal time
I need reliable suggestions on taking action rapidly
so that I can spend more quality time with my family

Insight 3

- Who is in charge of the household
- Accustomed to acting on impulse
- Know effective ways to reduce energy consumption
- Does not have time to seek information on her own



Statement 3

As a parent who is accustomed to acting on impulse
I need accurate and effective ways to reduce domestic energy consumption
so that I feel confident about making the best of my resources

UX Vision Statement

*We believe there is an opportunity to design a mobile app for **cash-rich time constrained parents** that encourages them **to use energy efficiently and engage in climate change activities**, to **overcome their worries about having a safer environment for the future of their kids** and experience to be a positive role model among their social circle.*