BSAC Business Briefing

Connectivity and Connected Devices

March 2014

This presentation was prepared for BSAC by IHS
and delivered by Richard Broughton, Director, Broadband, IHS
at a BSAC Council Meeting on 27 March 2014


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Connectivity & Connected Devices – March 2014
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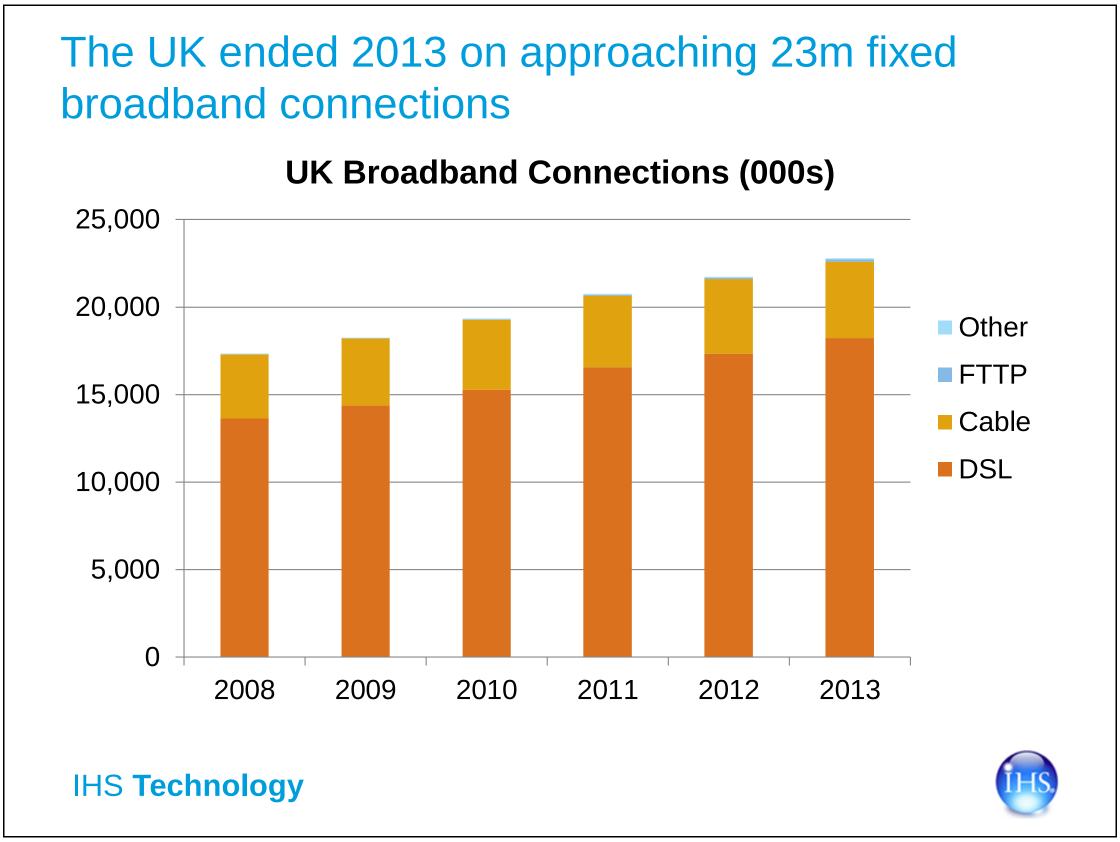
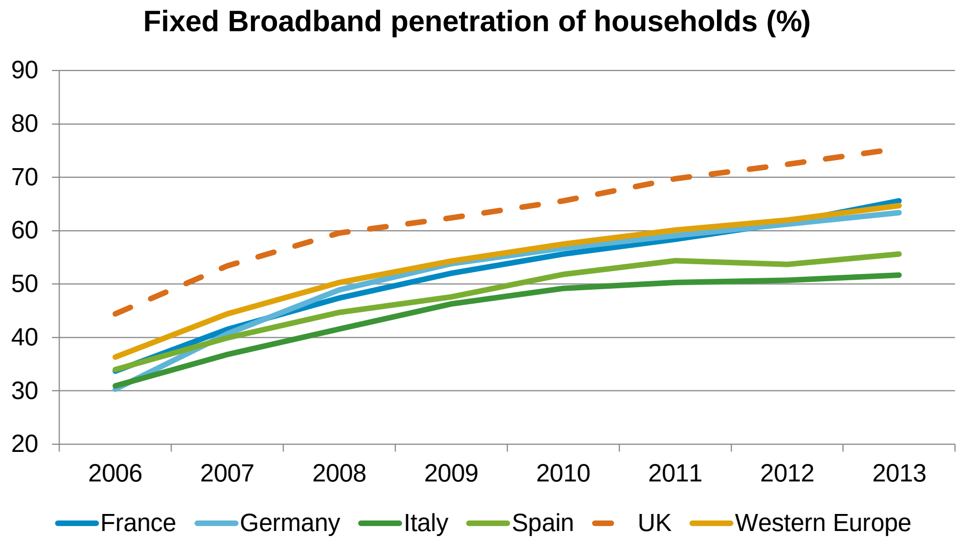


Over the year 2013:

- broadband connection rates continue to rise, with the UK ending 2013 on nearly 23m fixed residential and commercial broadband subscriptions
- the vast majority of these were DSL (ADSL, ADSL2+ and VDSL) subscriptions, with FTTP uptake low
- VDSL growth accelerated throughout, with BT Infinity reaching 1.7m subscriptions by year-end 2013.

