

What do households use the internet for?

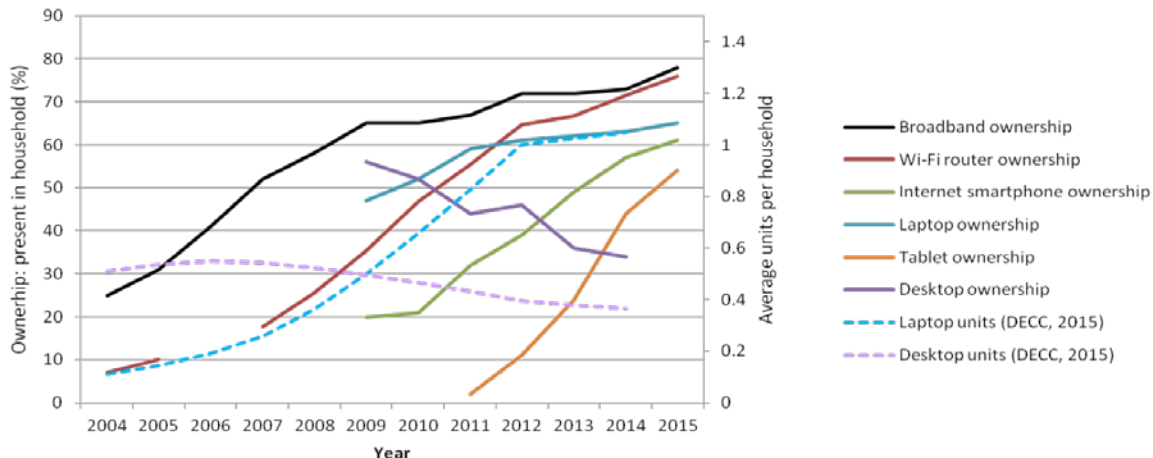
Findings from DEMAND research

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A site of change

Levels of ICT ownership in UK households



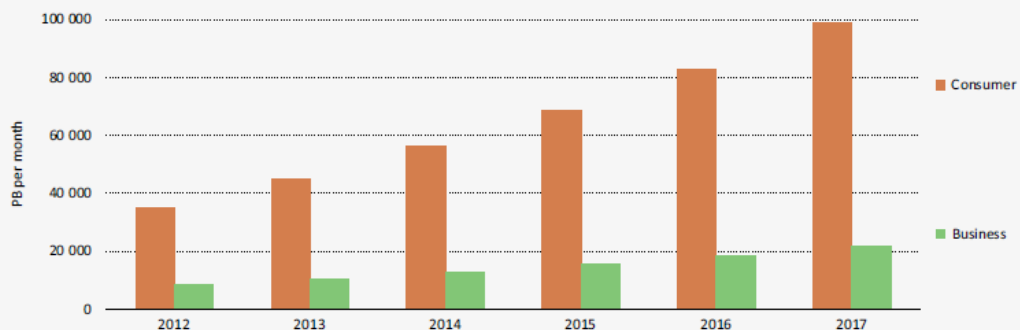
Internet connection is well established for most households.

But device ownership and domestic internet traffic are changing

How do we understand ongoing change?

Figure 1.4

Projected growth of global Internet Protocol traffic, consumer vs. business



Note: Consumer includes fixed IP traffic generated by households, university populations and Internet cafés; business includes fixed IP WAN or Internet traffic generated by businesses and governments.

Source: Adapted from Cisco (2013a), Cisco Visual Networking Index: Forecast and Methodology, 2012–2017, Cisco White Paper, Cisco Systems, Inc., San Jose. www.cisco.com/c/en/us/solutions/collateral/service-provider/ip-ngn-ip-next-generation-network/white_paper_c11-481360.pdf.

Key point Business Internet traffic is expected to grow by a CAGR of 21% between 2012 and 2017; growth of consumer traffic will be even faster, at a rate of 23%.

