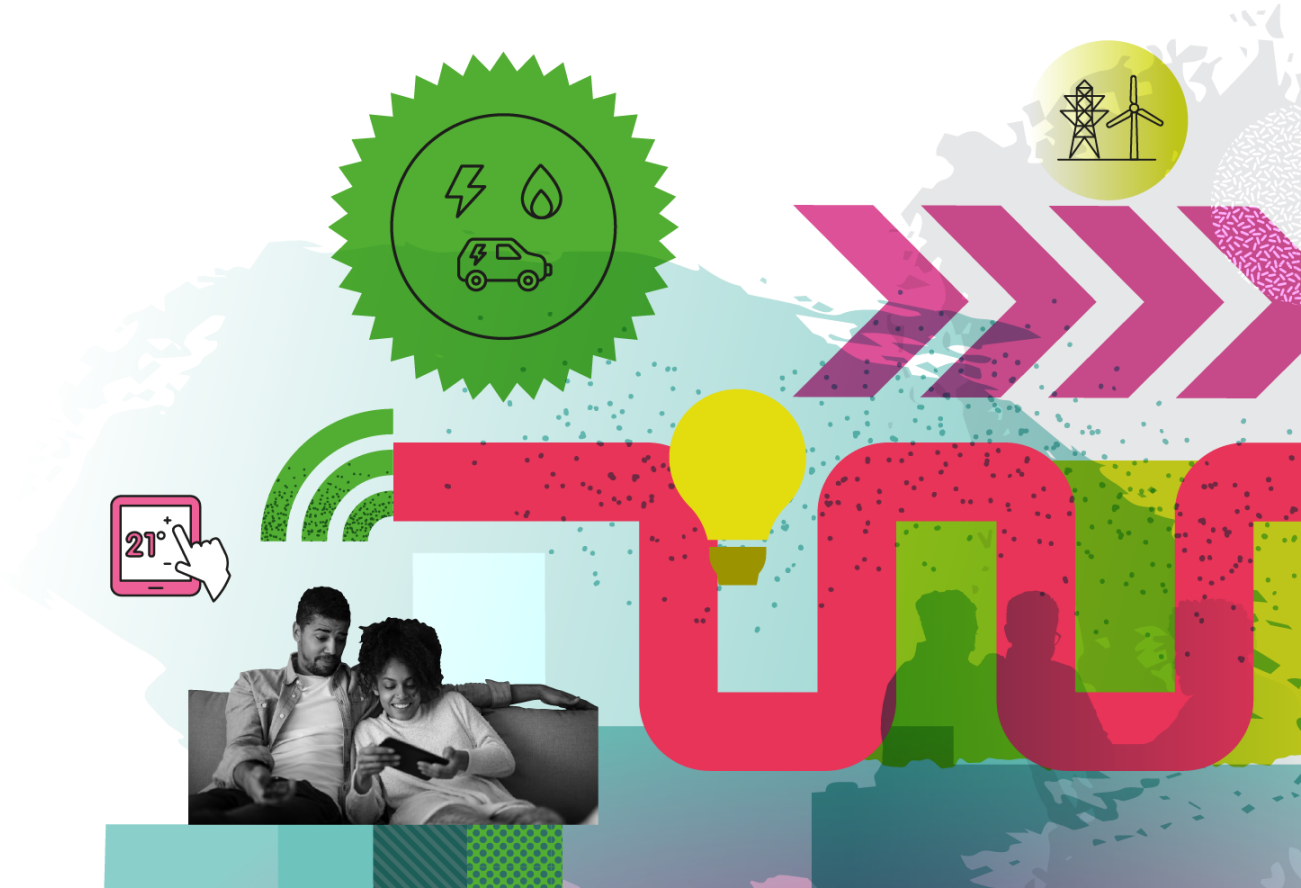
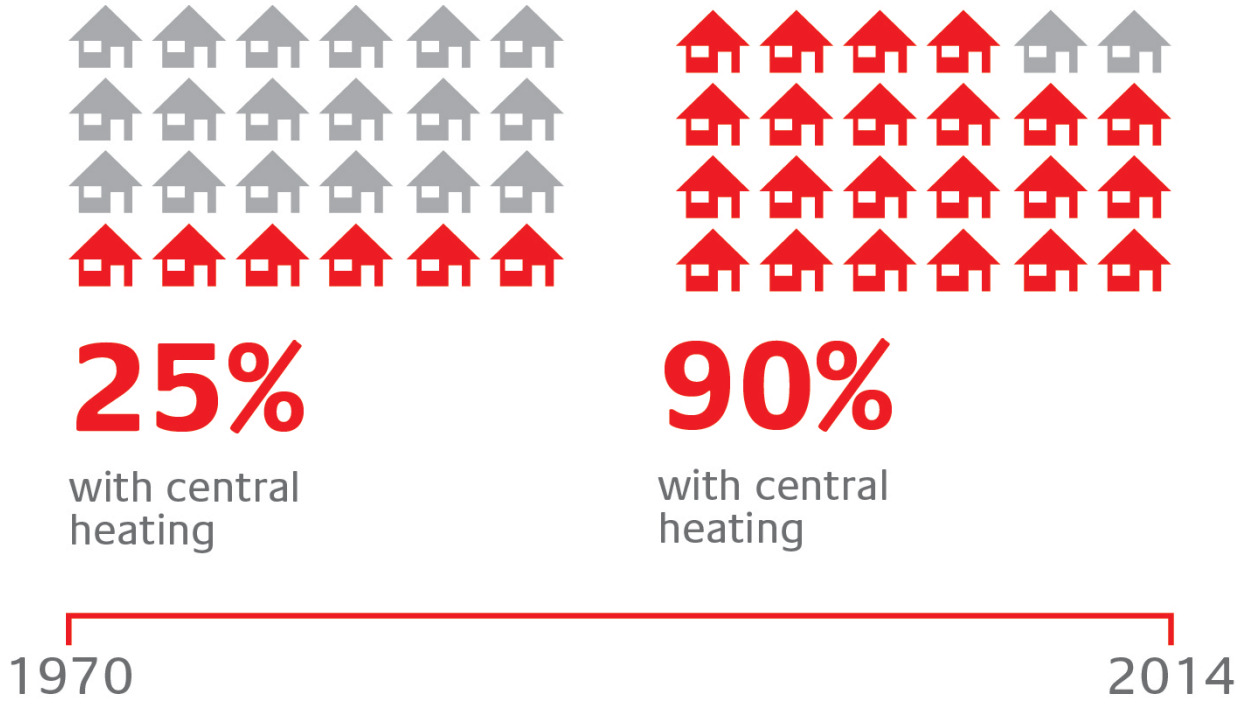
Could we make low carbon heat better than what we have?

