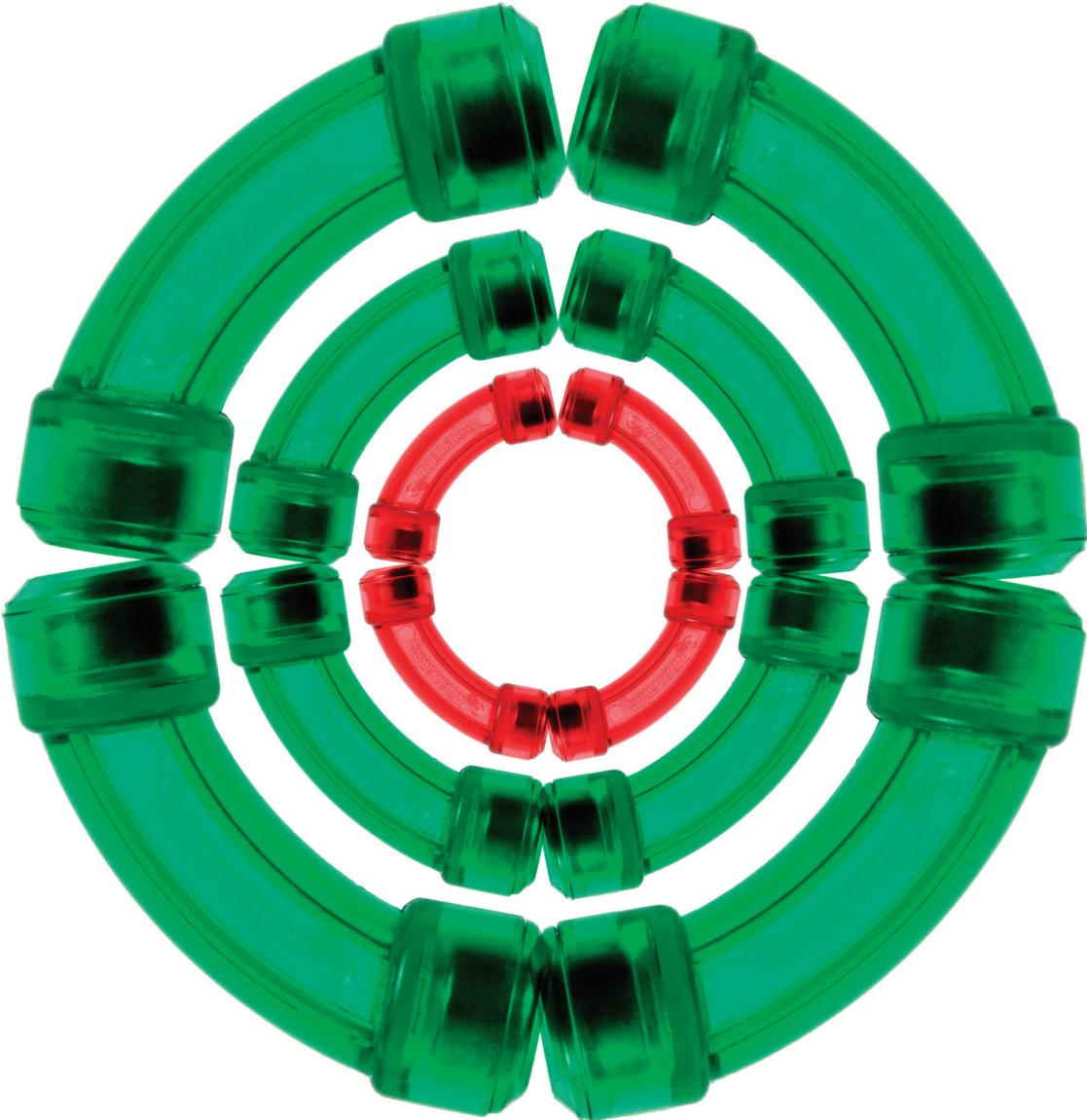


The state of the global
mobile consumer
Connectivity is core



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Foreword

The importance of mobile connectivity in our lives is growing each year. While the simplicity of a single device may be desirable, consumers are acquiring an increasing number of devices whose utility is a function of their ability to be connected. With the demand for a widening array of devices unlikely to satiate in the near future, a growing proportion of devices will become connected. Connectivity becomes core functionality as it adds value to devices and to content.

However, not all of these devices may have cellular connections – the majority of tablets, for example, have Wi-Fi connection only. In addition, the majority of mobile customers are yet to move to mobile data, so usage is likely to stratify further and become increasingly heterogeneous.

Deloitte's second Global Mobile Consumer Survey provides a unique insight into the mobile consumer behaviour of 26,960 respondents across 15 countries. The survey's scope ranges from quantifying ownership of devices to understanding how these are being connected and used. Other areas covered are: LTE (Long Term Evolution), apps, NFC (Near Field Communication), tariffs and billing, and mobile advertising.

The state of the global mobile consumer report provides a view of some of the key trends that the survey results have revealed, both by looking at the individual country picture and at the consolidated global level.

We hope you find these insights from the Deloitte Global Mobile Consumer Survey useful and we welcome further conversations based on the full data sets.



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About the research

Data cited in this report are based on a 15-country online survey of mobile phone users around the world. All research has been undertaken via online research. Fieldwork took place between May to June 2012. 26,960 responses have been included in the study.

The sample for Belgium, Canada, Finland, France, Germany, Japan, the UK and the United States is nationally representative. All samples in these countries were 2,000+ except Belgium and Finland (1,000).

In Argentina, Brazil, Croatia, Mexico, South Africa and Turkey, the online research approach used results in a high concentration of urban professionals. These are likely to be relatively high earners within their country. All samples in these countries were 2,000+ except Croatia and Turkey (1,000).

The questions for this survey were written by Deloitte member firms, with inputs from the wider mobile telecommunications industry (industry associations, operators, handset vendors, infrastructure manufacturers, regulatory authorities, investment banks, industry analyst and content creators). The multinational online research program was managed by YouGov.

The question set for this survey was standard, except where information about the local market was specifically requested. For example in the United States we asked additional questions about characteristics specific to this market, for example the adoption of mobile hotspot devices.

Questions were asked in a local official language in all countries and country specific examples were provided. Questions pertaining to spend were all asked in local currency. Currency ranges were tailored to local purchasing power where appropriate.

LTE: an iteration and an upgrade

Demand for cellular connectivity continues to rise. This is despite the rising popularity of alternatives such as Wi-Fi. Operators' ability to respond to the ever increasing end user demand depends upon factors that govern network capacity. But, with 3G operating at the limits of its capacity and capability, the time has come for a new generation of cellular network, in the form of Long Term Evolution (LTE), commonly known as 4G.

Many operators have launched LTE networks. As of November 2012, over 100 operators in almost 50 countries launched LTE networks.¹ Critical mass is slowly becoming a reality, with cities, towns and some rural locations gaining access to ultra-high speed services.

The benefits of LTE are widely recognised, and include the ability to handle more traffic at faster speeds and with more efficient use of a finite spectrum. However, LTE comes at a significant price: network upgrades, spectrum purchases, marketing and LTE handset subsidies are all potential constraints on the pace of rollout.

Why LTE's capacity is necessary

While the simplicity of a single device may be desirable, the reality for many is ownership of a number of connected, portable technologies. Not all of these may have cellular connections – the majority of tablets, for example, have Wi-Fi connection only. But the number of devices with cellular connectivity is likely to grow in the medium-term, requiring faster speeds and higher capacities.

Smartphone penetration continues to rise globally. Smartphone sales are expected to surpass 800 million units per year in 2013 and one billion by 2015.² While smartphone data usage is likely to become increasingly varied, and despite the fact that many users may never use the device to connect to the web, the average number of megabytes per month per smartphone is likely to continue rising.