Average UK household broadband data volume per month (Ofcom 2014, 2015)

2011: **17 GB**

2014: **58 GB**

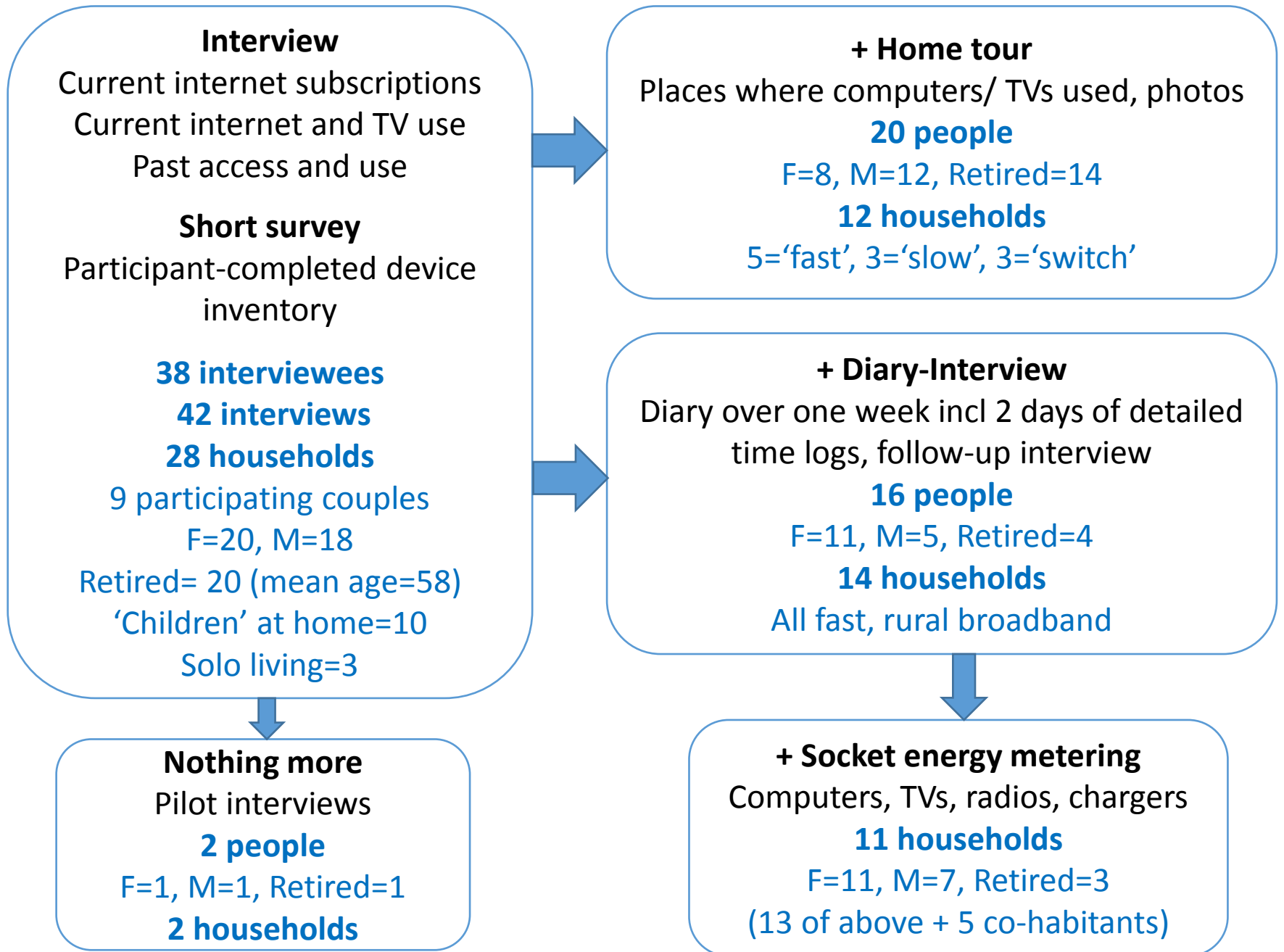
2015: **82 GB**

Some Research Questions

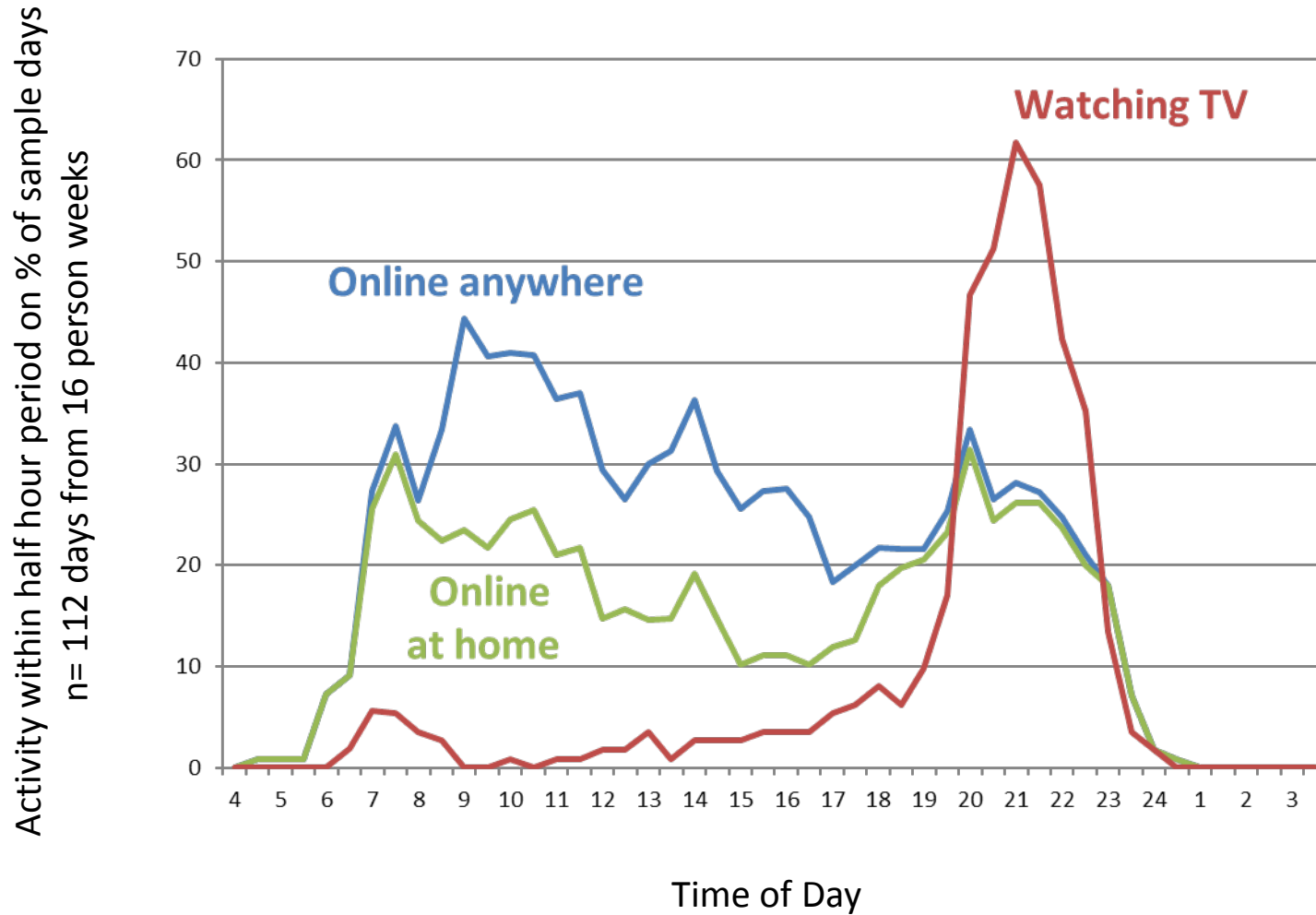
- Is the position of internet and connected ICTs in everyday practices changing?
- Are forms of dependence and 'need' evolving?
- Basically, what is the internet for?
- How might this be 'steered' in lower energy directions?