Matthew Lipson
Business Leader – Consumer Insights

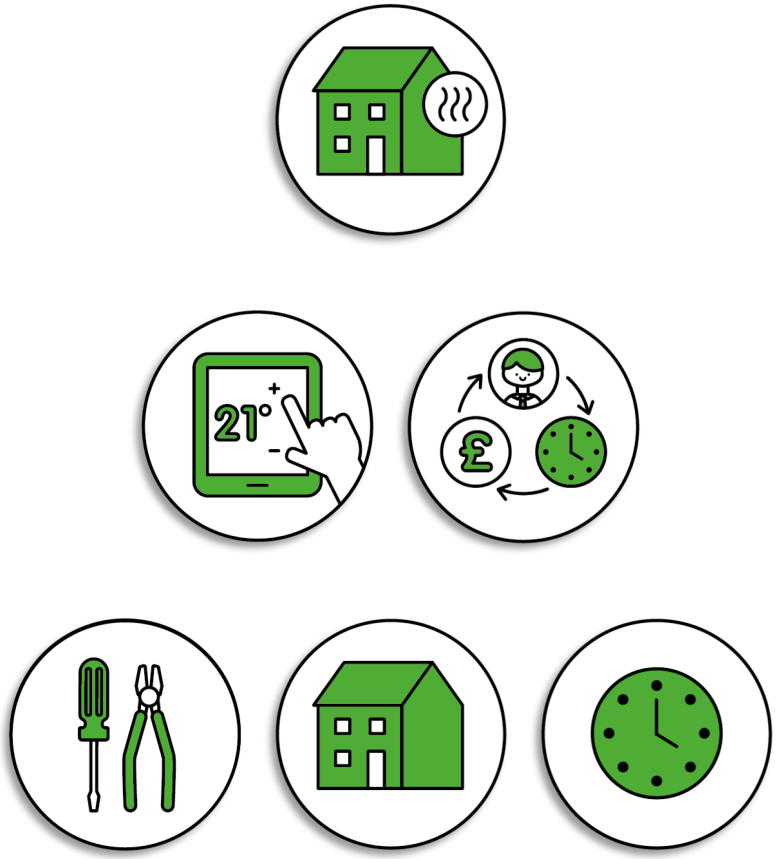


@EnergySysCat LinkedIn

Rapid change is possible if consumers want it: heating



Low carbon heat can be great but there are consumer challenges (even if the cost was comparable)



Improve low carbon heating systems

Make low carbon heating easy to control

Make low carbon heat systems easy to install

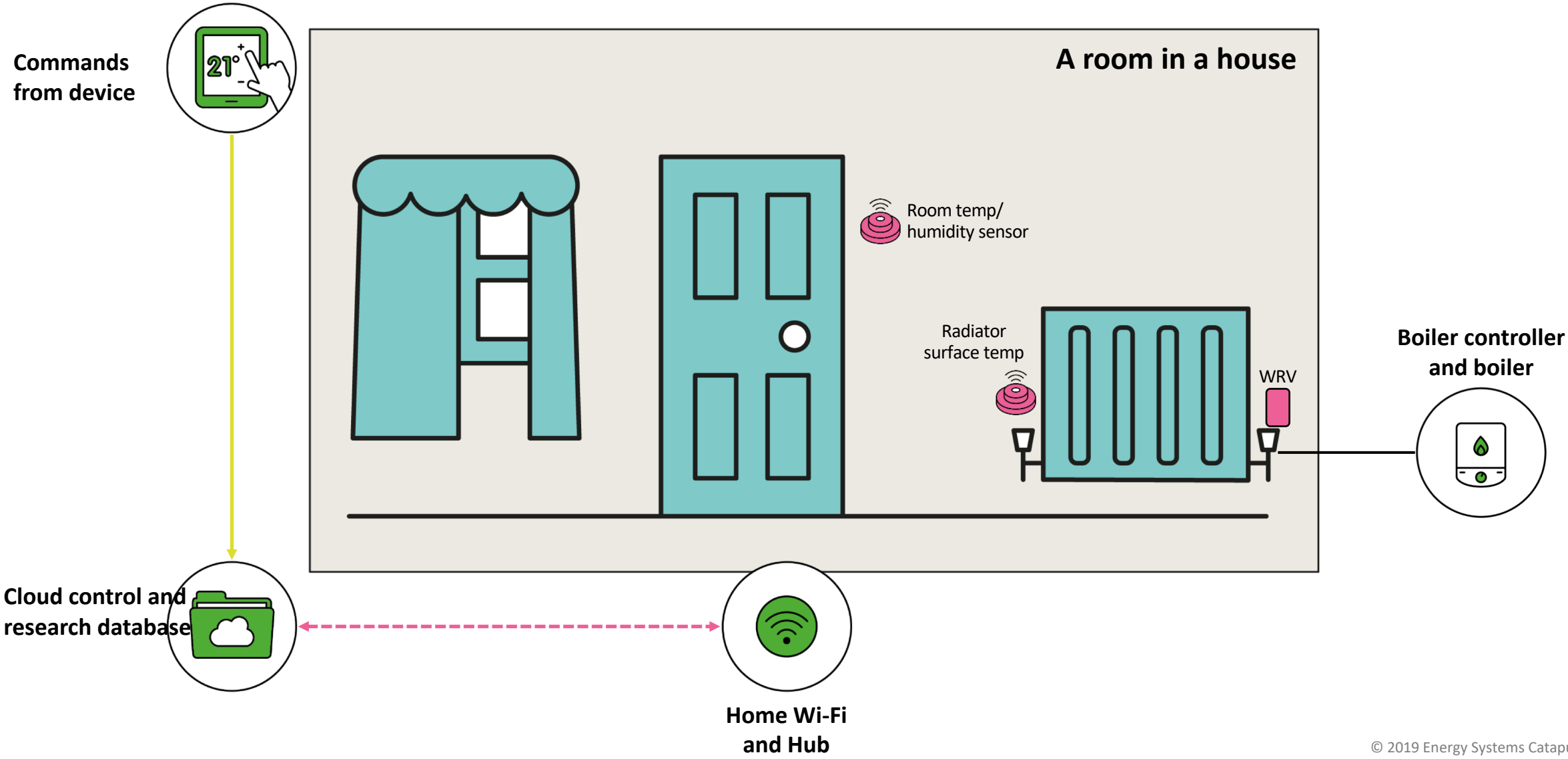
Consumers experience widespread problems that others sectors would see as spurs to innovate

