

# Resourcing the data ecosystem in observational research

what are the assumptions and what to expect?

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# Resourcing the data ecosystem in observational research

what are the assumptions and what to expect?

## The data ecosystem

*The GDPR: implications for business in data*

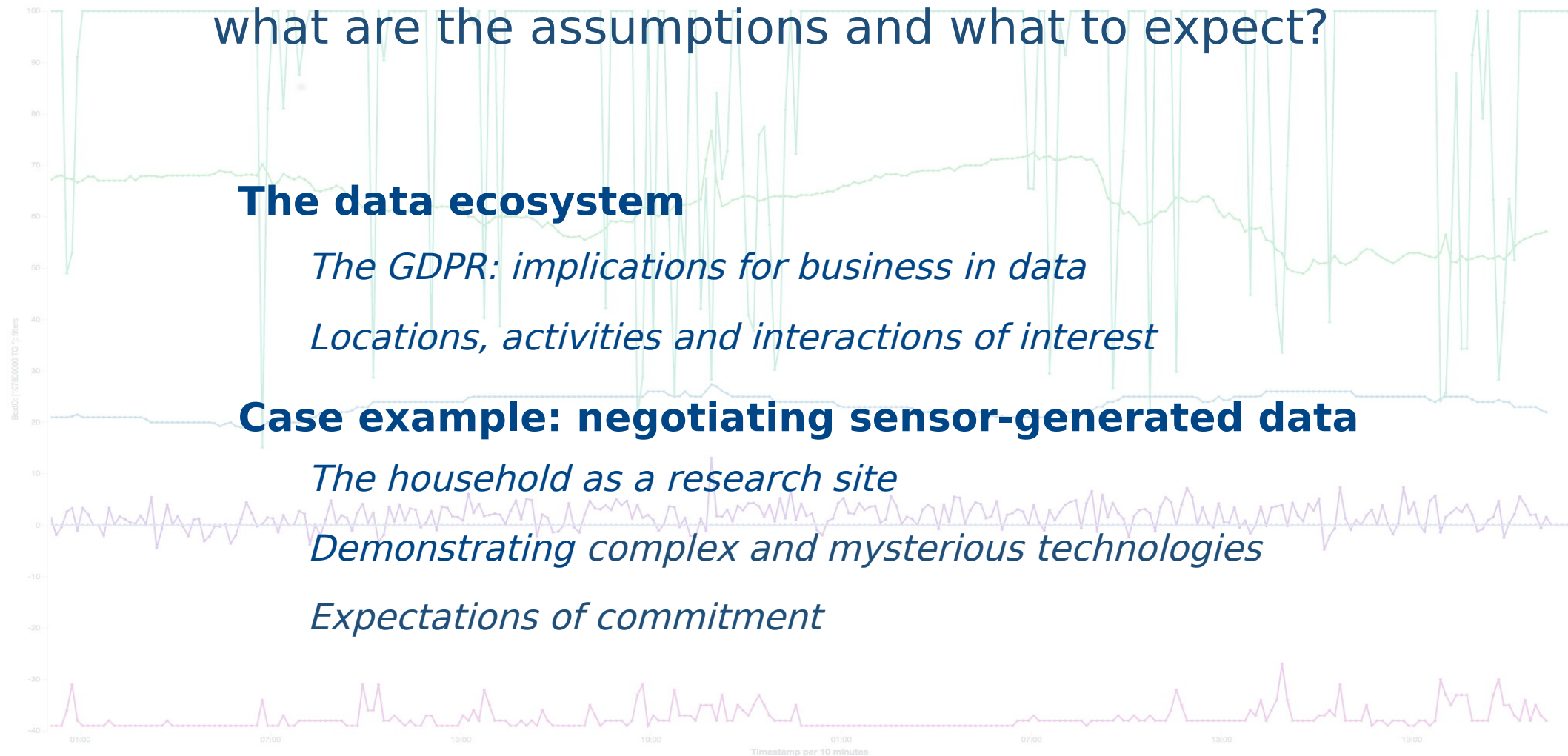
*Locations, activities and interactions of interest*

## Case example: negotiating sensor-generated data

*The household as a research site*

*Demonstrating complex and mysterious technologies*

*Expectations of commitment*



Which?

Britainthinks  
Insight & Strategy



axiom.