Household Study

- Interviews
 - Device survey (self-completed)
 - Diaries
 - Home tours
 - Socket electricity metering
-
- 28 households; 38 interviewees; 16 diaries
 - Mostly rural, some suburban
 - May-November 2016



Activity by Time of Day



16 people; for 1 week; different weeks

What is the Internet for?

1. Everything

- Personal communications, e.g. email, social media, Skype
- News
- Shopping
- Banking
- Working
- Booking travel and holidays
- Researching how to do things
- Learning
- Entertainment

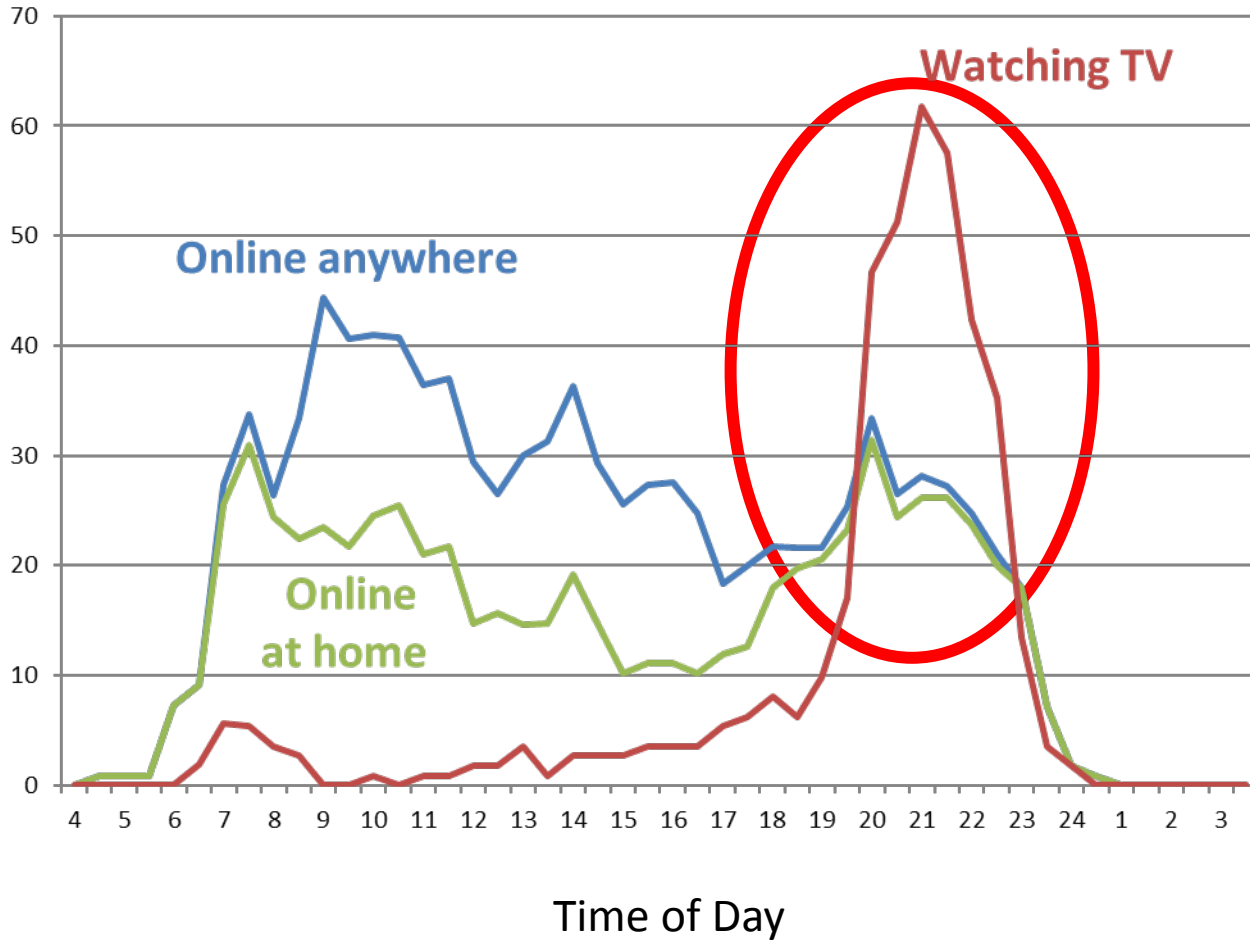
**“It’s part of everything now”
(Jocelyn, 63)**