By 2017, average traffic per smartphone via a mobile network is due to surpass one gigabyte per month, four times more than in 2011, with total traffic levels across all smartphones reaching 20 times the levels seen in 2011.³

One key driver for rising data consumption per smartphone is competition: manufacturers tend to differentiate through data-heavy features such as screen resolution, camera pixel count, internal storage and processor speed. Each of these elements encourages the downloading and uploading of large files. Data-heavy services such as video, cloud storage and online games strain the network significantly. Traffic generated by mobile video alone is expected to rise 25 times between 2011 and 2016.⁴ Mobile video's impact is being driven as much by screen resolution as the number of video-capable phones.

A rising number of devices such as tablets and laptops are connecting to the Internet via the mobile network. According to the Deloitte Global Mobile Consumer Survey, across the 15 countries surveyed, some 28 percent of tablets and 15 percent of laptops used to connect to the Internet do so via a mobile network, occasionally or exclusively. Going forward, the proliferation of shared plans can stimulate the growth of mobile devices connected to the mobile network.⁵

Wi-Fi only devices may also end up connecting indirectly to a cellular network via tethering with a smartphone or dedicated mobile hotspot. For example, an increasing number of Wi-Fi equipped digital cameras are on the market.⁶

Explaining LTE

Long Term Evolution (LTE) is a 4G wireless broadband technology, seen as the next generation of mobile wireless communication. LTE provides consumers with faster mobile data speeds and lower latency rates. LTE uses the Evolved UMTS Terrestrial Radio Access (E-UTRA) air interface. The standard is being developed by the 3GPP (3rd Generation Partnership Project), an industry trade group.⁷

Initial LTE deployments will provide consumers with theoretical mobile data speeds of up to 100 Mbit/s, on average around five times faster than theoretical maximum speeds reached by HSPA+ (High Speed Packet Access) networks (depending on the existing network).⁸ Actual LTE speeds achieved have averaged just over 15 Mbit/s.⁹ Initial LTE Advanced networks, likely to be deployed by 2015, are expected to run theoretical speeds of up to 1000 Mbit/s.¹⁰

A key benefit of LTE to operators is its superior spectral efficiency. It is able to use the same amount of spectrum – the bandwidth over which voice and data calls are carried – to carry more traffic. LTE can provide network operators 2 to 5 times greater spectral efficiency than the most advanced 3G networks.¹¹ For example, in the UK it is expected that early LTE networks will be 3.3 times more spectrally efficient than current HSPA+ networks.¹²

As of November 2012, 105 in 48 countries have launched LTE networks commercially.¹³ At the end of the second quarter of 2012 there were 27.6 million LTE subscribers, equivalent to half a percent of the 6 billion mobile subscribers.¹⁴ Most LTE deployments have been on a limited basis, typically focusing on major urban areas.

The evolution and adoption of LTE networks is a response to the end users' demand of mobile broadband products and services. The supply side consists of operators, their networks, and their market offerings. (The information below has been extracted from: *Airwave overloaded? Addressing spectrum strategy issues that jeopardize U.S. mobile broadband leadership*, Deloitte Development LLP, September 2012.)¹⁵

End users include consumers and businesses. They have needs involving goods, services, and information. Demand depends on how well operators do at providing mobile broadband connectivity products and services that help meet those needs. The key demand stimulators are the products and services the wireless operators offer, the prices they charge, the geographic area within which the offerings are available, and their performance along dimensions that matter to end users. As end users purchase and use mobile broadband products and services operators receive signals as to the appeal of different offerings and the characteristics of the usage their networks must accommodate.

Operators' ability to generate new offerings and respond to end user demand depends upon factors that govern network capacity – the infrastructure's ability to handle traffic volume, the sophistication of the applications it can support, and the quality of its operation. These factors determine not only a network's ability to administer today's applications and traffic volumes, but also its viability as a test bed for tomorrow's mobile broadband offerings. The capacity enablers are:

- Spectrum quantity: the volume of radio frequencies allocated to wireless services by the regulator, and acquired by a given operator, measured in megahertz.
- Spectrum quality: the suitability of the spectrum for the purpose intended. For example:
 - Lower frequencies tend to be better than higher frequencies for carrying mobile wireless signals long distances and for penetrating buildings
 - Larger, contiguous blocks of spectrum are easier to manage and allow greater efficiency of use than a patchwork of smaller ones
 - National allocations of the same frequencies enable simpler and lower cost nationwide operations than regional allocations that require an operator and the associated devices to operate on and seamlessly transfer signals across multiple frequencies
 - Licensed spectrum that is dedicated to a particular network operator enables improved security and service management capabilities compared to unlicensed spectrum available for general public use.
- Network density: the shorter the distance between cell sites, the greater the amount of wireless traffic an operator can handle with a given amount of spectrum. This is because cell sites with smaller radii serve on average fewer users for the same amount of spectrum capacity.
- Network technology: the more advanced the technology the greater is the network's ability to use spectrum efficiently and manage traffic effectively. For instance, LTE, a fourth generation technology, can be up to 96 times more efficient in its use of spectrum, measured in bits per second per Hertz, than GSM, a 2G technology.

A robust set of network capacity enablers will encourage a high level of demand stimulation, in turn leading to increased end user purchases and usage. This will stimulate further improvements in network capacity and capabilities.¹⁶

Data going mainstream

Data services have been available via mobile phones for decades. GSM phones supported data at 9.6 Kbit/s, which in the mid-90s was sufficient for email. Data speeds have since ratcheted up, but still the predominant use of phones has been to make calls and send messages. Nonetheless, data’s importance has steadily grown. Industry analysts expect that by 2013 mobile phones will overtake PCs as the most common Web access devices worldwide.¹⁷ This year’s Global Mobile Consumer Survey suggests that Internet connectivity on smartphones has attained parity with calls and text messages. In terms of network usage, data overtook voice in 2009.¹⁸

This year, more than three quarters of respondents told us they used their smartphones to connect to the Internet (78 percent of smartphone owners in developed markets – see Figure 1 and 79 percent of urban professional smartphone owners in developing markets – see Figure 2).¹⁹

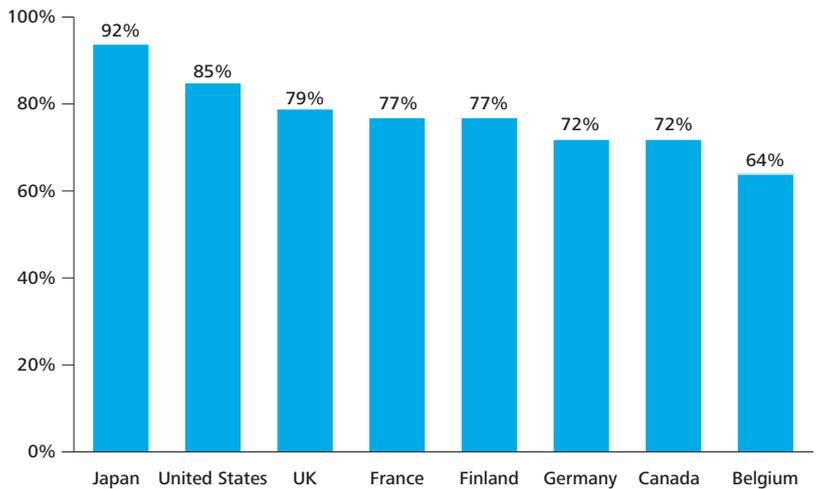
Making the LTE investment case

In recent years, many operators have addressed growing data demand by upgrading existing 3G networks to HSPA+, offering speeds of up to 42 Mbit/s.²⁰ In some cases the investment is lower than for LTE. According to industry estimates, capital expenditure on a HSPA+ network might (in the first year of deployment) be a third of the cost of LTE.²¹

LTE capital expenditure for a tier one operator in the first year of deployment is anywhere from a few hundred million dollars to billions of dollars, depending on existing infrastructure, population density, targeted area to be covered and spectrum available.²²