Most consumers experience damp, drafts and overheating

Other sectors can discover what consumers want

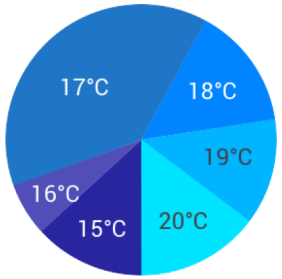
Could the smart home hold the key?

We upgraded homes to the 2020s level of data and control



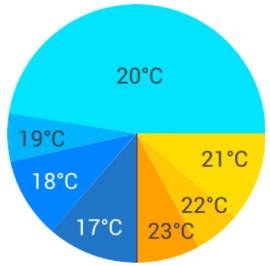
Everyone enjoys better control, but they use it very differently (e.g. temperature)

Cool Conservers



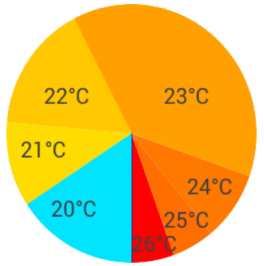
Often adjust temperature to try and cut bills

Hot and Cold Fluctuators



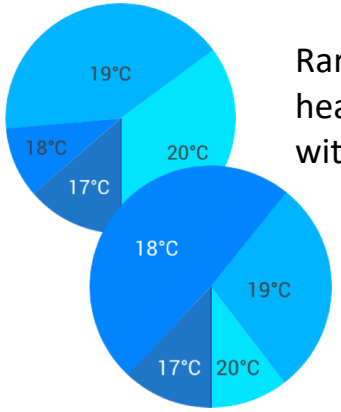
Often adjust temperature to get comfortable

On-Demand Sizzlers



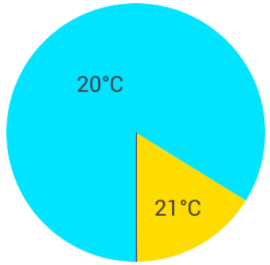
Some like it hotter or want to spend more than others in their home

Steady and Savvy



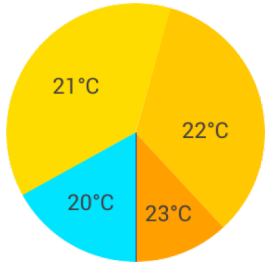
Rarely adjust their heating as they are fine with 18-20°C

On-off Switchers



Turn it on and off to try and make sure home is only warm when someone is in

Toasty Cruisers



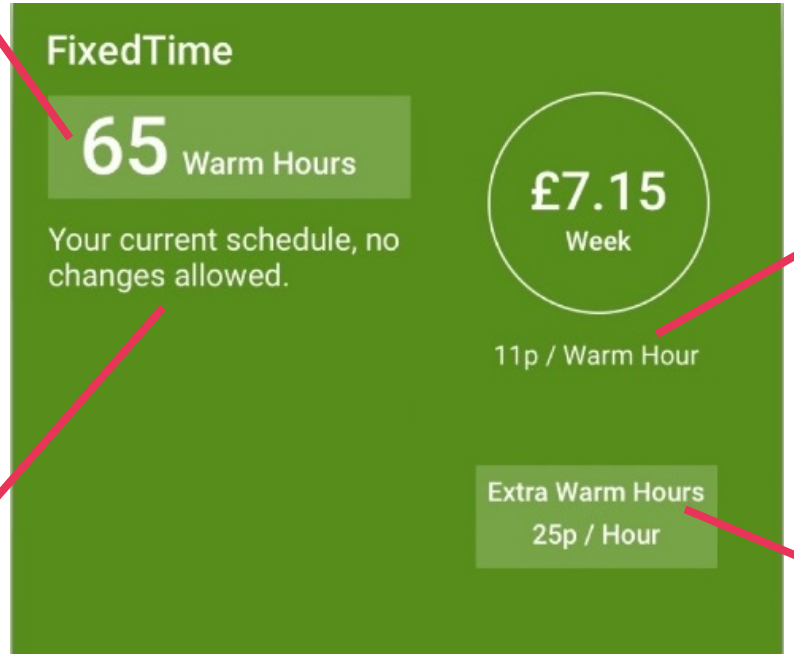
Love feeling cosy and prefer not to put clothes on if they're cold