Sorting Out Online Activities

Dimension	Positioning	
Alternatives	Online Only <i>Facebook</i> <i>Emailing</i>	Online-as-Mode <i>Banking</i> <i>News</i>
Central or Supporting	In its own right <i>News</i> <i>Family History</i>	In order to <i>Fixing a car</i> <i>Booking travel</i>
Obviously connected	Foreground <i>Website</i> <i>Social media app</i>	Background <i>Game apps</i> <i>Watching TV</i>

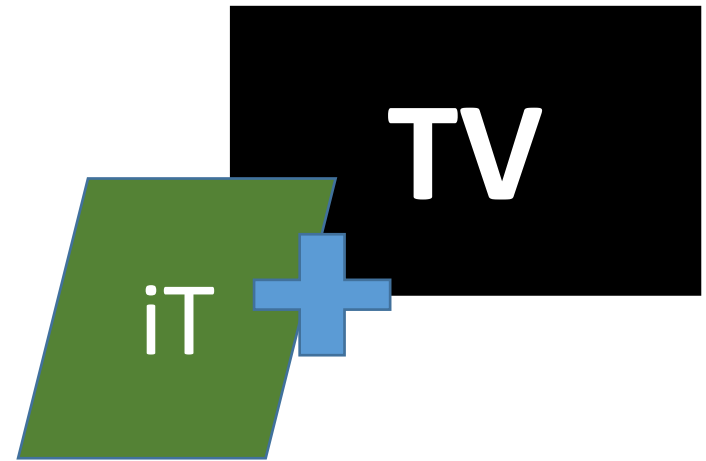
Activity by Time of Day

Activity within half hour period on % of sample days
n= 112 days from 16 person weeks



What is the Internet for?

2. Doing something *whilst* watching TV



“depends on the programme and how much it grabs me.” (Kat, 54)

Charlotte (40): “I can’t sit still so yes. Its very very rare that I will actually sit and watch TV. Its more likely to be on and I’m doing something here as well.”