Broadband penetration still growing steadily in Western Europe – over 75% in the UK at end 2013



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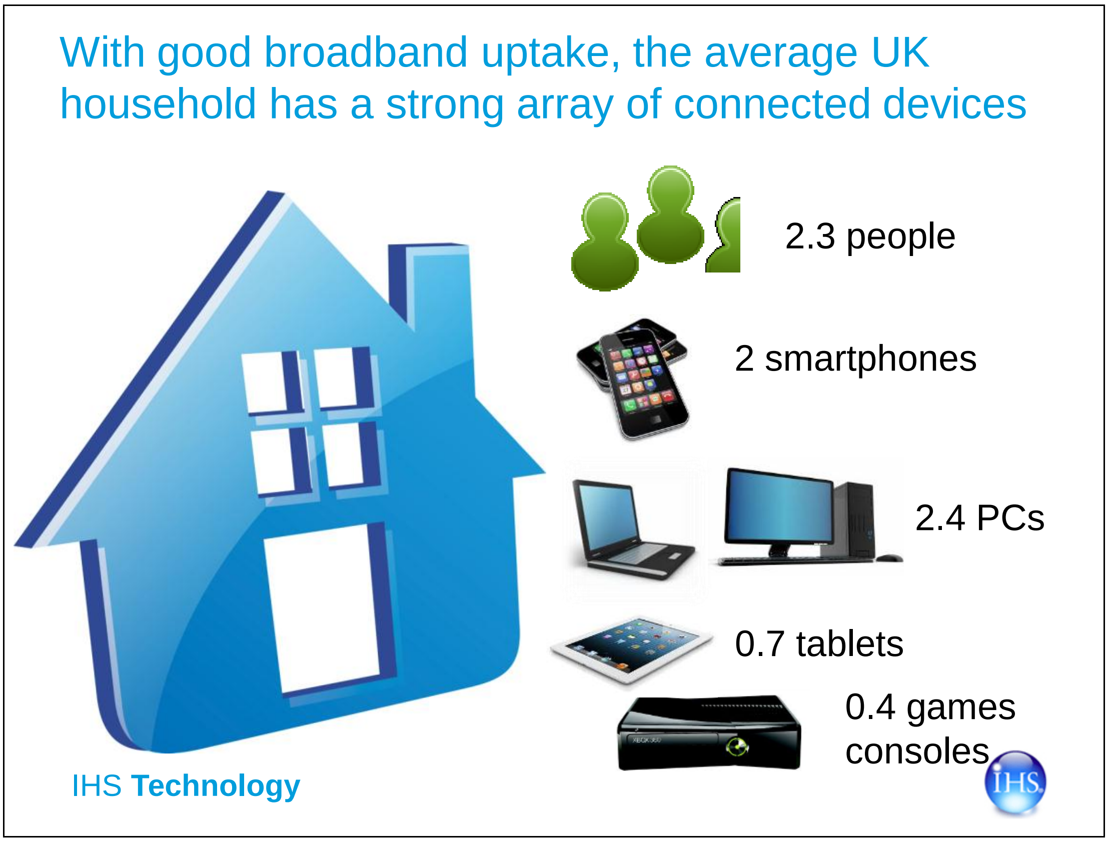
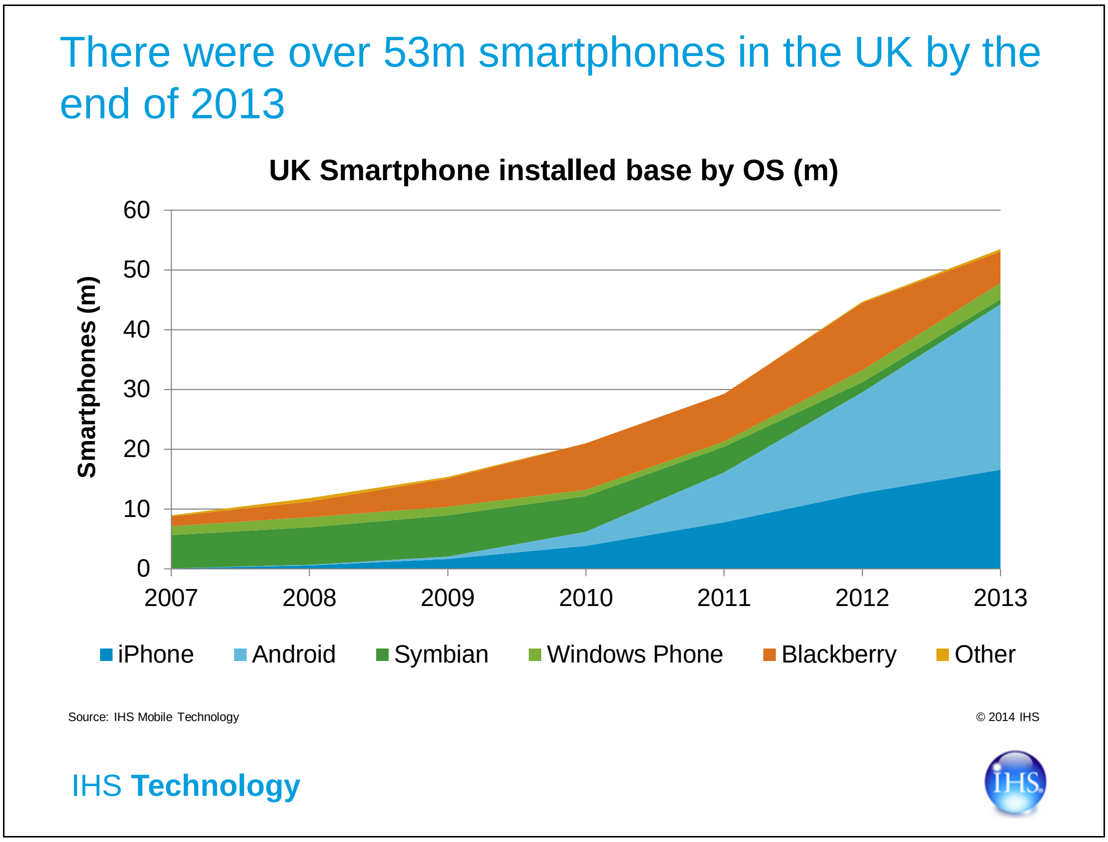
Broadband connections in the five most populous West European countries continued to rise. At year-end 2013, household penetration:

- had reached as high as 75.4% in the UK
- had surpassed 63% in Germany and France
- was lower in Spain and Italy, which were hit hard by the economic crisis, at 56% and 52% respectively. However, it was recovering after a dip in previous years.