POLICY RESEARCH REPORT JUNE 2018

# Control, Alt or Delete?

Consumer research on attitudes  
to data collection and use



Data privacy:  
What the consumer  
really thinks  
February 2018

Research partner



# Data protection regulation

## *the GDPR: implications for business in data*

### What the consumer really thinks

“...how consumers feel about privacy and their data [...] against the backdrop of rapid innovation in technology as we enter the fourth industrial revolution [...] The General Data Protection Regulation (GDPR) seeks to balance the customer's right to privacy with the legitimate interests of companies wanting to serve them better.”

### Attitudes to data collection and use

“...while technology is at the forefront of people's minds, consumer data is not. We have undertaken comprehensive qualitative and quantitative research to explore what people know and how they feel about their consumer data being collected and used by commercial organisations.”

# Data protection regulation

## *the GDPR: implications for business in data*

REGULATION (EU) 2016/679 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL

of 27 April 2016 (*in force from May 2018*)

on the protection of natural persons with regard to the processing of personal data and on ***the free movement of such data***, and repealing Directive 95/46/EC (General Data Protection Regulation)

The preamble (173 para), is high spirited about Article 8(1) of the Charter, however, it emphasises:

- (3) ...to harmonise the protection of fundamental rights and freedoms of natural persons in respect of processing activities and to ***ensure the free flow of personal data*** between Member States.
- (4) [that t]he right to the ***protection of personal data is not an absolute right***; it must be considered in relation to its function in society...
- (5) [that t]he exchange of personal data between public and private actors, including natural persons, associations and undertakings across the Union has increased. National authorities in the Member States are being called upon by Union law ***to cooperate and exchange personal data*** so as to be able to perform their duties...
- (6) [the t]echnology has transformed both the economy and social life, and ***should further facilitate the free flow of personal data*** within the Union and the transfer to third countries and international organisations...
- (7) ...the importance of ***creating the trust that will allow the digital economy to develop*** across the internal market...

# ***Data protection regulation***

## ***the GDPR: implications for business in data***

### **Promising discoveries driven by new-emerging data**

*e.g., in behaviour intervention, infrastructural management, service design...*

### **Giving way to matters of innovation for the advancement of European competitiveness**

*research and innovation for the greater good*

European Parliament. (2012). ***Data protection review: Impact on EU innovation and competitiveness (study)***. DG for Internal Policy. Policy Department A: Economic and Scientific Policy. PE 492.463.

...presenting an assessment of the innovation and competitiveness impacts of the [GDPR]:

... the argument goes that blanket restrictions will harm competitiveness by undercutting existing business models, back-office efficiency, new service discovery and the delivery of customer service quality.



# Locations, activities and interactions

*seeking communications and activity data*

The Internet of Things (IoT) and the '*smart*' *new world*



**Points of interception for business and research:**

tweets, online chats, crowd-sourced data, purchase histories, location tracking, activity and behaviour monitoring, self-reporting, environmental interactions, social trend formations, network formations, etc., etc., etc...

# Case: negotiating sensor-generated data



Microphone

Ranging sensor

Particulate sensor

Temperature & humidity

RGB Light & gesture sensor

WiFi™



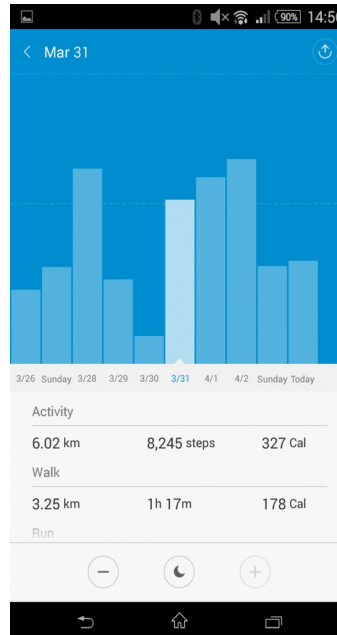
**HomeSense**  
digital sensors in social research



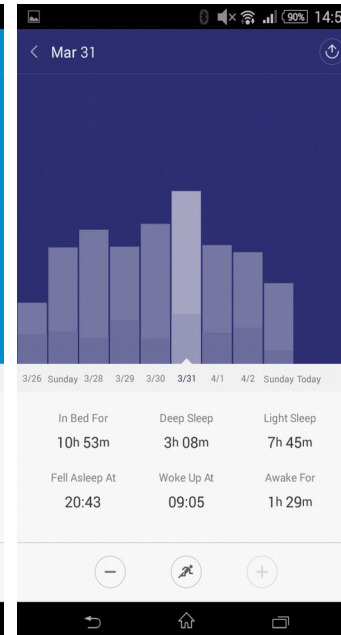
# Case: negotiating sensor-generated data