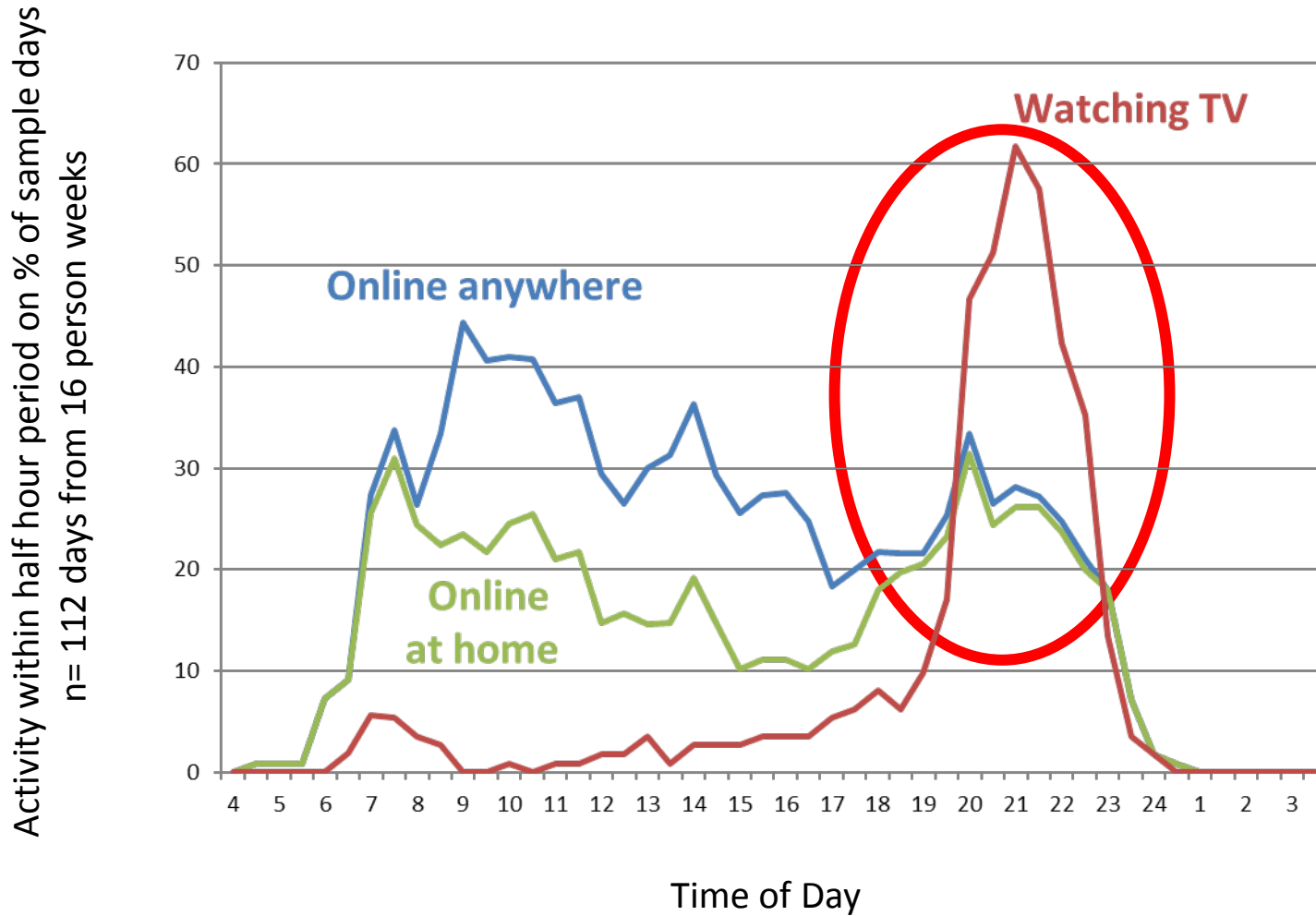
Rob (42): “Yes that would be quite normal. So between nine and 10 o’clock I’ll find something to watch and I’ll watch the telly and you’ll be...”

Charlotte: “Yes and I won’t have a clue what the end result was of whatever we’re watching”

Online and watching TV at the same time?

Always Mixed	Sometimes Mixed	Never Mixed	No TV watching
Lauren, F54	Nina, F35 Dylan, M36 Nick, M63 Kat, F54 Sheila, F48	Alistair, M79 Esther, F74 Frank, M65 Natalie, F47 Diane, F76 Ross, M43 Amelia, F46 Carol, F62	Heather, F62 Bridget, F58

Evening: also a time for doing things online



What is the Internet for?

3. Watching TV (in bed...)



“I watched a film the other night in bed because I couldn’t sleep. And that’s amazing isn’t it to be able to do that? ...Yes it **opens up a whole new world to watching television in bed I think.**” (Carol, 62)

“Yes, I do that quite a lot actually. Its kind of, **I can’t just go to bed and go to sleep.** Maybe its because I’ve been doing it a long time now, I just need a half hour or so just chilling out and usually watching a bit of something on iPlayer or something like that. And yes half hour, 45 minutes and then I’m usually ready for bed.” (Dylan, 36)