For some operators the most powerful rationale for upgrading to LTE would be to free up 3G capacity for voice. With data migrating to LTE, decongested 3G networks would mean higher quality voice services.²³

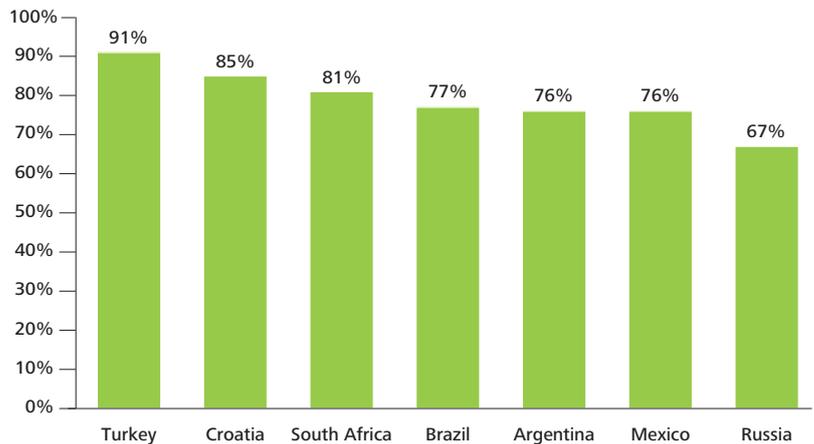
Figure 1. Proportion of smartphones that are Internet-connected in developed markets (among those who own a smartphone)



Note: The sample for developed markets is nationally representative.

Source: Deloitte Global Mobile Consumer Survey, May-June 2012. Sample: Respondents who own a smartphone (Belgium 249, Canada 933, Finland 405, France 791, Germany 846, Japan 598, UK 1063, Unites States 836)

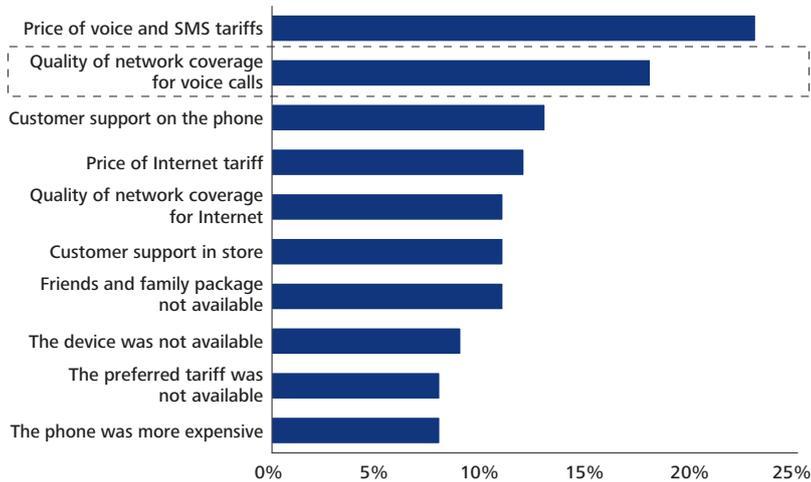
Figure 2. Proportion of smartphones that are Internet-connected in developing markets among urban professionals (among those who own a smartphone)



Note: The sample for developing markets is representative of the online population.

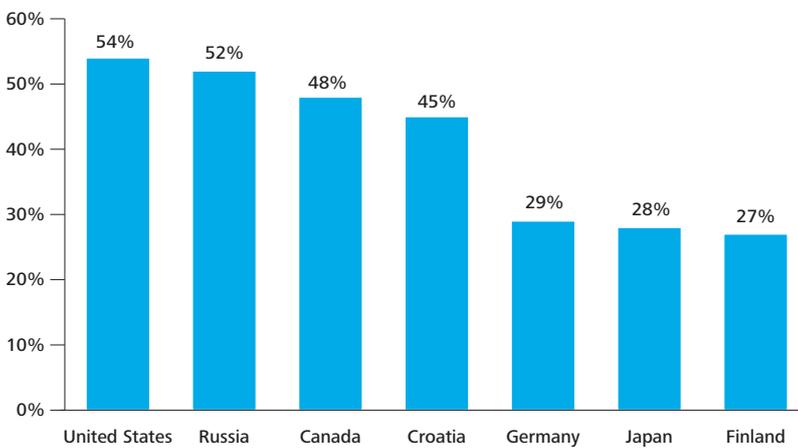
Source: Deloitte Global Mobile Consumer Survey, May-June 2012. Sample: Respondents who own a smartphone (Argentina 474, Brazil 779, Croatia 454, Mexico 659, Russia 591, South Africa 1588, Turkey 410)

Figure 3. Reasons for changing operator across all countries surveyed



Source: Deloitte Global Mobile Consumer Survey, May-June 2012. Sample: All respondents (all countries: 26,960 respondents)

Figure 4. Respondents with a smartphone in countries where LTE was commercially available in June 2012 who would like their next device to be LTE enabled



Source: Deloitte Global Mobile Consumer Survey, May-June 2012. Sample: Respondents who own a smartphone (Canada 933, Croatia 454, Germany 846, Finland 405, Japan 598, Russia 591, United States 836)

Voice remains fundamental to operators and their customers, even if they collectively spend tens of billions of dollars per year on data-centric devices. For subscribers, voice quality is the “key stone”: if operators don’t get this right, nothing else matters. A dropped call irritates customers who may not notice breaks in data connections. In the United States, data represented 85 percent of traffic over mobile networks in 2011 and generated only 39 percent of revenues.²⁴ In this year’s survey, quality of network coverage for voice calls was the second most important reason for changing operator (see Figure 3). In an LTE world, voice would initially travel over 3G as there is no single standard for VoLTE (voice over LTE), though a number of services are currently being trialed.²⁵

Marketing – at the heart of LTE’s success

In countries where LTE has been launched commercially, attitudes towards the technology are markedly positive (see Figure 4). As of September 2012, LTE was commercially available in seven of the 15 countries surveyed. In LTE countries, between 27 percent and 54 percent of respondents with smartphones indicated they would choose an LTE phone when next changing handset. Respondents in the United States, the country with the largest LTE roll out among those surveyed, had the most positive attitude towards the technology.

Over half of respondents with a smartphone in the United States want their next smartphone to have LTE. At the opposite end of the demand scale are Germany, Japan and Finland. While LTE has been launched in these countries, respondents appear less interested in acquiring LTE-enabled phones. This could be due to limited roll-out of LTE services relative to the United States and satisfaction with 3G speeds. Lower interest levels may also be due to a lack of marketing of LTE services; in the United States operators have run dozens of campaigns promoting LTE.

Marketing is likely to be essential to LTE uptake. United States operators have used flagship devices as a powerful tool to promote LTE services, with a clear and simple message: these devices are “strong enough to run on the fastest and most advanced network”.²⁶ According to this year’s survey results, a fifth of respondents in the United States bought a smartphone because it had LTE. By the end of Q2 2012, the United States accounted for almost 60 percent of all LTE enabled devices shipped worldwide.²⁷

In countries where LTE is not available, respondents are enthusiastic about a service that promises to offer considerably higher speeds than available on 3G.²⁸ Familiarity with the benefits of fast mobile broadband and greater availability of high quality handsets should enable rapid take-up of LTE in markets launching in 2013. This is in marked contrast to the 2G to 3G technology transition in the last decade, when the vast majority of consumers had never experienced mobile Internet and substantial compromises were required to adopt a 3G handset.

Monetisation of LTE services might pose difficulties, especially for those operators which have not charged a premium for improved speeds, for example when transitioning from 2G to 3G or 3G to HSPA+. Operators may struggle to balance providing customers with data allowances generous enough to allow them to take advantage of ultra-fast networks, while ensuring enough spare capacity to guarantee sufficient returns. And one business model may not fit all. For example, in the United States, the two largest operators (in terms of subscribers) have moved from unlimited data plans to capped plans, whilst the third and fourth operator are offering unlimited plans.²⁹

As long as mobile operators provide sufficient marketing support, LTE will be a success in the markets where it launches, due to availability of devices and enhanced customer experience. From a customer point of view the evolution to 4G will be easier than the revolution to 3G, and as such should be easier to swallow.

