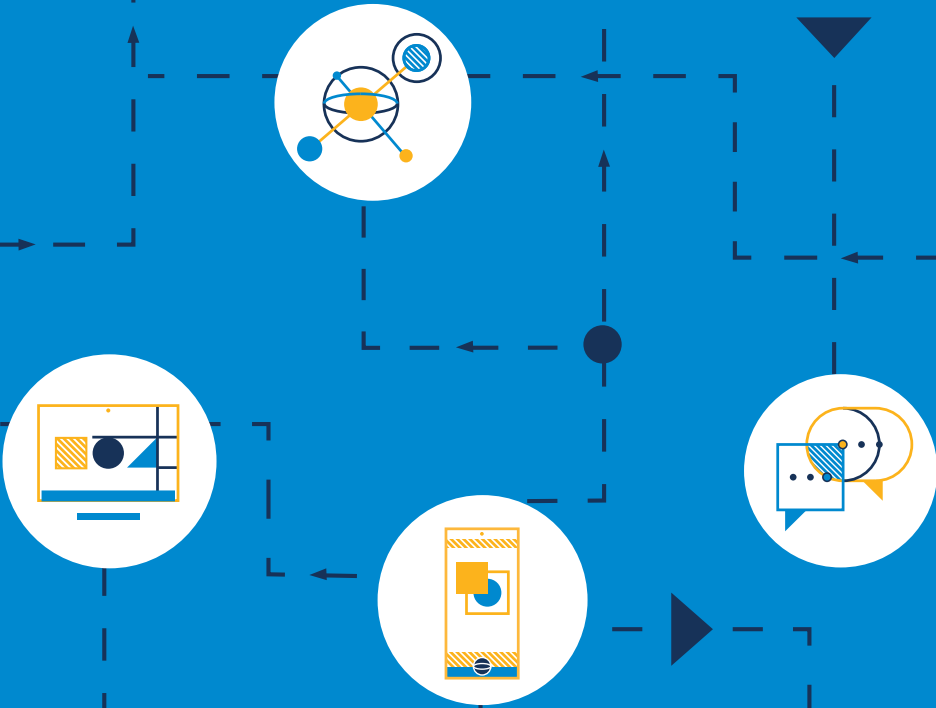


# Interaction



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## GroupM

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# Introduction

# INTRODUCTION

Welcome to Interaction 2016, our annual aggregation of digital media data and opinion.

The velocity of thought leadership and its dissemination has accelerated and colleagues from the world of GroupM and its agencies have published more than ever before. We are therefore focusing on areas we feel are most critical to the overall marketplace.

As ever the world has changed. Microsoft (other than Bing) and Apple effectively exited the advertising business, internet icon AOL was acquired by Verizon (Yahoo next?) and ad tech company Tapad by Telenor, continuing a trend of telco moves into data and advertising. Rather than further commentary on mergers and acquisitions, the dominance of Facebook and Google, the emergence of Snapchat and the possible implications of virtual and augmented reality or the machinations of competition between the digital giants, the purpose of this document is to identify the most important aspects of the year ahead as they pertain to advertisers.

## SIX AREAS STAND OUT

The purpose of this note is to identify the most important aspects of the year ahead as they pertain to advertisers.

- 1 The integrity of the digital media supply chain
  - The challenge of the stream and the curious case of online video measurement
- 2 Meeting the challenge of ad avoidance
- 3 The unabated rise of the app
  - The medium is the Messenger
- 4 E-commerce
  - Retailers, marketplaces and selling on the edge
- 5 The economics of television creation and distribution and the role of the advertiser
- 6 The opportunity and challenges for data-driven advertising and its attendant security

## Supply chain integrity—criminal, commercial and critical

In March of 2014 the Wall Street Journal asserted that some 36% of all web traffic was fraudulent: specifically that only 64% of aggregated traffic was viewed by humans rather than by “bot” software designed to inflate the volume of impressions in the market and thus defraud advertisers by charging for impressions that simply did not exist.

Alongside this patently criminal action was the compounding effect of impressions that were served into websites but that never entered the screen space visible to the user.

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Together these factors created a sudden and entirely legitimate loss of confidence in the digital inventory supply chain. The right not to be a victim of crime is self-evidently inalienable.

Advertisers are far from the only victims of fraud. It has been suggested by many authorities that it is providing a significant part of the funding of organized crime and the trafficking of armaments, narcotics and human beings.

The battle against fraud is being waged across the industry and by organizations like the Trustworthy Accountability Group that have made a huge contribution by verifying publisher inventory as authentic and giving advertisers greater confidence that bot traffic can be identified and that they will not be charged for it. Such traffic will never be eliminated completely, but the incentives to the fraudsters can be massively reduced if detection prior to payment is effective.

Viewability is a commercial issue not a criminal one. In less than two years digital media trading on behalf of major advertisers has migrated from ignorance of the issue, to shocked recognition, to a high level of vigilance in both display and video. Many advertisers in the USA in particular now trade exclusively on viewable impressions. The GroupM USA standard is simple. 100% of the ad must appear in the viewable window in order to qualify for payment. In video the same standard applies with the added qualification that at least 50% of the first 15 seconds of video must be viewed, with the sound on. For advertisers familiar with television this seems a modest expectation.

This is not a simple matter, but rapid progress is being made. The technology exists to verify our standard and many publishers have redesigned their sites to maximize viewability. It already seems clear 2016 will be the year in which demand for bad supply will plummet.

It already seems clear that 2016 will be the year in which the demand for bad supply will plummet.



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It may  
be time  
to remove the  
zero from the  
30-second  
standard.