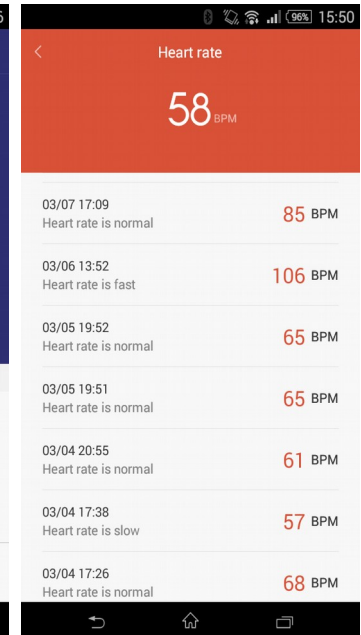
*Movement*



*Sleeping*



*Heart rate*



Ultra-thin 8mm battery

Battery capacity: 41 mAh  
Battery type: lithium polymer  
Input current: 25 mA(TYP)  
Input voltage: DC 5.0 V



Military-grade  
accelerometer by ADI

Premium-quality  
Bluetooth® chip by  
Dialog

Bluetooth® version: 4.0

# Case: negotiating sensor-generated data



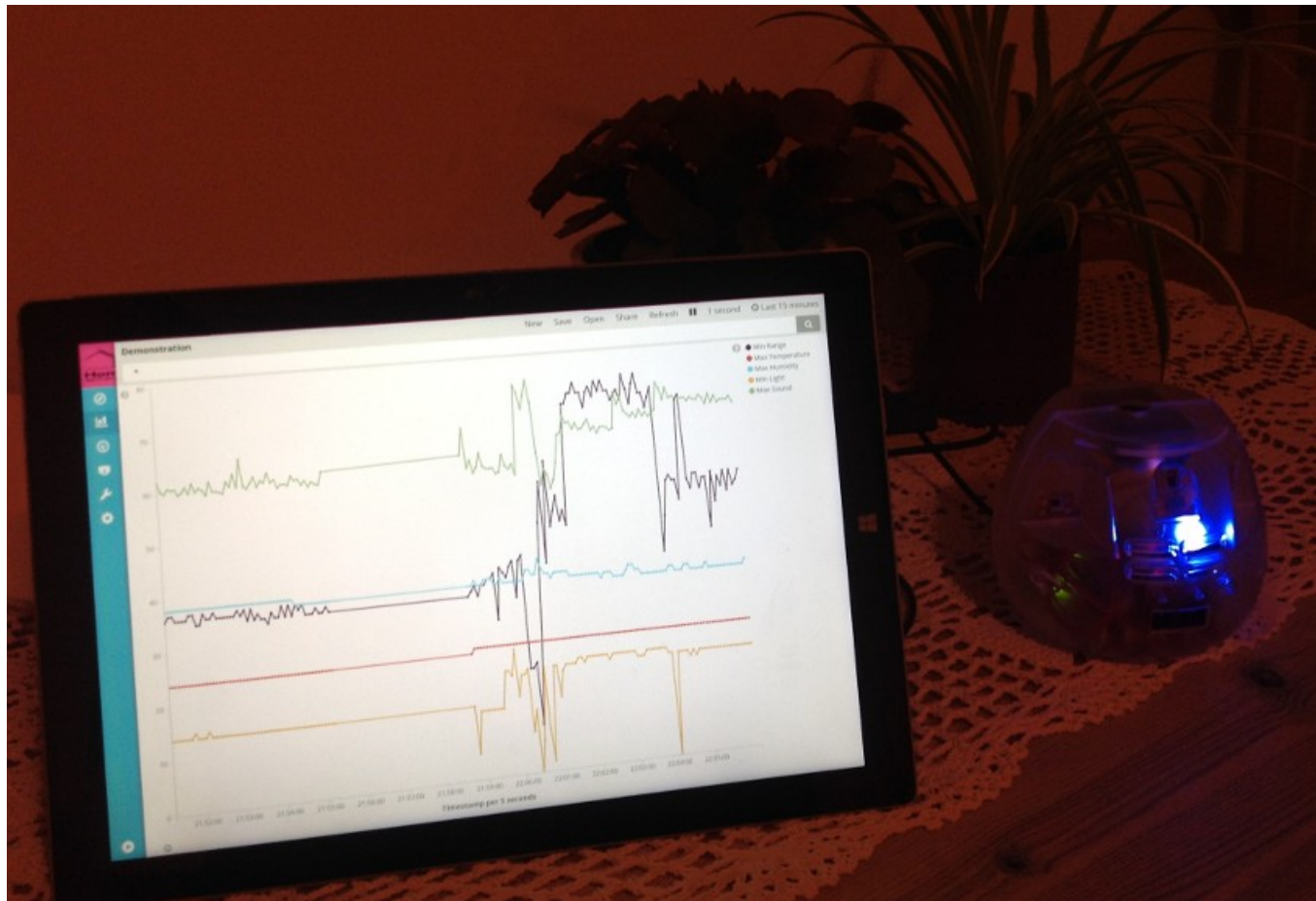
Sensors	X	Y	Z
<input checked="" type="checkbox"/> Accelerometer	-0.996	5.583	8.763
<input checked="" type="checkbox"/> Gyroscope	0.000	0.000	0.000
<input checked="" type="checkbox"/> Magnetic Field	31.751	4.674	-14.181
<input checked="" type="checkbox"/> GPS Position	51.24331	-0.58945	120.0
<input checked="" type="checkbox"/> Orientation	291.281	-31.886	-5.908
<input checked="" type="checkbox"/> Linear Accel.	0.000	0.000	0.000
<input checked="" type="checkbox"/> Gravity	0.000	0.000	0.000
<input checked="" type="checkbox"/> Rotation Vect.	0.000	0.000	0.000
<input checked="" type="checkbox"/> Pressure		0.000	
<input checked="" type="checkbox"/> Battery Temp.		32	