Bottom line

With average revenue per user from data services not growing as quickly as expected, operators will continue to face challenges in justifying LTE investment. However, severe network congestion caused by the rising number of smartphones is likely to encourage upgrading of 3G networks. Besides the investment in LTE, operators should also consider alternative ways of countering congestion. Offloading traffic onto Wi-Fi hotspots, deploying small cells to complement traditional towers and cells, managing traffic demand, and spectrum sharing should also be considered.

The technological benefits of LTE over previous cellular standards are considerable; however they may be difficult for the average consumer to understand. For this reason, in addition to the significant investment in network deployment, operators need to invest appropriately in promoting the benefits of LTE. Placing flagship devices at the core of marketing campaigns would help provide customers with a tangible benefit.

Operators in countries where LTE is yet to be launched should assemble a portfolio of LTE-enabled devices with which to target early adopters, hopefully creating a buzz around the service.

LTE will enable operators to encourage use of data-heavy services such as video streaming. In order to enjoy the benefit of ultra-fast network speeds, customers should be offered packages that offer predictability and transparency on data usage. Packages that provide unlimited access to the services customers most use would ensure monthly data allowances are not overspent (for more information around tariffs see 'Making all-you-can-eat-digestible').

To secure LTE uptake, operators should ensure they get the basics right, and manage expectations in terms of coverage and speeds. LTE is likely to be successful if advertised speeds are reached and nationwide roll-outs are completed in time, or preferably ahead of schedule.

As long as mobile operators provide sufficient marketing support, LTE will be a success in the markets where it launches, due to availability of devices and enhanced customer experience.

Making all-you-can-eat digestible

For many smartphone users all-you-can-eat is a prerequisite to using mobile data.³² Many operators, on the other hand, consider its cost unappetising.

There is a potential middle ground: all-you-can-eat per application (app), which has been successfully employed in pay TV. Offering unlimited access according to genres such as sports and movies has been shown to satisfy TV customers' desire for charging predictability and offers potential segmentation possibilities for providers. The model could be used in mobile, for example to provide unlimited access to social networks at a fixed price. Pricing can be adjusted to reflect bandwidth usage, with applications such as video priced higher.

With the majority of mobile customers yet to move to mobile data, now could be the right time to promote all-you-can-eat per app. As of Q3 2012, just one in seven mobile users worldwide owned a smartphone.³³ All-you-can-eat per app would be a way to encourage non-data users to try mobile data apps, without worrying about runaway costs.

The importance of predictability and the difficulty with data

Where all-you-can-eat data has already been successful, a key reason has been billing predictability. Metered mobile usage can cause headline-generating bill shock, as shown with voice and SMS.³⁴ However, the potential for bill shock in data services is arguably higher, as there is little connection between time used and charges. An hour spent on Instant Messaging (IM) may incur a lower charge than a minute of video footage on a metered tariff. Predicting metered data bills requires subscribers to understand file sizes. File size is not always obvious: a CD and a DVD look similar, but in digital terms there is a chasm between the size of a compressed MP3 track and an hour of watching TV.

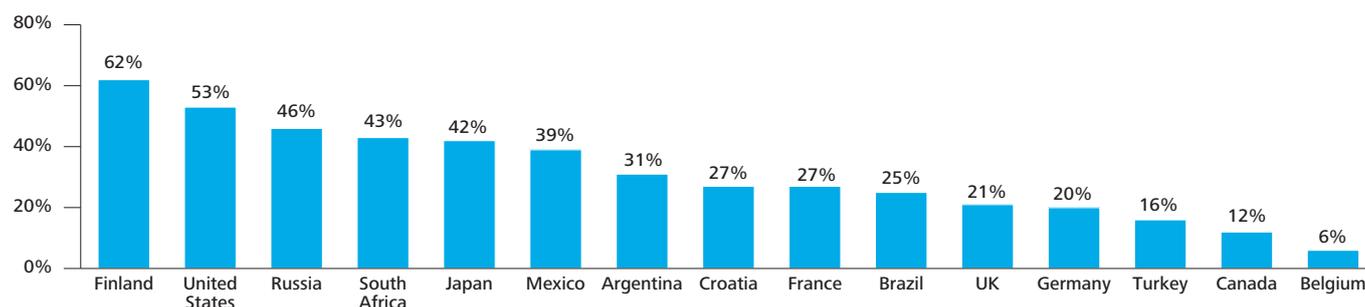
The end of the all-you-can-eat data package

Many operators in developed markets have placed restrictions on unlimited data offerings, which have become uneconomical. Meanwhile, connected devices, even with constant usage in terms of minutes, are likely to see a steady rise in data consumption. Websites' home pages grow larger each year, applications become richer and video becomes more ubiquitous. Data traffic generated by smartphones is forecast in 2013 to be approximately five times greater than in 2011, and in 2017 approximately 20 times greater.³⁵

The trend to more data is due both to more smartphones and more data usage per smartphone. More than a billion smartphones will be in use in 2013, rising to more than two billion by 2015 and more than three billion by 2017.³⁶ Between 2011 and 2017, average smartphone traffic via the mobile network is forecast to reach more than one gigabyte per month, four times greater than the 250 megabytes seen in 2011.³⁷

Three years ago, the majority of mobile data subscriptions in developed countries were marketed as "unlimited". According to the Deloitte Global Mobile Consumer Survey, a third of smartphone owners we polled that use a mobile network to connect to the Internet say they subscribe to an all-you-can-eat data package (see Figure 5). That represents 16 percent of respondents that own or have access to a smartphone – some do not use Internet at all, and others are using the Internet only via the Wi-Fi network.³⁸ However, it is worth noting that reported packages may not reflect reality; many "unlimited" packages are capped in some way.

Figure 5. Penetration of unlimited data packages, by country



Source: Deloitte Global Mobile Consumer Survey, May-June 2012. Sample: Respondents that own a smartphone use the mobile network to connect to the Internet and do not pay per use for data (all countries, 4,193 respondents)

The definition of “unlimited package” varies.

Some packages offer unlimited Internet, but limit the amount of data that can travel via the higher speed network. For example, a Brazilian operator offers unlimited Internet, but restricts the speed to 50Kbps after the first 300 megabytes.³⁹ Others incorporate usage throttling, in which the service is slowed or given a lower priority after a threshold has been reached.⁴⁰

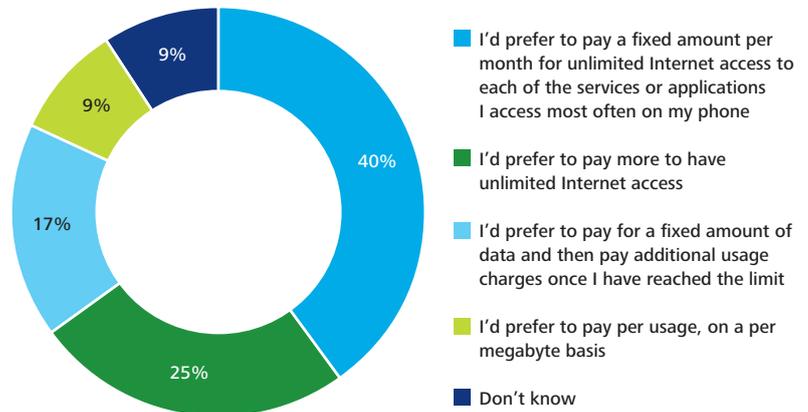
All-you-can-eat per application

A few operators have launched all-you-can-eat per app. The most common services offered are unlimited access to IM services or social networking sites.⁴¹

According to our research, consumers are amenable to this hybrid approach, comprising unlimited data but limitations around the type of service used. 40 percent of smartphone owners polled would prefer to purchase unlimited access to specific services such as email and social networks. In fact, as Figure 6 shows, more than twice as many smartphone owners said that they would prefer to pay for discrete services than for a fixed amount of data.