UK households have continued to increase their uptake of connected devices:

- at year-end 2013, the average UK household had: 2.3 people, 2 smartphones (business and home), 2.4 PCs (business and home), 0.7 tablets and 0.4 games consoles
- other connected devices – pay TV set-top boxes, standalone digital media adapters – remained relatively small contributors to the overall connected device landscape.



Smartphone adoption by OS has seen shifts in relative market share:

- a change in Apple's iPhone strategy could alter iPhone's market share. If it were to focus on lower-end/cheaper handsets, it could begin to shift market share back in its favour
- Android players are getting stronger in the high end of the market as the law of diminishing returns kicks in on smartphone innovation
- a high prepaid base plus prominence of low-priced contracts in UK play into Android's key strength
- consolidation in the handset market has not removed players from the UK market (so far)
- as the smartphone market matures, there will be more specialisation towards specific niches and more differentiated designs.

Demand for content & apps have driven dramatic evolution in smartphone designs

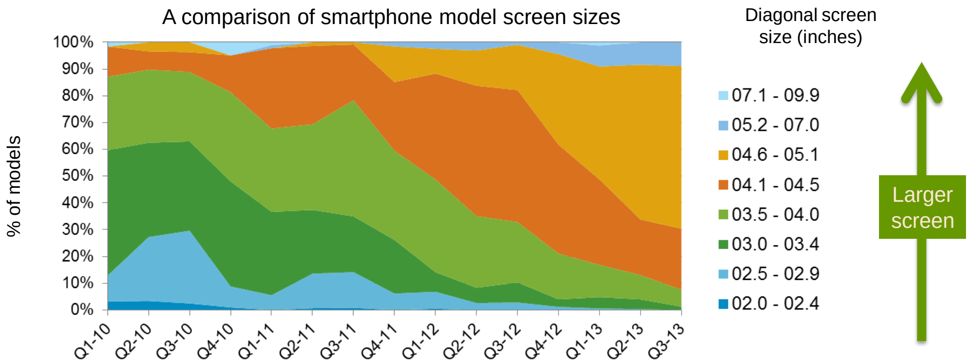
NEC E606	iPhone	Nokia N96	iPhone 4	Galaxy Nexus	Xperia Z
2003	2007	2008	2010	2011	2013
132x160 pixels	320x480	240x320	640x960	720x1280	1080x1920
Under 3 inch	3.5 inch	2.8 inch	3.5 inch	4.65 inch	5 inch
1st European 3G phone	Apple's launch	Mainstream DVB-H TV handset	HD "Retina display"	720p HD screen	1080p HD screen

IHS **Technology** Source: IHS, Mobile Technology Intelligence service (01/2014)

The smartphone design has continued to develop:

- over time, the smartphone market has seen larger-screen and better resolution devices entering the market
- by 2013, Sony's flagship device, the Xperia Z, offered a 5 inch screen capable of displaying 1080p resolutions.

HD smartphones prepare the ground for 4G by enabling better video & games experiences



- Larger screens improve on-screen gaming controls & immersive experiences
- Big rise in size in just the last 12 months.
- 4+ inches now account for >90% of new smartphones model (c. 50% in 2012).
- Demonstrates shift towards phones as media consumption devices.
- This is a leading indicator of where future consumer behaviour will go.

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Source: IHS, Mobile Technology Intelligence (12/2013)

HD smartphones have, on average, been increasing in size:

- a review of the smartphone models available shows the steady skew towards larger format devices
- devices with screen sizes greater than 4.5 inches represented the bulk of new smartphone models by the end of 2013.

Market maturity will also result in specialisation as competitors are forced into niches

- As smartphone market matures, there will be more specialisation to specific niches and more differentiated designs.

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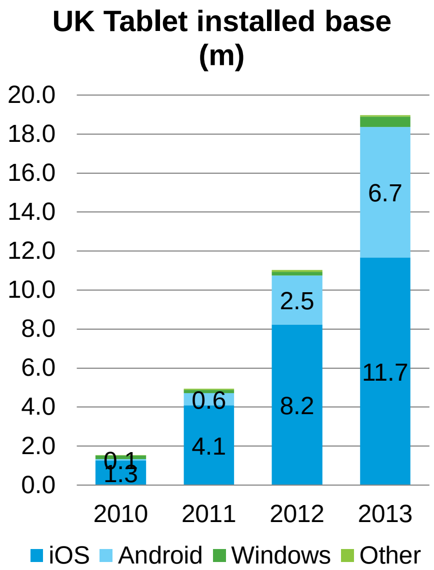
Process of niche specialisation has already begun, examples include:

- Nokia 41 megapixel Windows phone
- Doro phones, aimed at the older generation – these have larger fonts and simpler interfaces
- LG curved screen phones
- Sony's latest waterproof smartphone.