Other sectors apply usage data to improve systems design (e.g. automotive)

Digitalisation could enable the heating sector to improve low carbon solutions

Heat Plans: a starter-for-ten energy service

Warm hours
Hours any room is warm

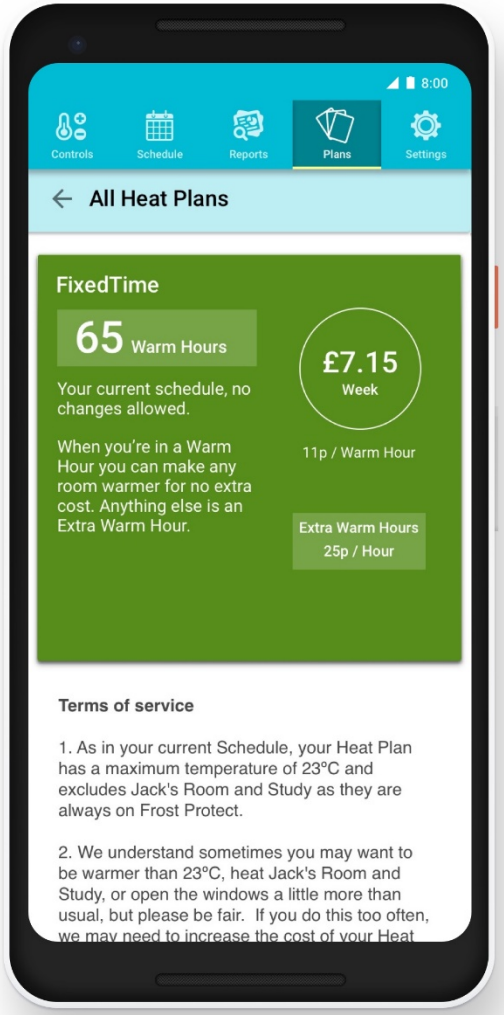


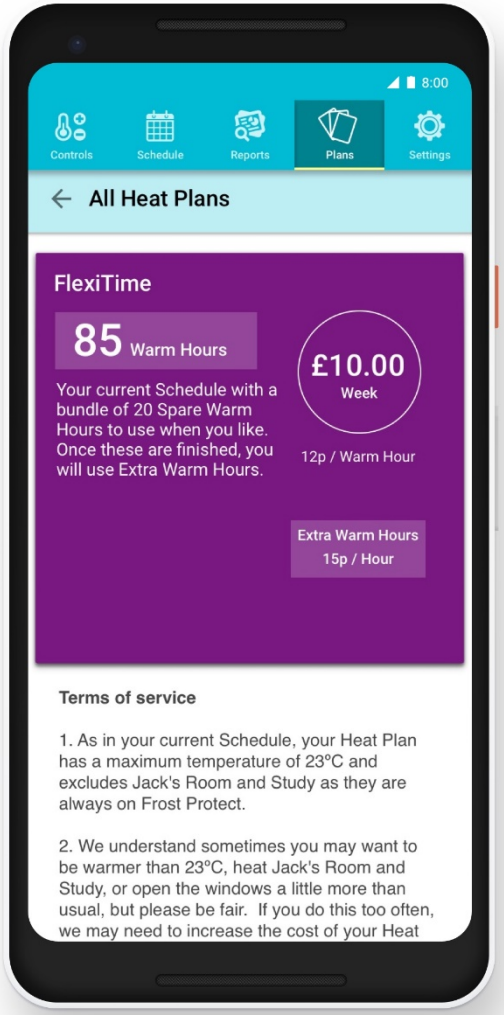
Pence per warm hour
Like “mpg” for heating

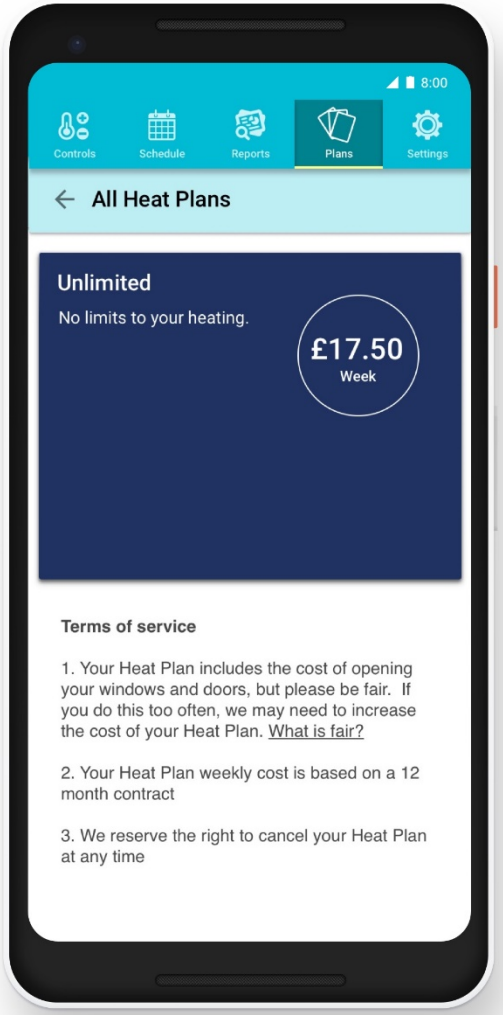
Schedule
Temperature of rooms at any time