Respondents generally are uninterested in paying on a per megabyte basis – only nine percent of respondents would do so. ‘Pay-per-usage’ Internet is unlikely to be suitable for the future mass market smartphone consumer. As smartphone take up accelerates, operators will need to consider differences in attitude between early adopters and new price-conscious connected consumers.

Figure 6. Attitude towards Internet package billing



Source: Deloitte Global Mobile Consumer Survey, May-June 2012. Sample: Respondents that own a smartphone and use the mobile network to connect to the Internet (all countries, 5,398 respondents)

‘Pay-per-usage’ Internet is unlikely to be suitable for the future mass market smartphone consumer.

The preference towards “unlimited access to services they use the most” ranges between 29 and 54 percent of smartphone owners among the countries surveyed (see Figure 7). There are considerable differences in customer expectations between markets with high and low smartphone penetrations. For example, between the UK or United States, where users have been spoiled in the past with all-you-eat-data packages, and markets where smartphones are still relatively novel. In the United States, 40 percent of respondents said that they would rather pay more to have unlimited Internet access whilst only 32 percent would like to have unlimited access to services. More recently the two main operators have seen strong uptake of their metered shared plans, which were introduced as an alternative to the all-you-can-eat plans.⁴² In India, it has been shown that a lack of understanding of pricing options and fear of overspending is stopping people from consuming data on their mobile devices.⁴³

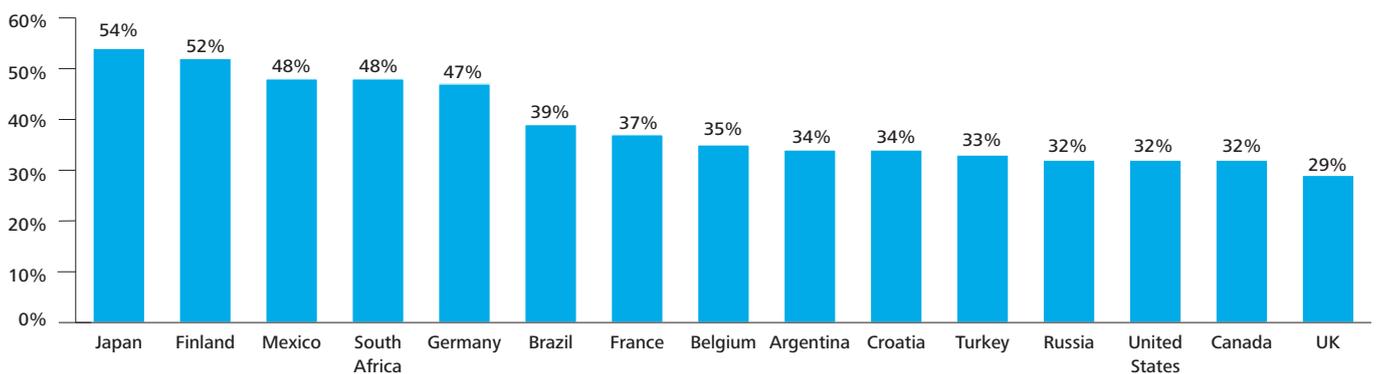
Relative to other countries, Japanese customers are happiest buying data on a per-service basis. This is possibly due to the i-mode service, which launched in 1999 and has accustomed users to paying a monthly charge for access to content.

Here the mobile operator collects monthly content charges via a consolidated bill.⁴⁴ This could be the preferred model in developing markets such as Brazil, South Africa and Russia, where paying on a per-megabyte basis is currently the norm, implying a greater customer understanding of file sizes.

Social networks and emails are services to which most respondents would like to have unlimited access. These were ranked in the top two most popular applications in 14 of the 15 countries surveyed.⁴⁵ Video services scored highly in Germany, France, Finland, Canada and Japan.

Unlimited access to the services they use most would give customers greater charging clarity. According to this year’s survey, overspend on data allowance is the third most common reason to have a higher-than-expected phone bill.⁴⁶ With the roll-out of faster LTE networks, which encourage heavy-usage, customers will want to make sure they are able to control their usage (For a discussion on LTE, please see: LTE: an iteration and an upgrade).

Figure 7. Respondents that would prefer to subscribe to a package which would give them unlimited access to services they use the most, by country



Source: Deloitte Global Mobile Consumer Survey, May-June 2012. Sample: Respondents that own a smartphone and use the mobile network to connect to the Internet (all countries, 5,398 respondents)

Bottom line

With smartphones increasingly a mass market product across all geographies, it is essential that operators simplify data offerings. They should provide service-centric packages that tap into the popularity of social networks, IM, emails and video services. These types of packages will be particularly welcomed by customers with little understanding of data.

However, some users might struggle if they are required to pick individual services for their subscription or may find it difficult to anticipate what applications will use the most. Tiered tariffs split by type of service may therefore be a more suitable approach.

For example, fair usage packages could give unlimited access to emails, popular social networks and news services, while heavy usage packages would allow unlimited video and music streaming in addition.⁴⁷

Customers should also be given the option to customise their subscription by adding services not available in the standard offering, based on personal preference. This would be applicable to services such as games, where preferences tend to vary.

There are certain services (e.g. high bandwidth services) which operators might find difficult to offer on an unlimited basis. With video streaming, if the network speeds allow it, there can be a risk of overuse. In these cases, operators might need to apply a fair usage policy, limiting not according to megabytes or gigabytes but by more tangible metrics such as minutes or hours.

One Spanish operator currently offers access to a TV streaming service, limited to 10 gigabytes of traffic for €7 (\$9) per month. Ten gigabytes would allow 80 hours of TV streaming.⁴⁸ Offering services on an unlimited basis may also lead to cannibalization of existing revenue streams, a potential issue with Voice over IP services (VoIP).⁴⁹

Although service-based packages are beneficial to consumers, net neutrality rules mean it may not be possible to offer them in all geographies. Ahead of launching service-based tariffs, operators must consult local regulations, and it may be that they will be required to offer a variety of services.

Service-based packages could be attractive to content owners aiming to achieve brand exposure outside their existing customers. To date, online technology and media companies are passive participants in such schemes. They could, however, become active if they choose to subsidise access to particular sites by paying for the relevant bandwidth on behalf of customers.⁵⁰ If such schemes emerge, they will likely test the mettle of regulators and legislators, who wish to avoid violation of net neutrality rules but also reap economic benefits from a connected population.

With smartphones increasingly a mass market product across all geographies, it is essential that operators simplify data offerings.