☒ Include User-Checked Sensor Data in Stream

# Demonstrating complex and mysterious technologies



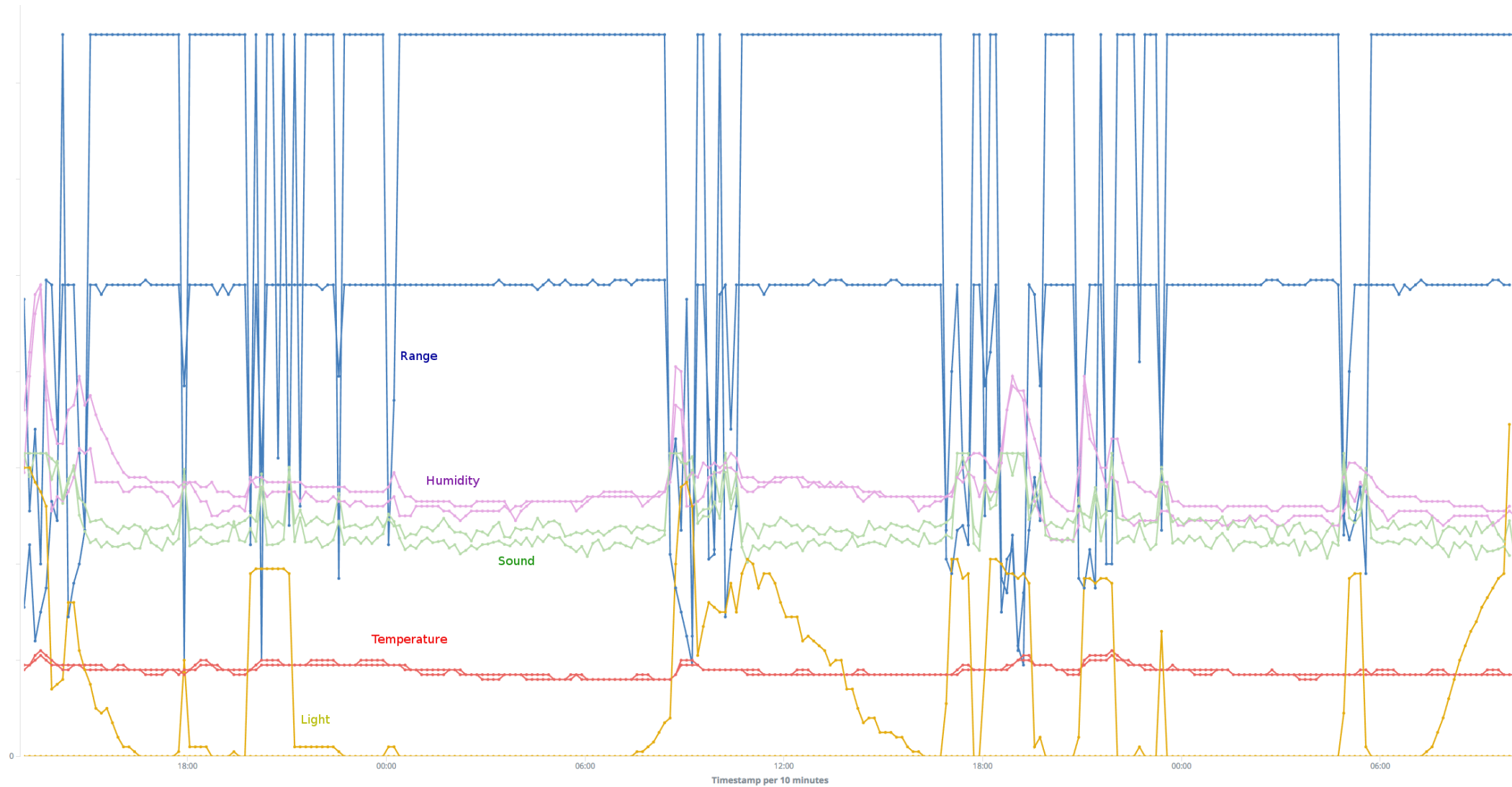
# Demonstrating complex and mysterious technologies