Extras
Cost of warmth outside the schedule

Offered households the chance to ‘buy’ Heat as a Service







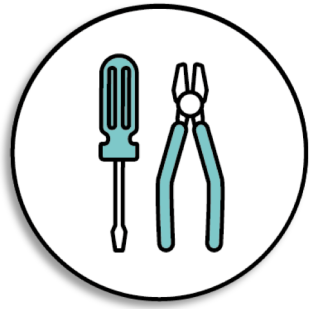
Businesses could use this data to offer households tailored retrofits that prepare their homes for low carbon heat

Supports design of a local energy plan that can deliver net zero

Plans inform investment in networks, developments and communities

Data about household and building

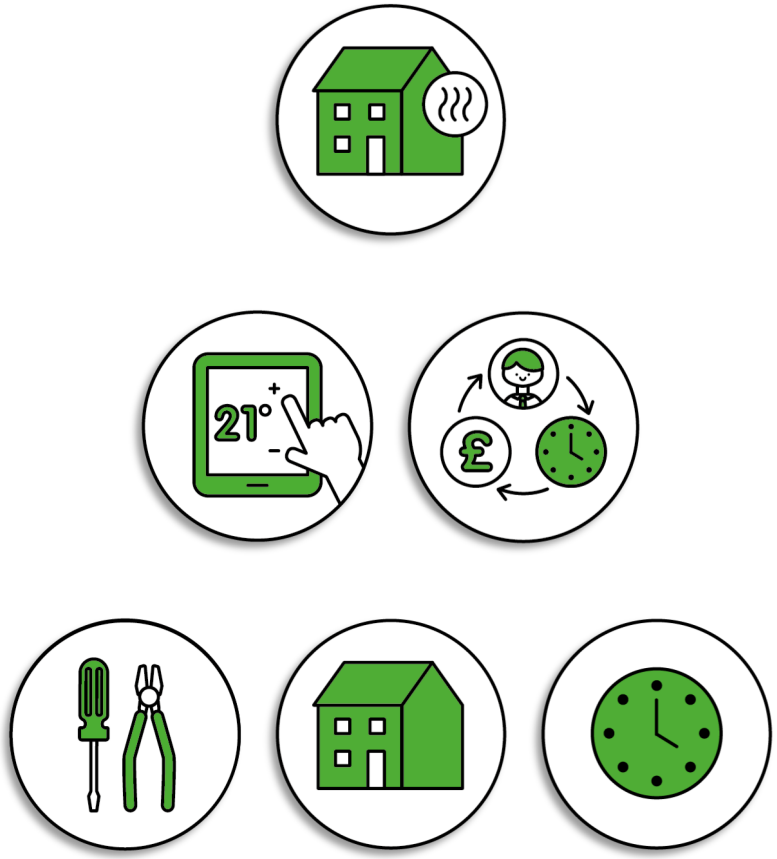
Shows when cannot get comfort they want (e.g. lounge feels cold)



Used to design retrofit that improves comfort and energy efficiency

Prepares home for low carbon heating that suits that area

Smart technologies can help tackle consumer challenges to low carbon heat (once the cost is comparable)