“I might watch, if I was doing catch up of something I might watch it on there [the iPad] as much as watch it on the television... So I’ll do something else whilst I’m watching it... I’d be **doing something in here [the kitchen]** and put it on.” (Amelia, 46)

Watching TV on a tablet or laptop

Always mixed	Sometimes Mixed	Never Mixed	No TV watching
Lauren, F54	Nina, F35 Dylan, M36 Nick, M63 Kat, F54 Sheila, F48	Alistair, M79 Esther, F74 Frank, M65 Natalie, F47 Diane, F76 Ross, M43 Amelia, F46 Carol, F62	Heather, F62 Bridget, F58

What is the Internet for?

4. Watching TV (on a TV)



Always mixed	Sometimes Mixed	Never Mixed	No TV watching
Lauren, F54	Nina, F35 Dylan, M36 Nick, M63 Kat, F54 Sheila, F48	Alistair, M79 Esther, F74 Frank, M65 Natalie, F47 Diane, F76 Ross, M43 Amelia, F46 Carol, F62	Heather, F62 Bridget, F58

There is a time for on-demand too

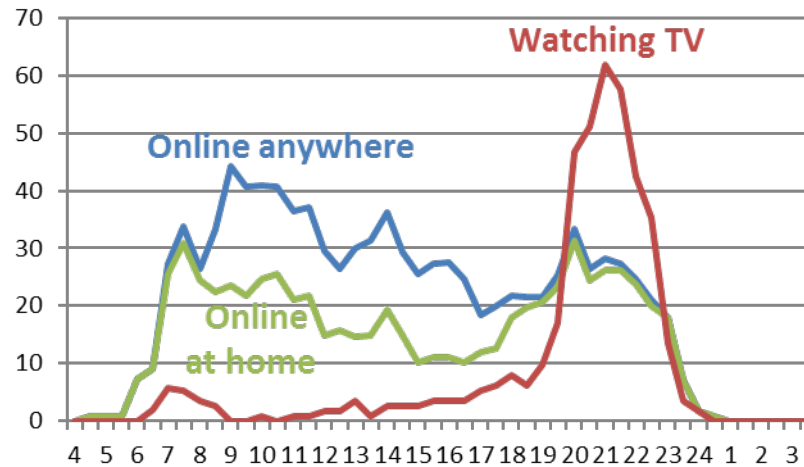
Ross' Diary

	Mon	Tues	Wed	Thurs	Fri	Sat	Sun
4							
5							
6							
7							
8	H						
9	W						
10	W						
11	W						
12	W						
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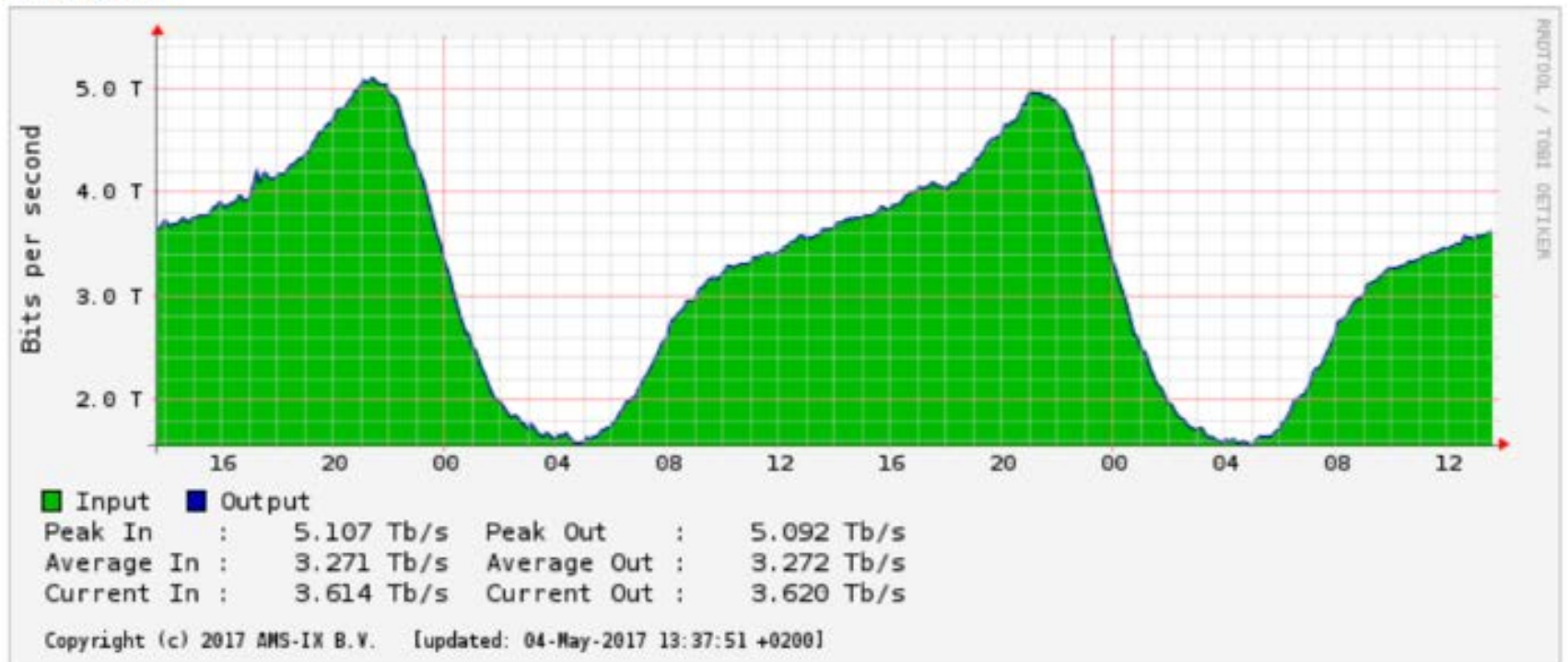
The Bureau yes. Its an Amazon series... its very realistic and the thing we like about that is it's an hour. An hour is a perfect, think oh its nine o'clock I don't want to watch a film now. **But an hour's perfect you know 9-10.** And admittedly once you get... we could probably watch it every night. I'm not sure we do that, but you know we have watched a lot of The Bureau for instance because **once you get start watching something.** But then you know that... we'll finish watching series two this week or next week and then we won't watch something else for another week. **So it does come and go.**

Ross (43)

Amsterdam