The tablet continues to proliferate

The tablet computer has enjoyed strong sales since it first launched with shipments expected to reach 120 million in 2012, a year-on-year rise of almost 70 percent.⁵¹ The tablet's first one million sales were attained faster than any other portable devices category.⁵² By 2016, annual tablet sales are expected to hit more than 250 million, catalysed by falling costs, multiple device ownership and mass-market take up.⁵³ The tablet is becoming the media device of choice for online activity, apps, entertainment and games.⁵⁴

One in six respondents now has access to a tablet

Year-on-year growth in tablet shipments is impressive, though the product has a way to go to rival mainstream electronic product penetration. TVs, PCs and smartphones still have far greater installed bases and shipments. For example, in 2013, around 800 million smartphones and 400 million PCs are expected to ship.⁵⁵ These volumes remain significantly higher than the 170 million tablets forecasted to ship in the same period.⁵⁶

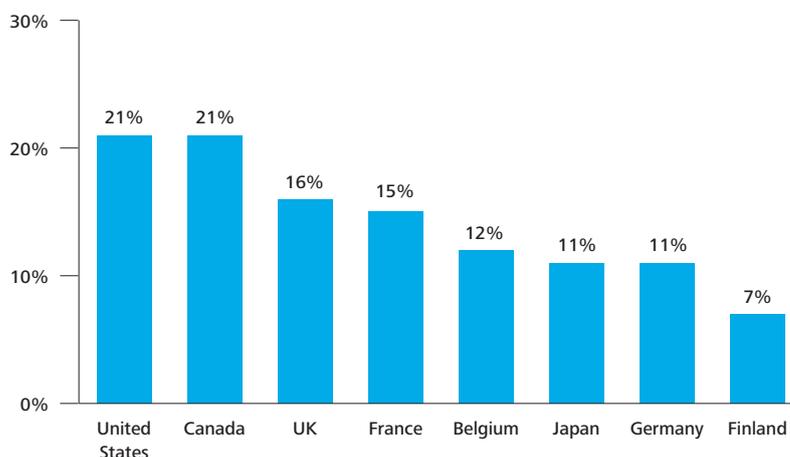
The Deloitte Global Mobile Consumer Survey reveals that 15 percent of respondents in developed countries own or have access to a tablet (see Figure 8 for penetration by country in developed markets). In developing markets, 19 percent of urban professionals own or have access to a tablet (See Figure 9 for penetration by country in developing markets).⁵⁷ However, sharing is still common; for example, two thirds of tablet owners in the UK share their tablet in some way.⁵⁸

By comparison, 65 and 39 percent of respondents in developed markets own or have access to a laptop, and to a smartphone respectively. In developing markets, 63 and 40 percent of urban professionals own or have access to a laptop and to a smartphone respectively, plus typically these devices are not shared.

Affordability will be a key driver for increasing tablet adoption

The first mainstream tablet launched in March 2010 at a \$499 price point for the entry level version.⁵⁹ Subsequently, many models have launched at lower price points, with mainstream seven inch tablets now available from \$159.⁶⁰ In some markets, tablets cost as little as \$60,⁶¹ although roll-out of sub-\$100 tablets is limited to a few countries, and sales appear to be insignificant.

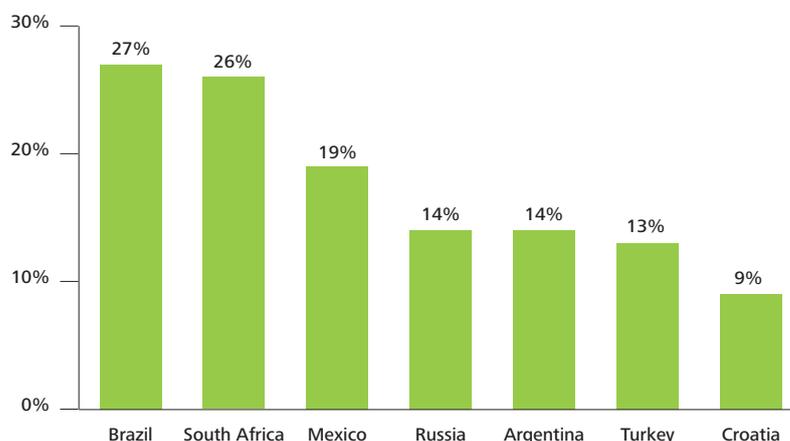
Figure 8. Ownership or access to tablets in developed markets, 2012



Note: The sample for developed markets is nationally representative.

Source: Deloitte Global Mobile Consumer Survey, May-June 2012. Sample: All respondents in developed markets (Belgium 999, Canada 2,380, Finland 1,127, France 2,011, Germany 2,083, Japan 2,011, UK 2,060, United States 2,022).

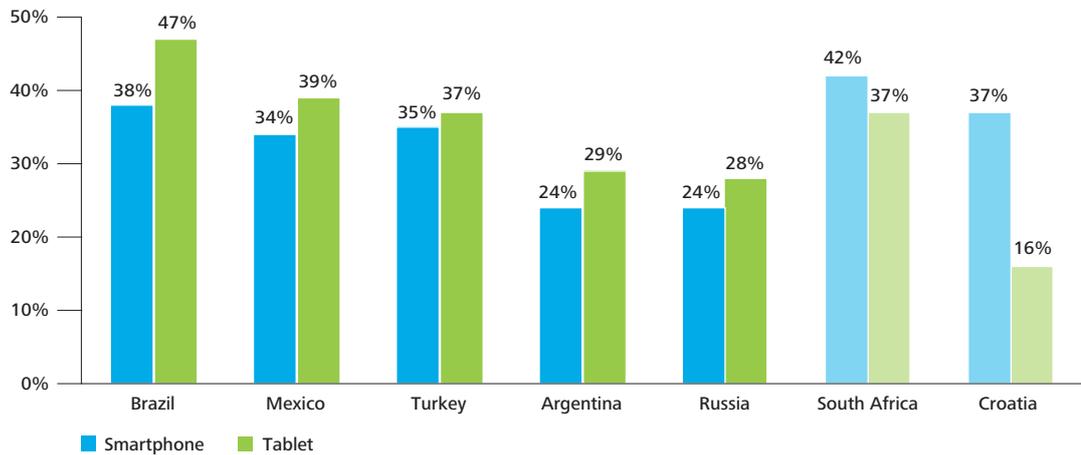
Figure 9. Ownership or access to tablets in developing markets among urban professionals, 2012



Note: The sample for developing markets is representative of the online population.

Source: Deloitte Global Mobile Consumer Survey, May-June 2012. Sample: All respondents in developing markets (Argentina 2,040, Brazil 2,032, Croatia 1,004, Mexico 2,045, Russia 2,046, South Africa 2,088, Turkey 1,012).

Figure 10. Most desired future mobile device in developing markets in the next 12 months (comparison between tablets and smartphones)



Note: The sample for developing markets is representative of the online population.

Source: Deloitte Global Mobile Consumer Survey, May-June 2012. Sample: all respondents in developing markets (Argentina 2,040, Brazil 2,032, Croatia 1,004, Mexico 2,045, Russia 2,046, South Africa 2,088, Turkey 1,012).

Owning a smartphone and tablet (and indeed a laptop, games console and many other connected devices) is for many affordable and desirable. However, some consumers, constrained by their income, may have to choose between a tablet or a smartphone. This year’s survey suggests that the tablet might win this battle: in five of the seven developing markets surveyed, the tablet is the mobile device that most respondents would like to buy in the future, scoring higher than the smartphone (See Figure 10). This may be because developing world consumers perceive a tablet as a better laptop-substitute than a smartphone.

In developed markets, the smartphone is the portable device that most respondents would like to buy in the future, scoring ahead of tablets.

Mobile Internet traffic is overtaking desktop Internet traffic in some developing markets, due to the increased functionality of mobile devices and improved cellular infrastructure – coupled with low access to wireline broadband connectivity.⁶² Especially due to its size, the tablet has greater utility than smartphones, which is attractive to price sensitive consumers. As tablet formats proliferate and prices continue to fall, devices such as smartphones, laptops and even small television sets may become less relevant for consumers who cannot afford to own more than one connected device. As more consumers purchase tablets, they may defer the purchase of newer versions of consumer electronics that they already own – effectively lengthening the replacement cycle.