# ***Testing: 45 hrs in the kitchen***

***26 Nov, 1pm to 28 Nov 10am***



# Expecting commitment

**Areas of concern which, together, pose a significant challenge to communicating with participants the use of sensors in research:**

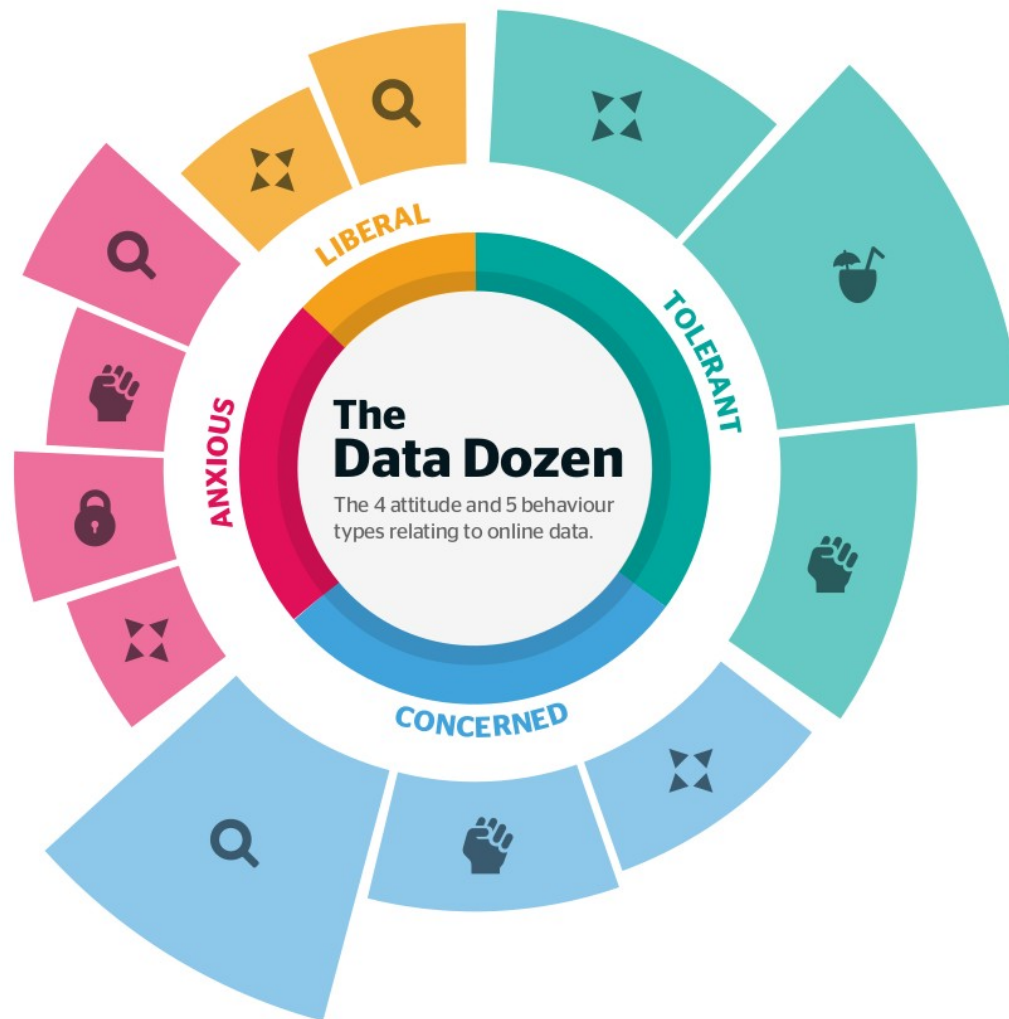
- Presumed inevitability of 'smart' technologies
- Uncertainty as to what can be observed, and by whom
- Confusion about relevant contextual information
- Poor correlation between attitude and practice