Tablets – iOS still leads, but lower cost Android devices pushing market the way of the smartphone



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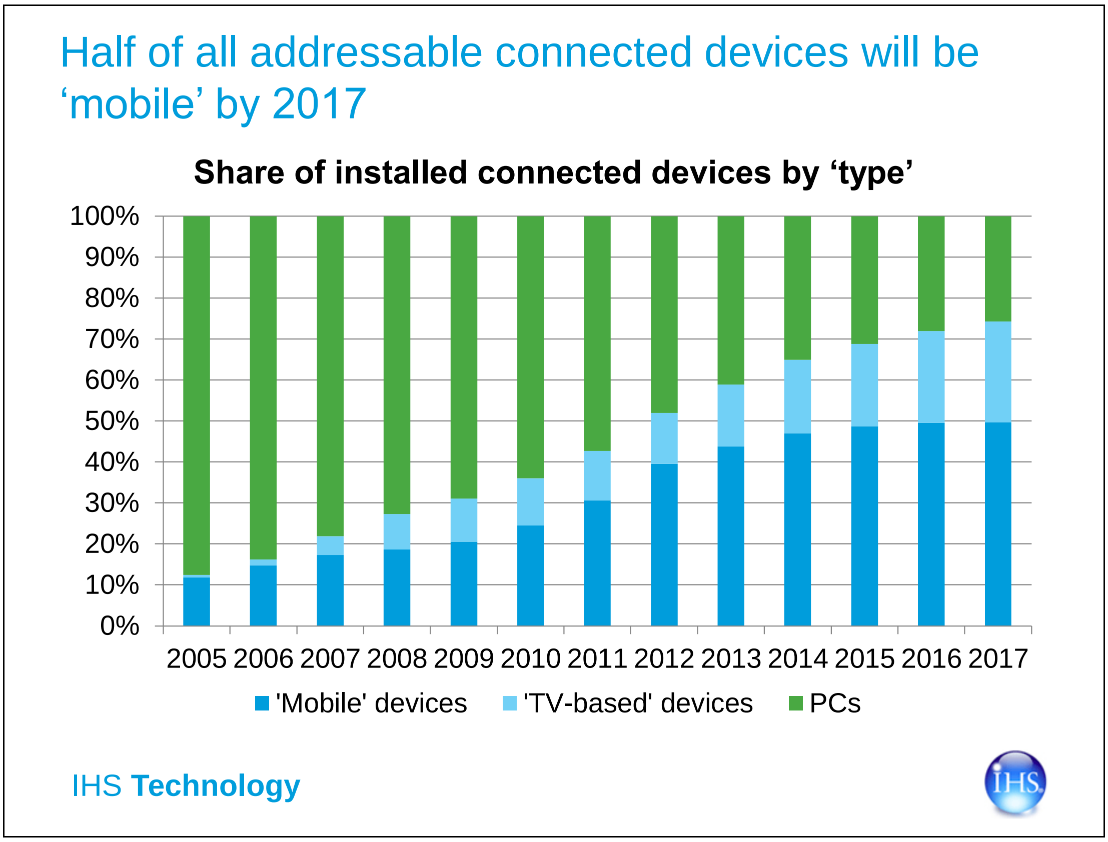
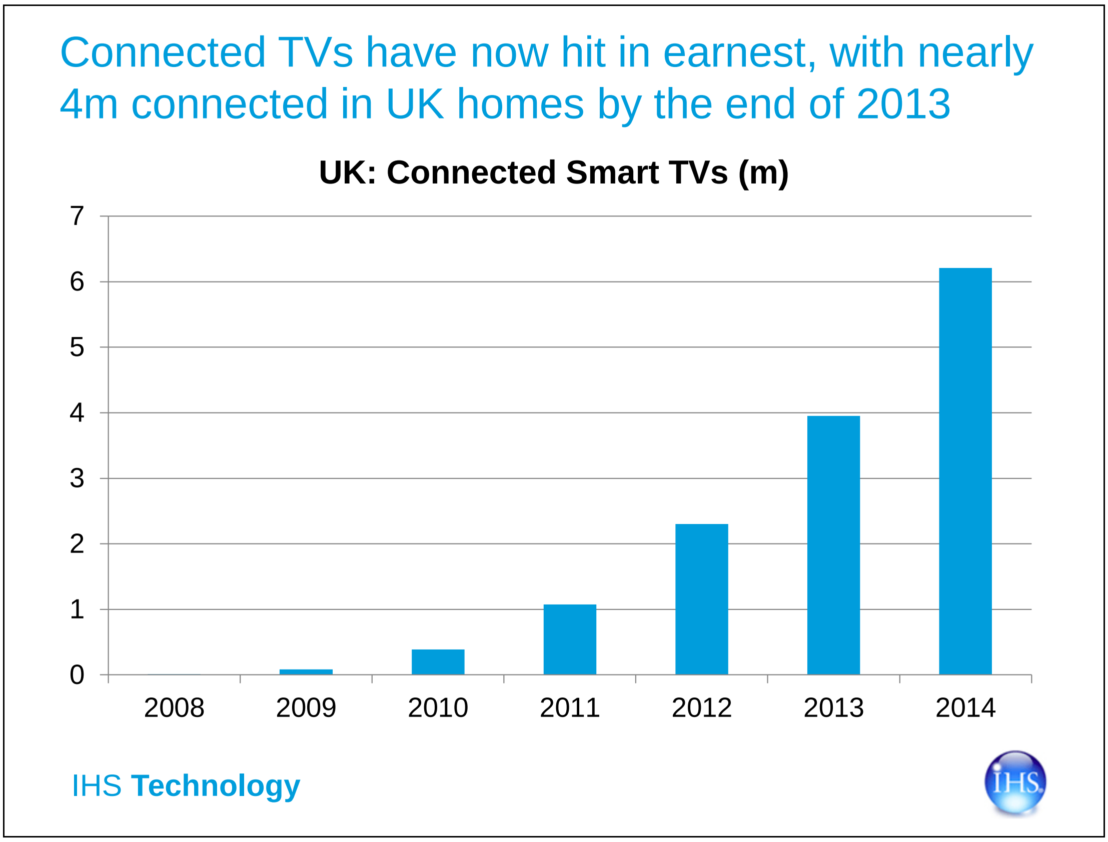
Take-up of tablets has increased rapidly over 2013:

- the emergence of lower-cost Android devices, such as the Hudl and Nexus 7, are driving the market towards a smartphone-like future, with a heavy Android contingent
- there were 400,000 Hudl sales in 2013 – with a price point as low as £120, this is perhaps unsurprising
- tablet growth has been so rapid that market saturation within the next two years is likely – growth in installed base will slow post 2014
- we are expecting over 40m active installed tablets by 2017 – so, in just seven years, tablet penetration of the population will have increased from zero to over 60%.