Improve low carbon heating systems

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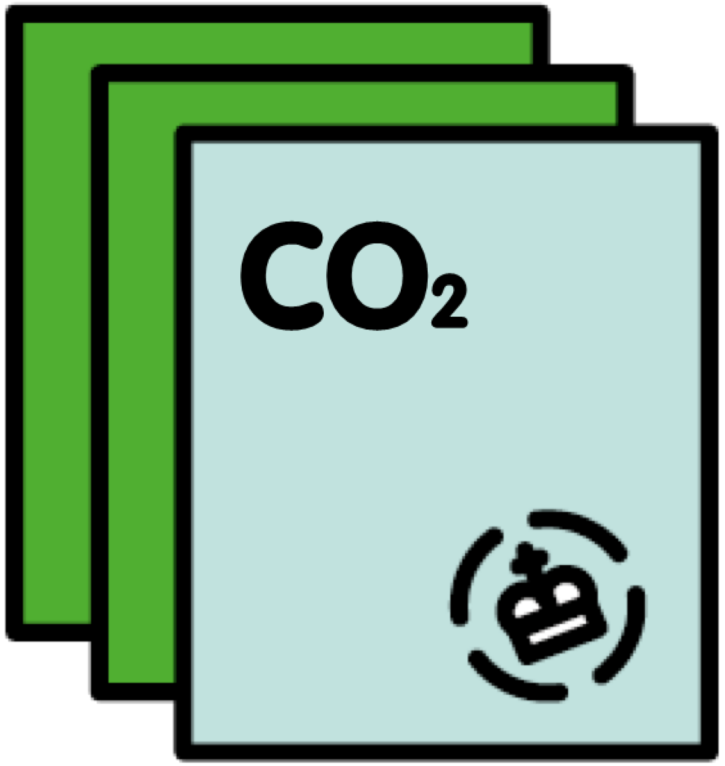
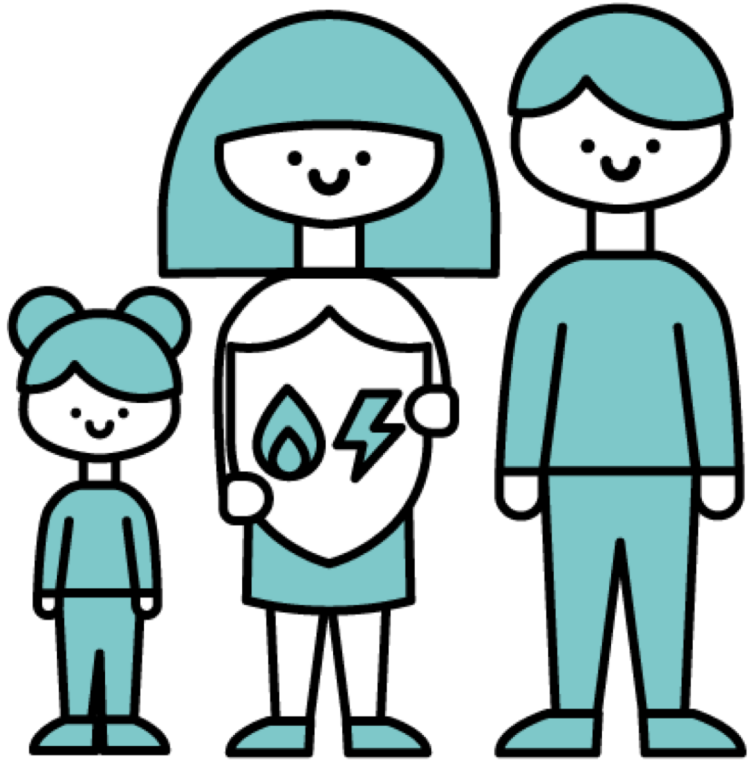
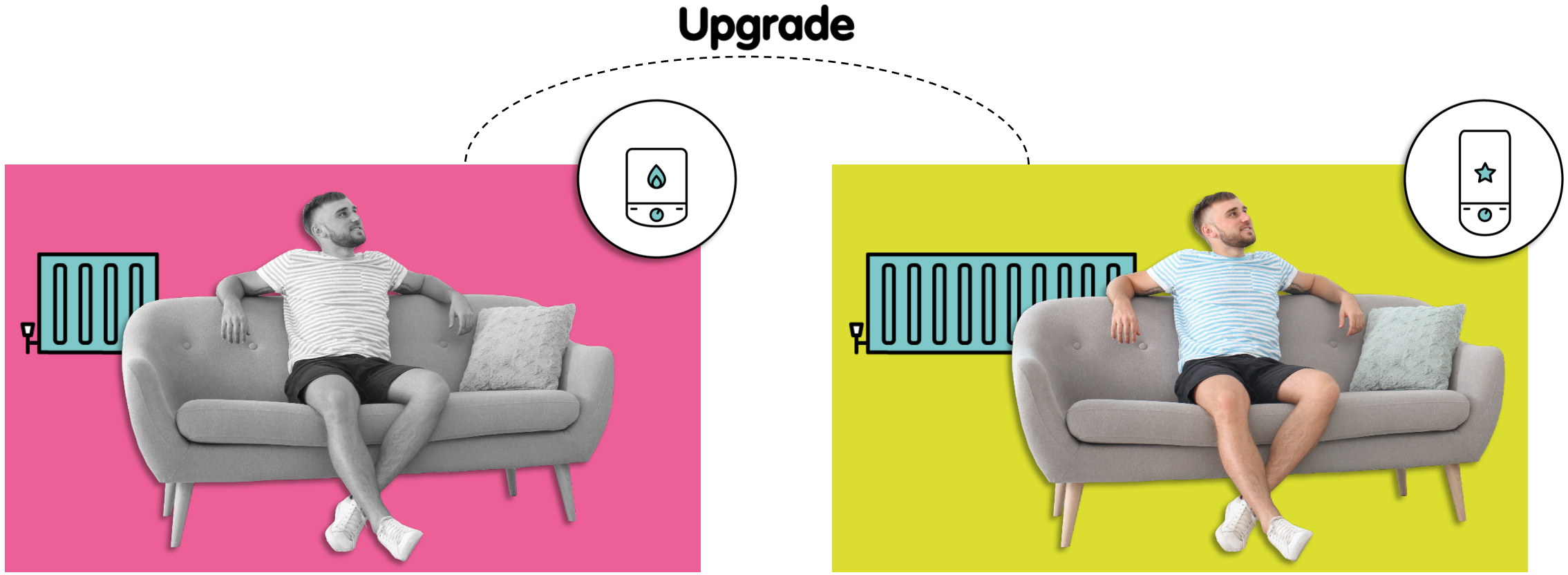
None of this will be low carbon without policy and consumers will need protecting in this smarter new energy world





If energy services could guarantee people got the comfort they wanted, they might not care how it was delivered



Signs that energy services could unlock low carbon heat

77%

Could Heat Plans help ‘sell’ low carbon heat?

Preferred the idea of a heat pump bundled with a heat plan vs. 23% for a heat pump alone

45%

Would services be a more popular approach to decarbonising heat?

were positive to energy services vs.
38% for a home improvement loan,
30% for a boiler ban and 22% for a carbon tax

85%

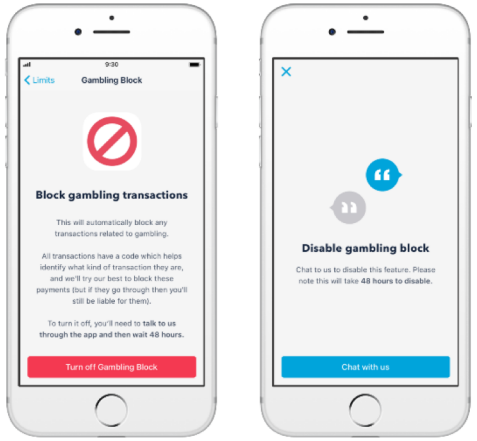
Does experience of a Heat Plan make people open to low carbon heat?

of people who bought heat plans were open to alternatives to gas when replacing their boiler (vs. 1/3 for people who have not)