Tablet penetration remains relatively constant across age groups and genders

In developed markets, the tablet’s success has in large part been due to its penetration across users outside traditional early adopters. This is in addition to the long-term steady increase in the number of computing devices owned per person.⁶³ Tablet penetration is less skewed by age group than that of smartphones, typically owned by younger respondents (see Figure 11). More than 40 percent of tablets in the developed countries surveyed are owned by the over 45 age group.⁶⁴

Early adopters of tablets were predominantly men. Currently tablets appeal increasingly to men and women. A study conducted in Q3 2010 in the United States suggests that 39 percent of tablet owners are female, whilst the Deloitte Global Mobile Consumer Survey results for the United States suggest that 46 percent of owners are female.⁶⁵ An August 2012 study found that in the United States 27 percent of women own tablets slightly ahead of 24 percent of men.⁶⁶ This is also reflected in the content consumed on tablets. In July 2012 four of the top ten grossing apps on a popular tablet in the United States were designed for women. Three were aimed at men.⁶⁷

Lower prices, different screen sizes and various form factors are driving multiple tablet ownership

As prices fall and tablet awareness and functionality increases, consumers are likely to become familiar with the advantages of owning multiple tablets. The first tablet launched just over two years ago; now more than a fifth of tablet users own or have access to more than one tablet (Figure 12).

Multiple ownership of tablets is surprisingly high, compared to smartphones and laptops, despite the fact that these devices have been available for considerably longer. Among all countries surveyed, 21 percent of respondents own or have access to more than one tablet, compared with 30 percent for laptops and 33 percent for smartphones. It took more than ten years for households to own more than one smartphone or personal computer, but less than two for tablets.

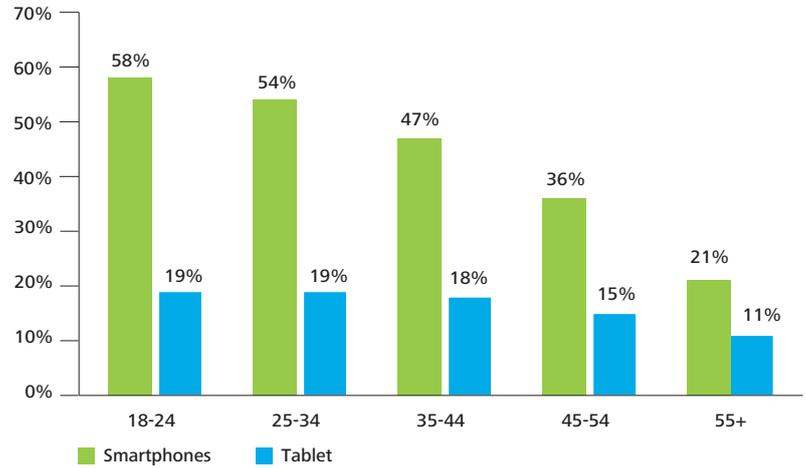
There are multiple reasons for tablet owners to acquire additional tablets. Size is likely to be a key driver. There is a growing range of smaller tablets available, measuring between five and eight inches.⁶⁸ For those wanting larger devices, 13 inch tablets are now available.⁶⁹ Other drivers of multiple tablet ownership are enterprise deployment, form factors and business models.⁷⁰ With the ever-increasing range of tablets on the market, consumers will be more inclined to buy a personal tablet, instead of sharing with others in the household.

The tablet is preferred over smartphones for content consumption and app usage

Increased tablet adoption is also driven by the devices suitability as a content consumption device. With a larger screen, tablets offer an enhanced user experience compared to smartphones, especially when viewing content such as videos, but also when playing games. Two-thirds of the time spent on tablet is used to play games.⁷¹ With features such as accelerometers, gyroscopes, large screens with good resolution and low priced games, the tablet has become a strong competitor to traditional games consoles.²²

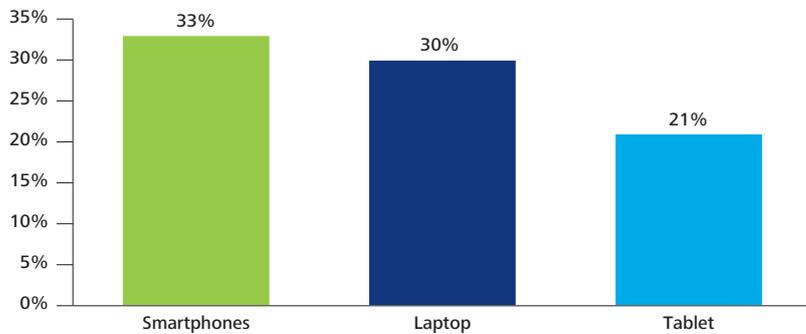
Tablets are accommodating the changing way in which content is consumed. For example, Figure 13 shows that tablets are the preferred device for online media subscription-based services as opposed to smartphones. Deloitte expects that in many markets, the tablet – combined with broadcaster supplied video-on-demand services – could gradually replace the small second or third television set currently used in the kitchen and bedroom.

Figure 11. Smartphone and tablet penetration by age group in developed markets



Source: Deloitte Global Mobile Consumer Survey, May-June 2012. Sample: All respondents in developed markets (Belgium 999, Canada 2,380, Finland 1,127, France 2,011, Germany 2,083, Japan 2,011, UK 2,060, United States 2,022).

Figure 12. Respondents that own or have access to more than one smartphone, laptop and tablet

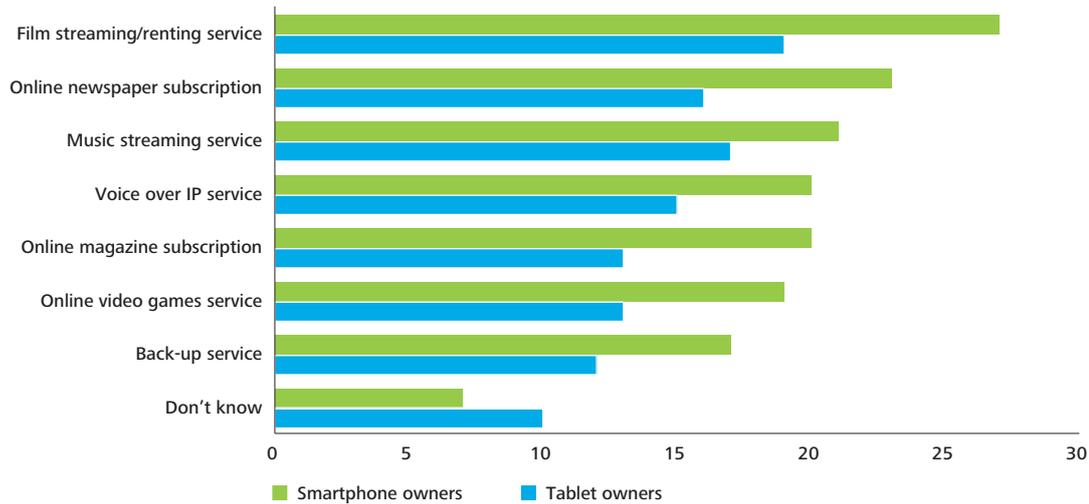


Note: The sample for developed markets is nationally representative and for developing markets is representative of the online population.

Source: Deloitte Global Mobile Consumer Survey, May-June 2012. Sample: Respondents who own or have access to at least one mobile device (all countries, 26,960 respondents).

With features such as accelerometers, gyroscopes, large screens with good resolution and low priced games, the tablet has become a strong competitor to traditional games consoles.

Figure 13. Preference for online media subscriptions by tablet and smartphone (all countries)



Source: Deloitte Global Mobile Consumer Survey, May-June 2012. Sample: Respondents who own or have access to a smartphone (all countries, 10,220 respondents); Respondents who own or have access to a tablet (all countries, 4,373).

However, tablets have yet to be embraced as TV (as opposed to short form video) viewing devices – and only occasionally are used for this purpose. According to Deloitte LLP research on television usage behaviours, only 14 percent of respondents would rather watch TV content on a computer/laptop/tablet than traditional television.⁷³

The preference for content consumption on tablets is also reflected in the number of apps downloaded. Respondents that own a tablet download on average more than 40 percent more apps than smartphone owners.⁷⁴

Content consumption is screen-dependent and seems to increase with the size of screen. For example, the number of monthly average browser page views for a ten-inch tablet is almost 60 percent higher than for a seven-inch tablet.⁷⁵ Some five percent of tablet owners said that since they owned a tablet, they hardly use their smartphone; 23 percent said that they use their smartphone less often, but still a lot.