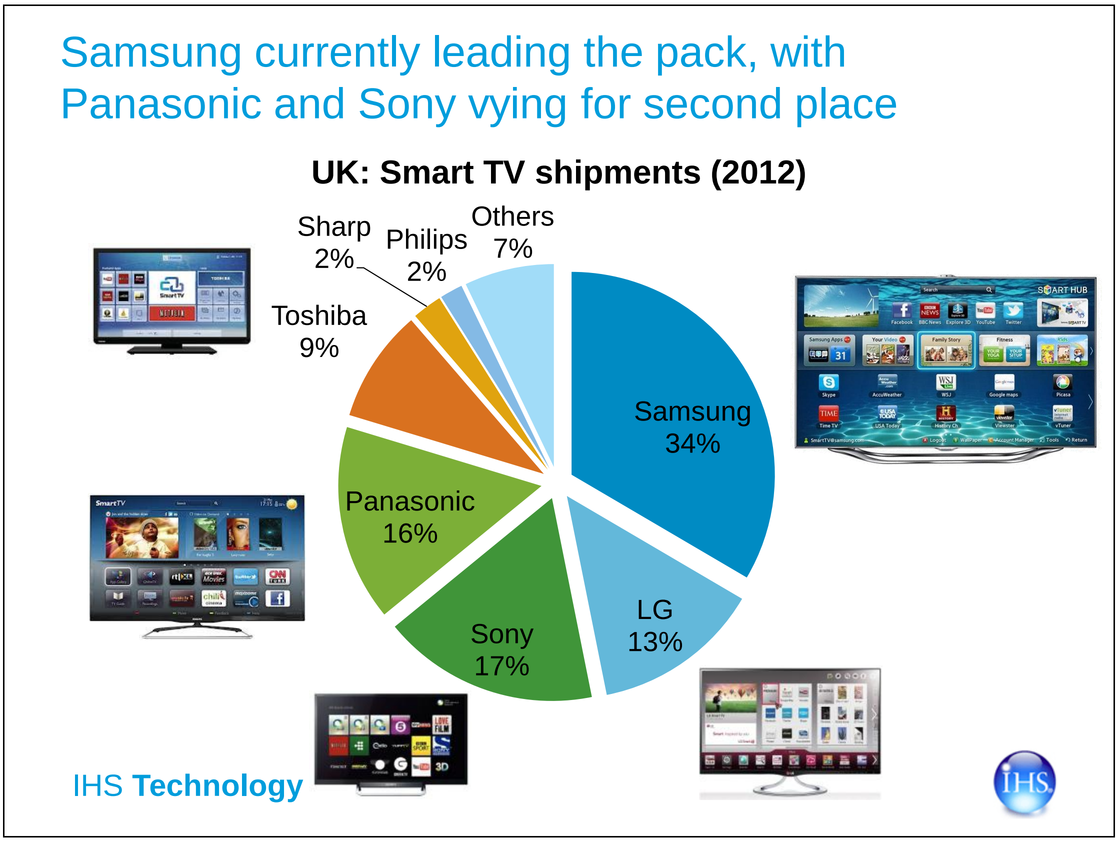
There will be shifts in the pattern of device ownership:

- combined, tablet and mobile devices will represent half of all (video-capable) connected devices in the UK by 2017
- living room devices, such as digital media adapters, smart TVs, games consoles, connected BD players and set-top boxes, will represent roughly a quarter of devices
- PCs will have dwindled to the remaining quarter of the market.



Connected TV's are now beginning to become a reality:

- they are easier to connect, due to WiFi enablement now (as opposed to the earlier wired models), increasingly 'smart' by default, and come with a growing array of content services
- there were approximately 4m connected TV's at year-end 2013, and we expect this to increase by approximately 50% to over 6m by year-end 2014.



In terms of uptake by brand:

- currently, the market leader in the UK is Samsung, which claimed 34% of shipments in 2012 (2013 numbers are still coming in, but the situation looks relatively similar to 2012)
- Sony and Panasonic were vying for second place, at 17% and 16% respectively, with other providers such as LG and Toshiba not too far behind.

But connected TVs are still facing significant issues – they compete for attention with STBs

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Smart TVs face a battle for ‘control of the consumer’, with set-top box players (and indeed games consoles, digital media adapter companies and others).

What happens when you plug in your brand new smart TV, and decide to switch it on...?

But connected TVs are still facing significant issues – they compete for attention with STBs