People with experience of Heat Plans were more likely to want a heat pump

<0.1% of people who read an on-line advert wanted a free heat pump compared with >15% of people who stayed on the trial

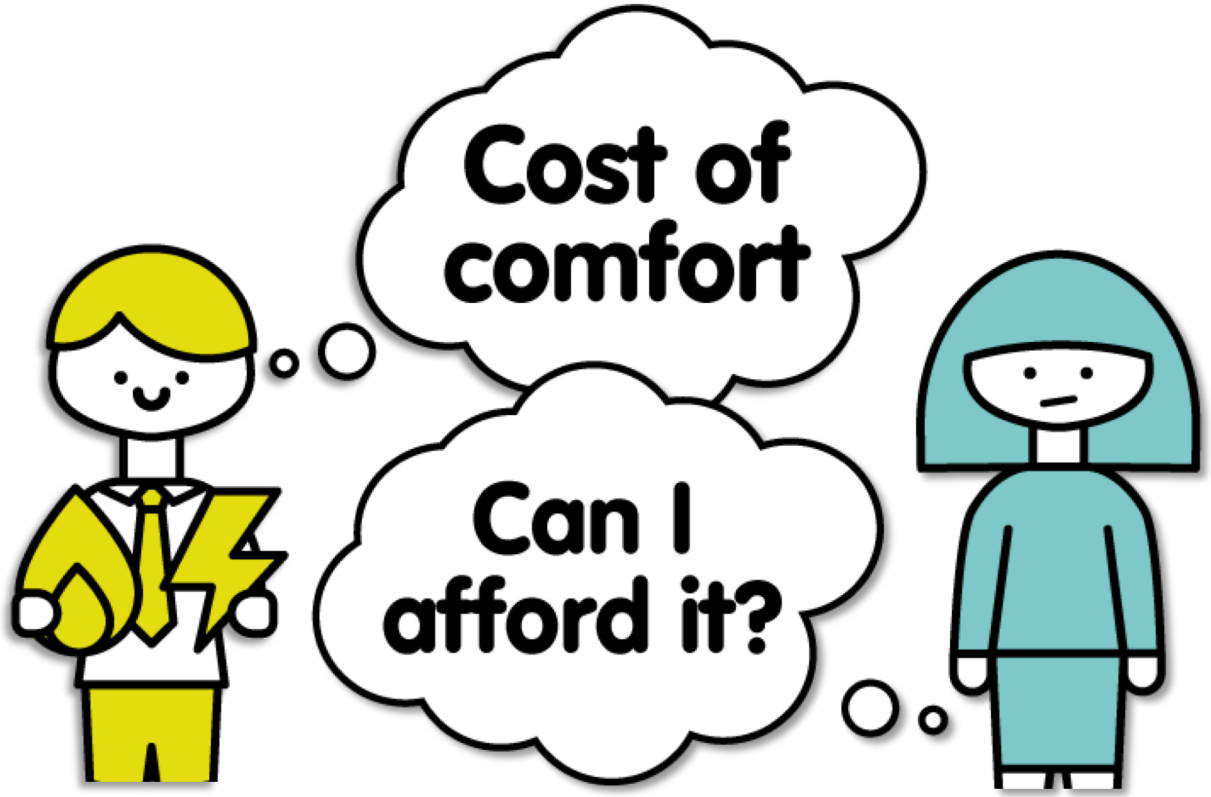
Innovation is helping vulnerable consumers in other sectors



UBER Health

RelayRides

Could innovation help reduce fuel poverty?