Despite their success, the tablet's potential may be limited by its functionality, which is restricted to content consumption and web browsing. Despite rapid adoption of media tablets across geographies, age groups and genders, functionality has remained stable.

That is unlikely to change anytime soon, as touch screens lack the precision and ergonomic comfort of a mouse and keyboard. Activities ranging from report writing to financial modelling will likely remain difficult on a tablet, suggesting it will continue to complement the suite of existing devices commonly used for content creation.

Bottom line

Tablet penetration is likely to continue to grow across all geographies and demographic groups. At the same time, the average selling price of a tablet will likely drop from over \$400 in 2012 to less than \$300 in 2016.⁷⁶ Due to its low price point in less affluent markets, the tablet may be the first Internet device adopted by the new wave of connected consumers, ahead of PCs and potentially ahead of smartphones. Tablet manufacturers should not compromise on quality whilst trying to keep low price points especially as it is likely that these users have had little previous interaction with computing devices.

In developed markets, and increasingly in developing markets, multiple device ownership, both within and outside individual categories, will continue to be the norm. Currently, the tablet complements the PC and smartphone, and can offer additional functionality. With the ever increasing number of devices owned per person, making content available across a number of devices is essential. To ensure full coverage and maximise potential audience, the convergence should be platform and operating system agnostic.⁷⁷

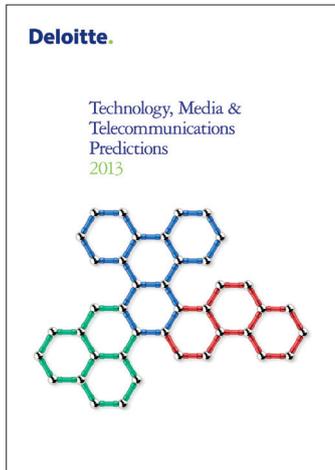
Notes

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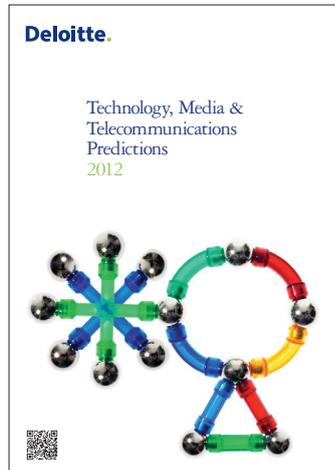
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64. This is partially due to the fact that the concentration of the over 45 age-group represents 53 percent of the total sample in developed countries
65. For a view on tablet penetration among female users as of Q3 2010, see: Changing Demographics of Tablet and eReaders Owners in the US, Nielsen, 25 August 2011: http://blog.nielsen.com/nielsenwire/online_mobile/changing-demographics-of-tablet-and-ereader-owners-in-the-us/
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68. Examples of smaller tablets include the Samsung Galaxy Note series, Amazon Kindle Fire series, Apple iPad Mini, etc.
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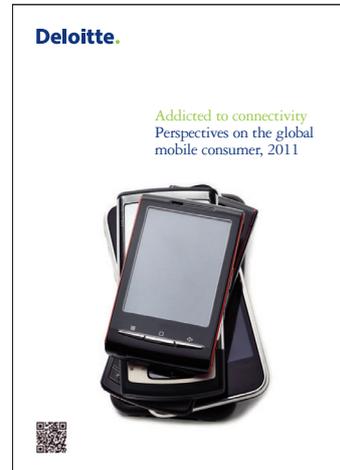
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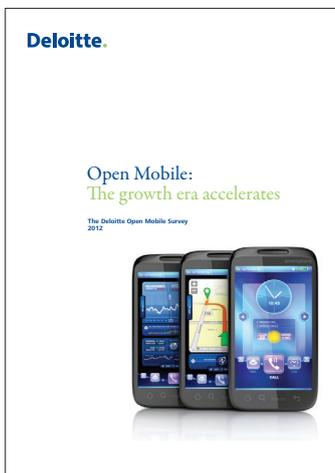
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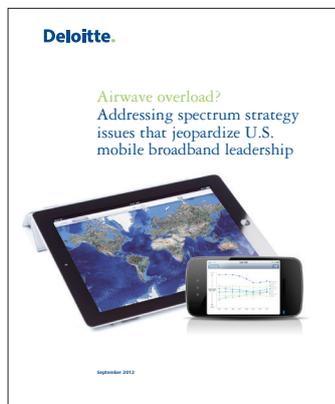
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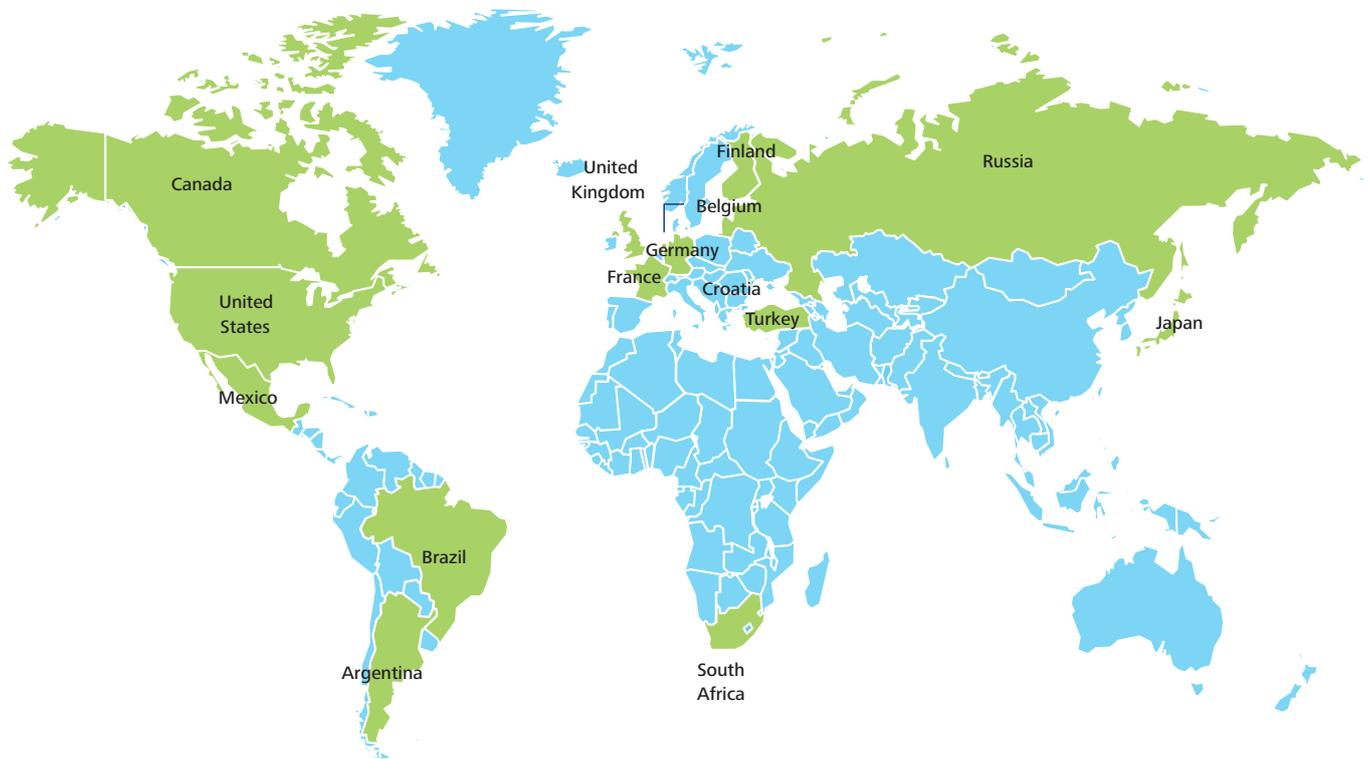


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