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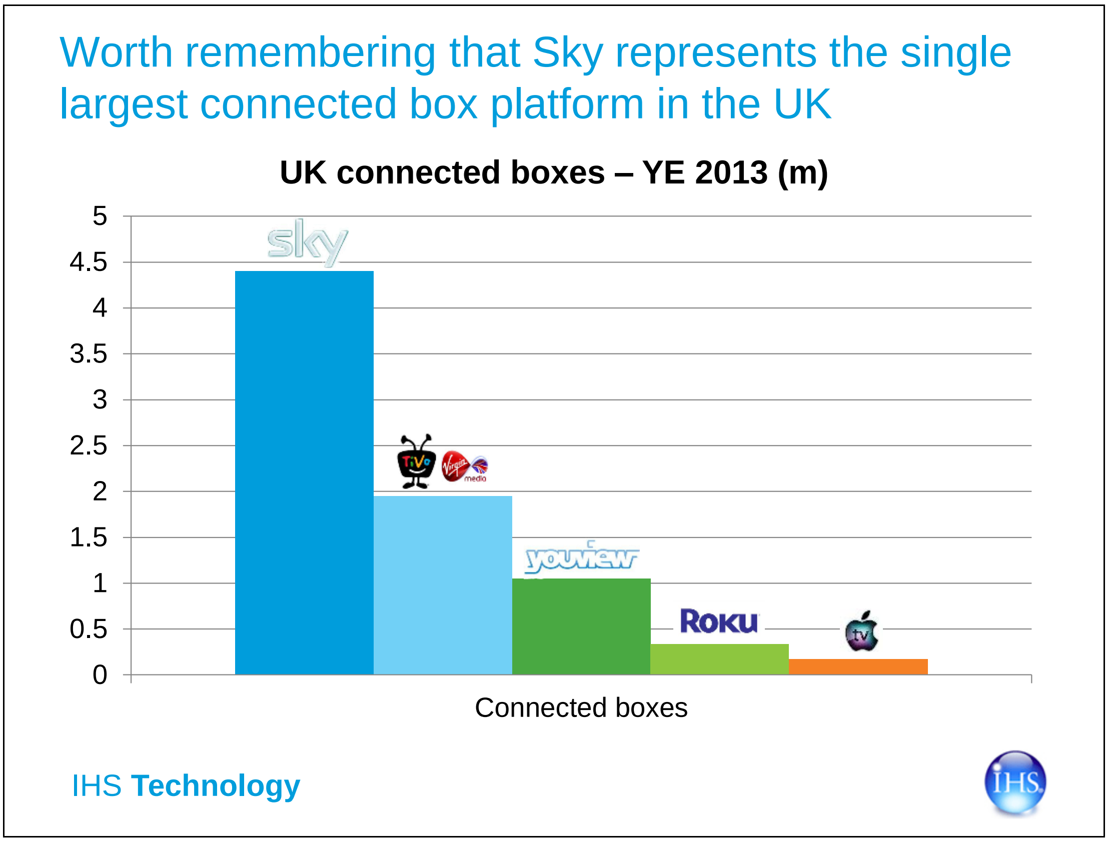
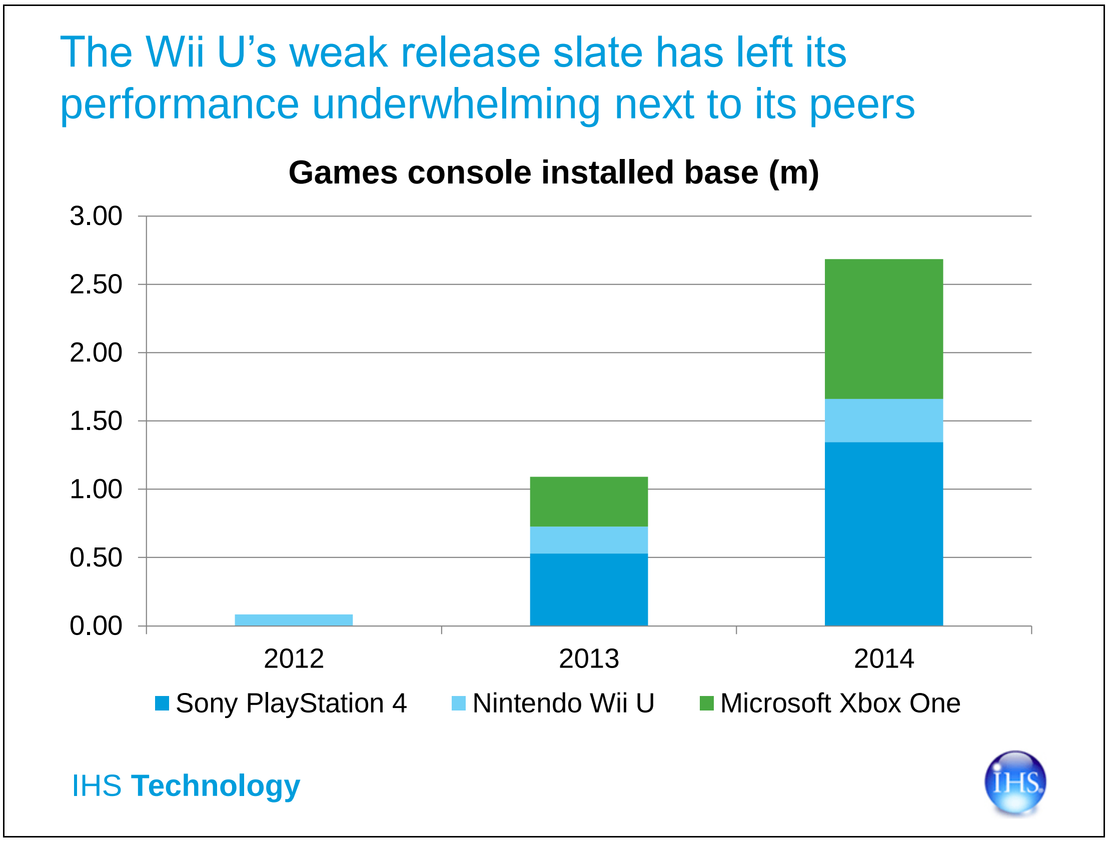
At present, when a set-top box is connected to a smart TV:

- The set-top interface overrides the smart TV interface. The exclusive content remains locked behind a paywall, which is available via pay TV operator set-top boxes
- Sky's supported devices for Sky Go include PCs, iOS and Android devices. However, and as you might expect, the company has focused on using its existing set-top box for provisioning the main TV screen.

