openTRV

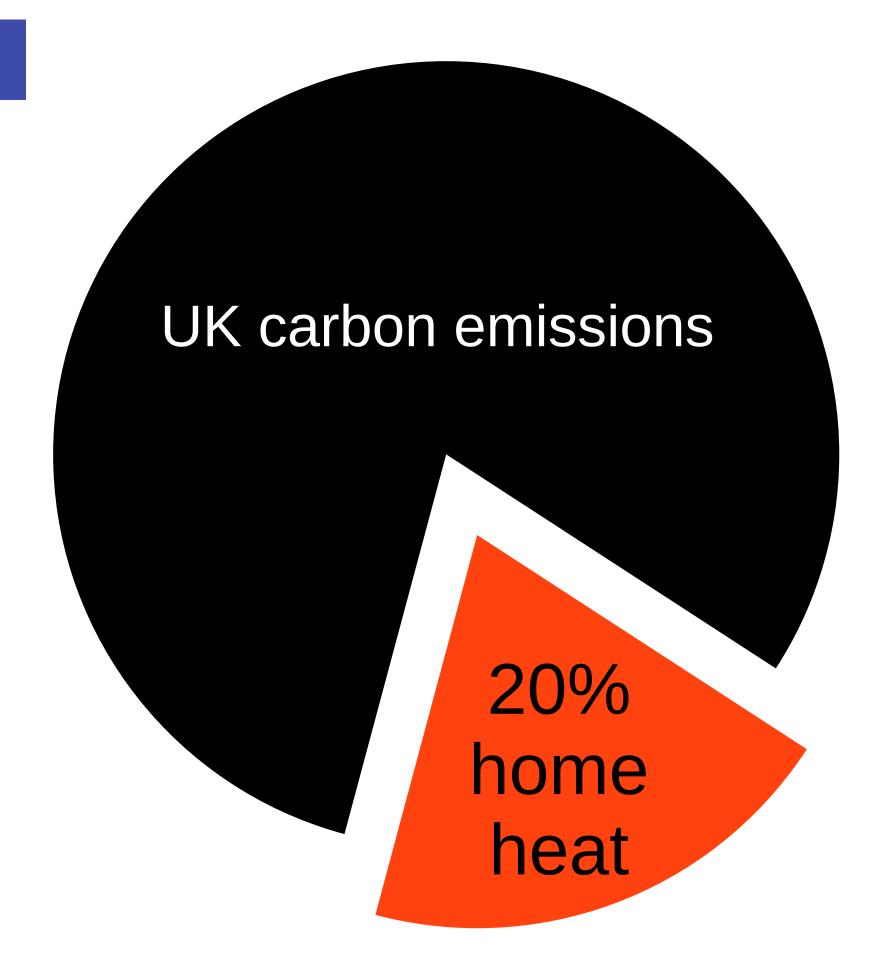## Health, wealth and buses: IoT and carbon

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UK carbon emissions

20% home heat

Problem: UK carbon emissions from domestic space heat 20%, gas bill £10bn/y, 50% wasted.

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before

"£10 retail"

"no manual"

"simple to use"

after

"monitor RH, CO, activity"

"Heat+Health as a service"

"utility decoupling"

Solution: £10, no-trades retrofit, **efficiency and monitoring** eg: activity, temperature, RH, CO.

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PROBLEM

?

Problem: operator knows where buses are, but what about the people waiting?

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Solution: £10, pluggable backhaul across LAN/Internet, pluggable sensors, no soldering.

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SMALLER OR SMARTER?

IP
Internet

Bearer, protocol?
Homes without WiFi?
Bus shelters?

?

AES GCM
64-byte frames
IPsec model?

?