Priorities for smarter consumer protection

Know what they're buying

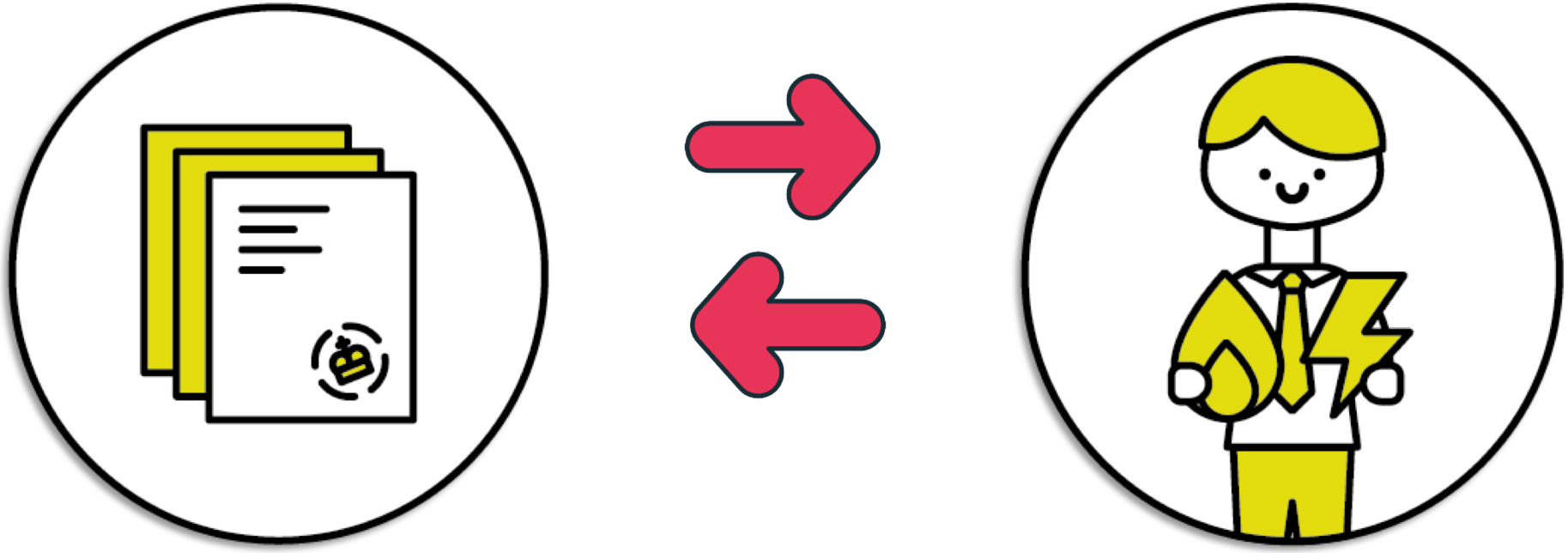
Can get the experience they want

Can get their problems fixed

Can compare offers and switch

Link to report: https://tinyurl.com/y5mrbf9x

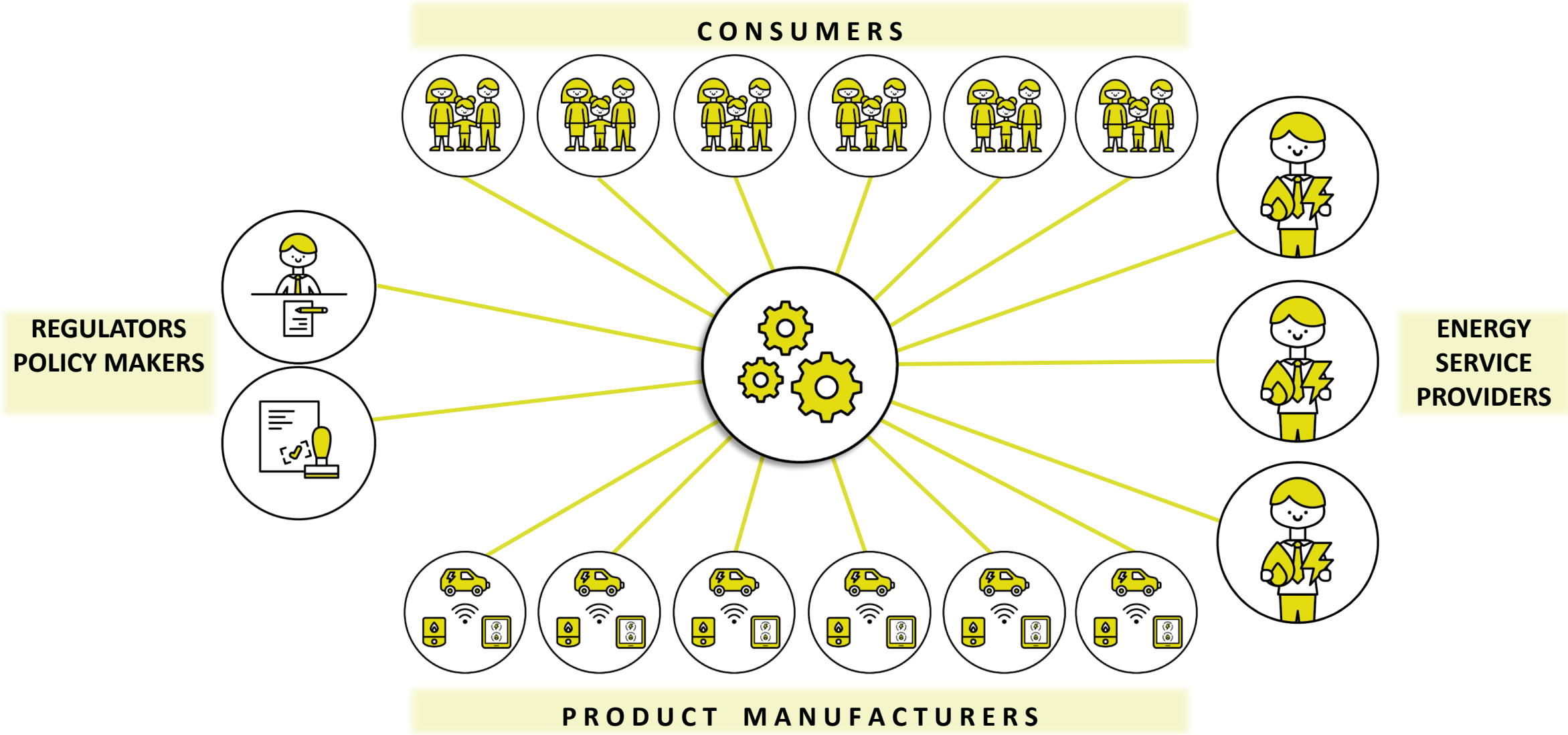
What comes first?



Policies

Energy Service Providers

A Living Lab so we can all move forward together

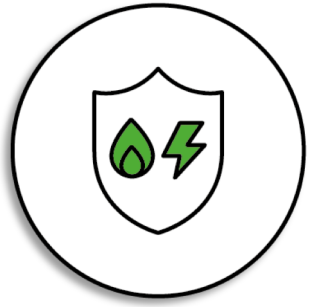


We are using the Living Lab to accelerate innovation

Move five owner occupiers from gas to heat pumps

Help industry learn how to sell energy as a service

Help innovators test new products and services



Learn how to design smarter protection

Large scale Demonstration Programmes with partners

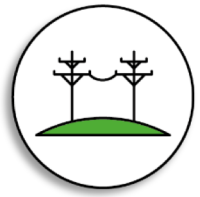
Summary

How to decarbonise heat: our hypothesis

Start with the consumer, not the technology

Digitalisation offers significant potential (and some risk)

Heat as a service could be a powerful proposition



Understanding different local energy systems is essential

Heat decarbonisation will require significant market changes/policy drivers

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Find out more about our work at
http://www.peoplelab.energy/