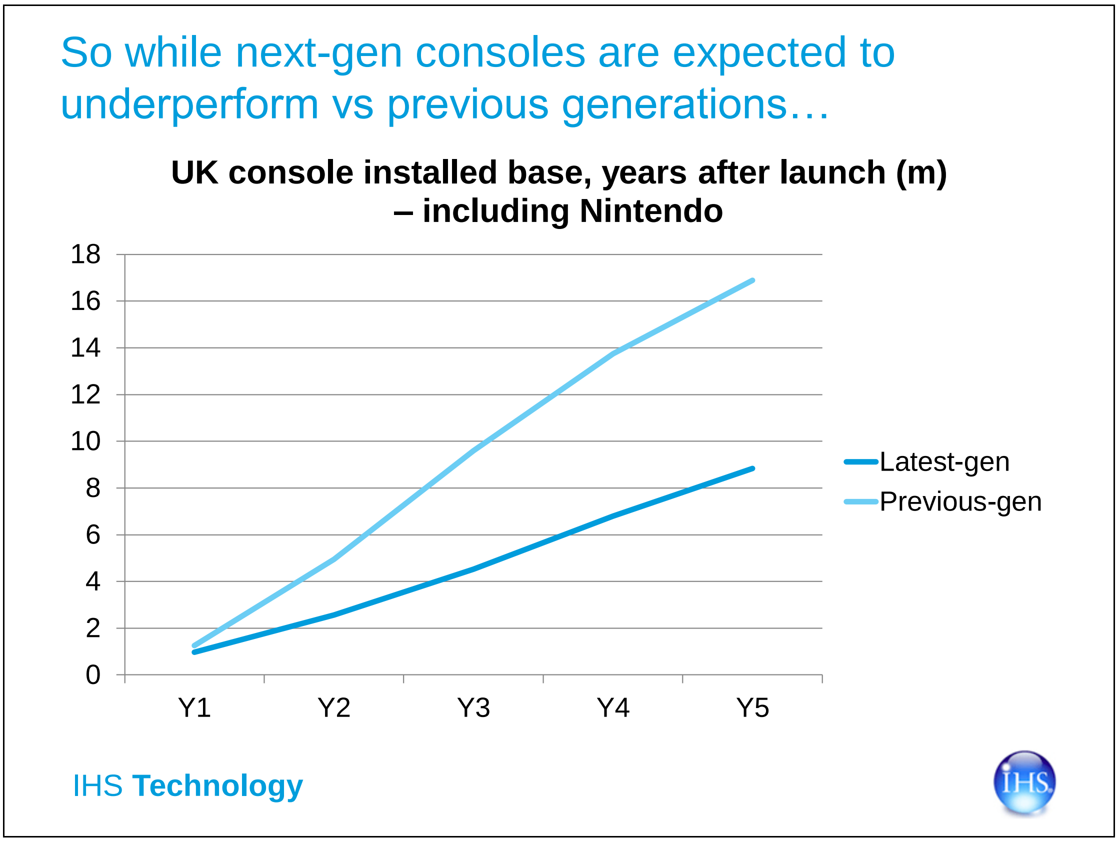


It is worth remembering that pay TV set-top boxes are some of the more prolific living room connected devices. The main content services are available via the set-tops (including catch-up, Sky Movies and NowTV via YouView), with more being added on a regular basis.



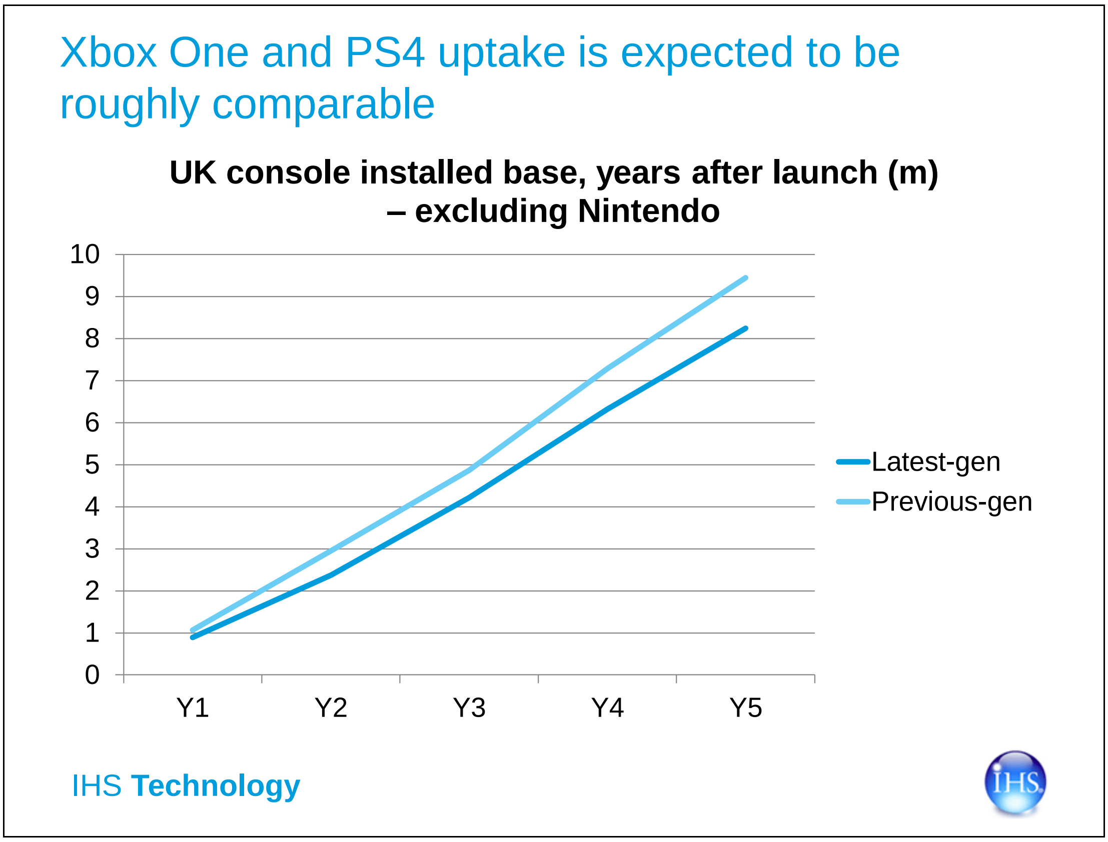
Within the UK console market:

- there are currently 1m of the latest gen consoles in the UK – we expect approximately 2.6m by year-end 2014
- we anticipate greater uptake for the PS4, driven by better specs, wider title line-up (although Xbox One has some key titles) and lower price. This has been borne out by sales data so far
- previous gen consoles represent, at year-end 2013:
    - Sony PS3 – 5.31m
    - Wii – 8.27m
    - Xbox 360 – 8.13m.