WiFi hop
HTTPS
VPN

maintenance
security
ISM SIGFOX
GSM deployment
power

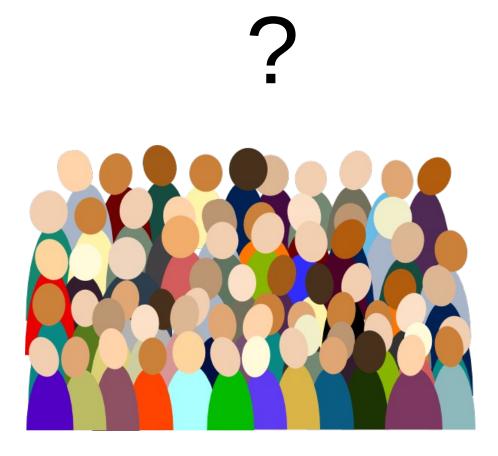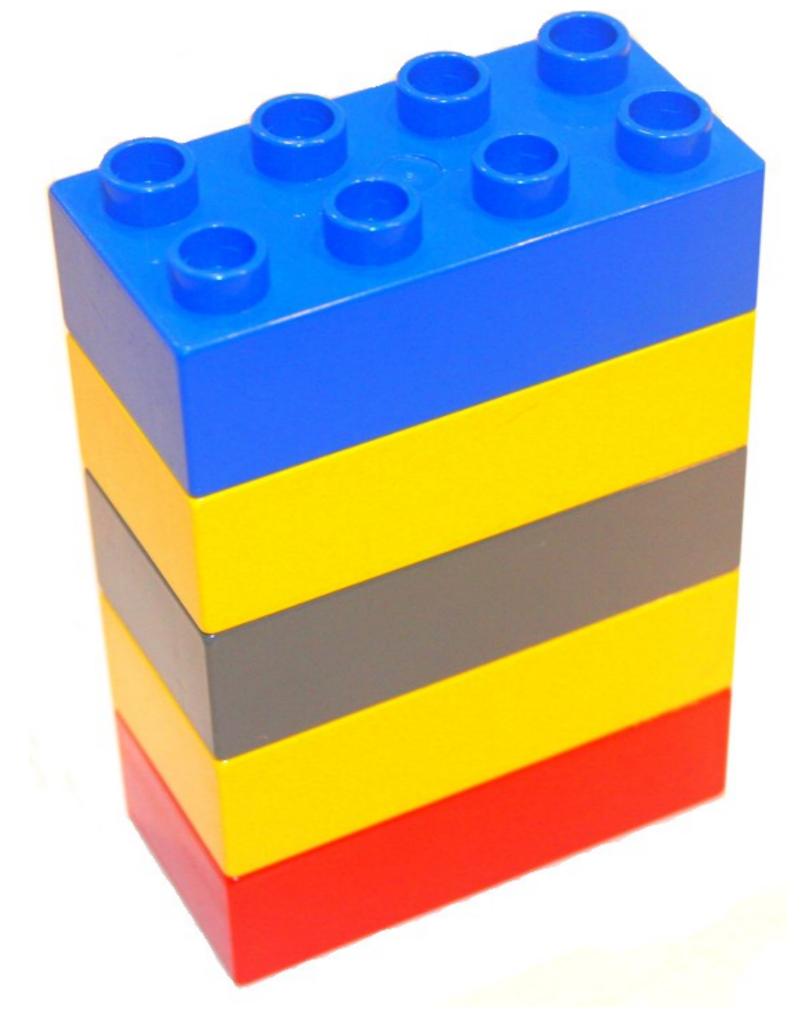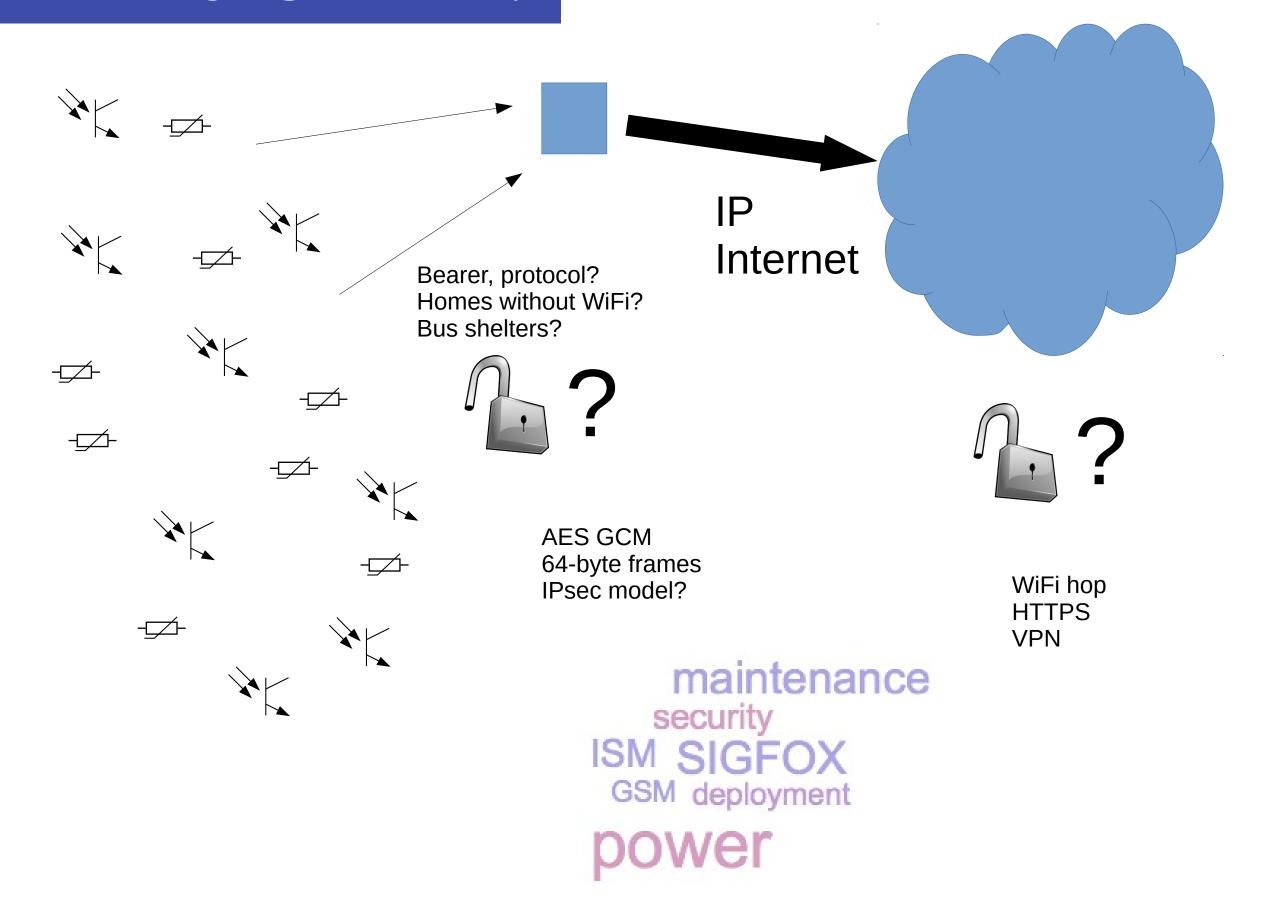IoT business case: If you can measure, you can manage. NB 'I' too big for small and cheap 'T'!

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*"improve efficiency & quality-of-life,
cutting carbon"*

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"simple smart tech"

http://bit.ly/1Aw4F2p

http://www.earth.org.uk/IoT-Launchpad-research.html

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