*Distractions, disregards and everyday practicalities*





# Expecting commitment



The relationship between attitudes and practice is poor – a problem for communicating with research participants their ongoing commitments to an observational study



#### ACTIVIST

Frequently online, very restrictive with their data.



#### CASUAL

Online fairly often, unrestrictive with their data.



#### PROTECTOR

Sometimes online, sometimes restrictive.



#### BROWSER

Hardly online, unrestrictive with their data.



#### MAXIMISER

Often use online shortcuts.

# Expecting commitment

## ***Excerpt: I can't remember***

R: ...so I've just said to them that, you know, the university have put the sensors in because they're doing a social experiment to see... monitor things like movement, light, umm... various other things around that you know, that we... yeah, movement, light, there was... I can't... it's gone out of my head, I can't remember the other things, apologies... but, umm, various things that they're monitoring, it's not videoing and it's not recording, and it's just to see how sensors can help us in the, you know, in in society or in our homes, really.

I: **hmm.**

R: - erm, that's how I explained it. I hope that's quite accurate. (Laughs).

**(how much do we push participants in an interview setting?)**

## ***Excerpt: that's all I can say really***

R: I couldn't identify exactly what the experiment was about except to say that it was sensors gathering information about how many, for instance, people came through erm how hot the house was, humidity, erm, erm, how much electricity being used at certain times, you know, the fluctuations during the day. Erm, that's all I can say really 'cause I'm not [laughter] wasn't quite sure myself [laughter] erm... yeah, but erm... as I say I don't, I, as you can probably see by the data I, I, I don't have people coming around as I used to...

**(how to understand future subjunctive?)**

# Expecting commitment

***Excerpt 6: Is it all right if we record?***

**I: - and they didn't sign f... you didn't have any forms signed?**

R: (overspeaking), No, no no, not any problems, no.

**I: Yeah. Okay.**

R: I mean, one, one of the visitors was a girl aged 10 and I did say to the father, "Is it all right if we record?"

**I: Hmm.**

R: - with these monitors, if that was all right -

**I: Hmm.**

R: There was nothing personal or secret about it, so... you know.

**I: Yeah. Okay. So that would not have been a problem. But did you find yourself ...you were explaining to other people?**

R: Oh, only just very superficially, just saying, "Look, these funny things on the walls, they're recording light, movement and everything."

**I: So you wouldn't explain what the study was about really?**

R: No, no, no, no.

**I: You didn't do that?**

R: No, no I didn't think they were interested in that, no, too detailed, no.

# Expecting commitment

## ***Excerpt 7: We have lots of people in and out***

R: Oh, yeah, I forgot to do all, I t..., everybody, erm, cos we have, it, that's, it's really hard, that's actually one criticism, it was really, really hard to manage cos we have lots of people in and out -

**I: Hmm.**

R: - all the time -

**I: Hmm.**

R: - and although, you know, again, for the first two or three weeks, I told everyone what was and blah, blah, blah and that we needed their permission, and everyone was like, everyone was fine about that ...then actually getting someone to sign a form, it kind of doesn't work like that when you have some friends around your house.

**I: Hmm.**

R: But the thing is, they all would, if, you know, if you went back and said, "Oh, you know that thing I said I need your permission" but, erm, that was a bit, erm, no, that, that, erm, no -

**I: So, you didn't actually get any signatures?**

R: - no, no, no, none at all.