The current generation of consoles is underperforming relative to the previous generation:

- the chart shows uptake of consoles in the years following their launch. All consoles have been on the same scale, with Y1 being the first year of operation
- there are significant differences between the installed base at 'x' years post launch, with the next-gen consoles' uptake significantly lower than in previous years.



Much of this difference disappears, however, when you remove the WiiU from the equation – although some underperformance is still expected.

The underperformance of latest consoles, relative to the previous generation, is due to:

- the high internet connectivity of PS3 and Xbox 360 consoles – we believe that this factor will slow some consumer transition to new consoles and maintain usage of existing platforms in the market
- console subscription services – there are two elements to this: firstly, existing subscriptions may prompt consumers to keep their old consoles more active for longer, and secondly, because a single online console subscription service covers both old and new platforms, even if a new console is bought. We believe that it is more likely that old consoles will remain active for longer than had been the case for previous generations
- the graphical performance increase is less significant than for the last generation – the graphical step up displayed by new consoles is not as significant as it had been for the switch from the PS2 to the HD generation, especially for franchise games made for both older and new consoles. Some consumers will be happy to stick with cheaper games for the older consoles
- other entertainment services are still supported on older platforms – PS3 and Xbox 360 platforms still support all of the entertainment services that they had previously, and will continue to do so for the foreseeable future. This factor is expected to keep these older platforms active for longer
- PS3 and Xbox 360 games are not supported on new machines – this is another reason why we believe that there will be a long tail of continuing activity on legacy platforms.

We expect that 2015 will be the tipping point for the connected device sector

IHS anticipates that…

- By the end of 2015, there will be more active smartphones than PCs in the UK
- By the end of 2015, there will be more connected set-top boxes than connected games consoles
- By 2015, there will be one tablet for every two PCs in the UK

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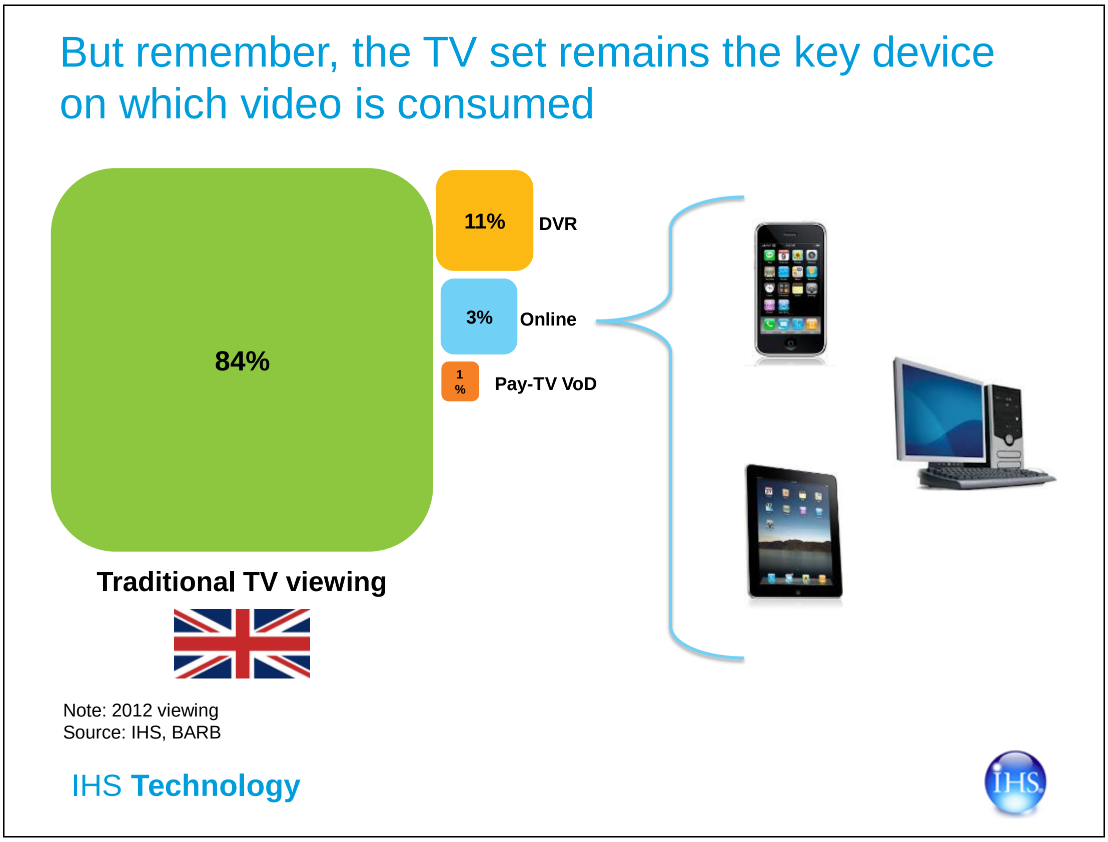
In conclusion:

- the average UK household will be a crowded place by 2017…
- although the number of people per household will not have changed much (it will have decreased very slightly), the number of connected devices will have rocketed
- there will be more smartphones than people
- PCs will have declined in prevalence, but will still fulfil functions that newer devices have yet to replicate
- tablets will be close to market saturation
- games consoles will be present at roughly the same sort of level as in previous years, but will be joined in the living room by a similar volume of smart TVs and connected set-top boxes, as well as a reasonable number of dedicated streaming boxes (Apple TVs, Roku boxes and smaller devices, such as Chromecasts).



However, it is worth remembering that, despite the huge array of different devices, the majority of consumer rest time is spent in a location with a TV:

- in 2012, circa 97% of viewing took place via TV – an increasing proportion timeshifted, certainly – but it is as important as it ever has been for content companies and broadcasters to ensure that they do not lose focus on the primary viewing instrument.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