Internet Exchange
2-4 May 2017



Daily graph



TV demands (super) fast broadband

Smart TV, but not enough internet speed

Eric (69): “So really we don’t get the advantage out of that smart... we didn’t go to buy a smart television, I forget how it happened now... It played at first, but now it won’t play again, its just keeps scrolling around”

Yvonne (72): “We got a smart TV and none of it works properly because of the internet”

Plenty of speed but no smart TV

“But I want to make the television smart, I think that’s what its called, so I can actually watch catch up things on it and use the computer screen on it”(Esther, 74)

On-demand - by recording not streaming

“I probably **tend to watch more recorded stuff** these days than anything that’s currently going out. Just because I might be, its nine o’clock, any of the good things that come on are usually at nine o’clock and that’s when I’m putting the girls to sleep. So I might not get back in here **till 9.15 and so I’ll just start it then.** So I’m not usually far behind but just, that helps having that ability to be able to do that.”

Sheila, 48

“I tend to **watch things that have been recorded** on Sky+. I’m always a bit behind. I don’t often watch television real time, so that’s changed.”

Pauline, 48

Key Points

Close connections between Internet and TV

- **As activities:**
 - can be complimentary
 - both frequent at home in the evening
- **But TV increasingly watched over the Internet**
 - On tablets (and other mobile devices)
 - On smart TVs
- **This is hugely significant for broadband traffic**
 - May become significant for electricity supply
 - Especially at (or after) peak times
- **Important for telecommunications policy**
 - Where is 'on-demand' infrastructural demand?