GroupM has elected to take a robust stance in North America—and now in markets such as Canada and Australia—abetted by the vociferous support of our clients and by many publishers who believe their inventory to be of premium value. It helps that we confine transactions to about 200 suppliers for the vast majority of our business. Walking in the best-lit neighborhoods is the best way of keeping safe.

By working with those partners and staying away from other inventory we believe that we are succeeding in minimizing the challenges of fraud and viewability. Our goal is to standardize this approach around the world. This is a long but valuable endeavor. Our goal is to drive a behavioral change that reduces the need for rules. If the appropriate incentives can be agreed upon we will succeed. Nowhere is this more important than in programmatic media where velocity must not be allowed to obscure integrity. Programmatic is about the automation of manual processes in trading and data application, not a mechanism for creating the illusion of efficiency.

## The challenge of the stream and the curious case of online media measurement

The biggest outstanding challenge remains viewability in “feed-” or “stream”-based environments including Facebook, Twitter and Instagram as well as the vast majority of mobile applications. Given the astonishing growth of mobile media consumption this is of immense significance. Now saturated in terms of device penetration, mobile has overtaken the desktop in almost all aspects of digital media behavior although desktop use itself remains at a four-year average.

Most mobile use is scrolling, in which advertising is inherently ephemeral. Many have adopted verification standards yet three factors concern us:

- First, the speed of the scroll means advertising may pass through the viewable window yet be seen only fleetingly
- Second, the notion that “autoplay” video with a charging event after three seconds “in window” may not represent a reasonable period for advertising effect. This is not to say that it has no effect.
- Third, the propensity for individuals to consume their feeds without sound, a behavior exaggerated by the autoplay factor

The message to video advertisers would appear to be simple: if creative assets do not deliver their goals within three seconds and without sound, the value of in-feed video has, at least, to be questioned. Given the pervasiveness of these platforms new creative forms would seem to be an imperative. It may be time to remove the zero from the 30-second standard that has characterized video advertising for generations. Perhaps those will give rise to a new definition of earned media in which the dividend is calculated by the number of seconds viewed over and above the point at which the advertiser is charged.



Irrational exuberance is short-lived in challenging economic times. If advertisers don't find a creative and economic formula that works they will take their investment elsewhere or simply move still more spend toward trade marketing and promotions at the expense of advertising.

The feed-based publishers have created an outstanding user experience as evidenced by their popularity. They have succeeded equally in creating targeting capabilities using unprecedented volumes of data. The ad units of the past just don't fit in the containers of the present, and extensive work is underway to prove or disprove the value of very short video interactions. The outcome of that work will be to value feed video to both buyer and seller. This process will have a substantial impact on supply and demand. If the value exists, in terms of long- and short-term recall and effectiveness, at a price above the available yield from other ad units, a substantial source of supply will be created. If not the opposite will apply.

Digital video is further complicated by the metrics available to advertisers. Despite the limitations of television measurement it is possible to assess the role the medium plays in people's lives both in terms of programming and advertising. Further, it is easy enough to tease out viewing cohorts and their viewing hours and to discover the content to which they pay attention.

Such comparison is not available in feed or some other digital-only environments. The early days of the internet promised the most accountable media ever. It became apparent quickly that there was a large difference between accountable and countable. Countable, unfortunately, is only of value if those in control of what appear to be perfect data choose to share, and have verified, that data. Thus far this has not been forthcoming. Instead partial metrics such as time spent per average monthly unique user and aggregated video hours seem to be the limit of disclosure.

The early days of the internet promised the most accountable media ever.



There are far more illuminating metrics such as video views, initiated video views (as opposed to autoplay) and advertising (as opposed to content) views among particular cohorts. In the United States, for example, Nielsen reports that 89% of all online video is consumed by 11% of households. Absent more disclosure from the platforms concerned we can only speculate. One piece of speculation may be this: if Facebook users spend on average almost 50 minutes per day on the company's platforms it's probable that around one-tenth is spent with video, most of which is autoplay. Given Facebook's desire to put the user first it's unlikely that more than one-tenth of the videos to which the user is exposed are advertising—yielding a maximum of 50 seconds of ad exposure per user per day. If that is true the number of ads that are watched for 10 seconds or more may be less than one per user per day. We offer this calculation not as “a truth” but as an informed speculation absent actual proof.

This is not an issue exclusive to Facebook, but as the market leader (by far) in feed-based advertising it seems reasonable to ask the company to publish such data at a level of granularity that allows its sole source of revenue, the advertiser, to make informed decisions. If that happens, Twitter and Snapchat will follow suit by necessity and a clearer picture will emerge. For now we have to draw our own conclusions. Facebook reports 1.6 billion users and 10 billion video views per day: extraordinary numbers, but numbers without the context of time and distribution are numbers of limited meaning. YouTube is barely more of an open book, but at least autoplay is not an issue and we believe that Google will begin to report more illuminating data soon.

The tools to verify and measure audiences exist. In almost all cases these tools are also deployed. However, until that deployment yields relevant

The tools for both verification and measurement of audiences exist.



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and actionable reporting the advertiser will continue to be uneasy. This unease is exaggerated by the resistance to third-party adserving into some apps. Advertisers fought a long battle for the right to do this on the desktop and for the right to pay on independent “counts.” If 2015 raised the demand for truth across the entire media ecosystem, 2016 will be the year of reconciliation or consequence for failure. By mid-2016 results from Moat verification in Facebook and Twitter’s feed will be available at usable scale; our expectation is of high (if short) viewability and low (if any) fraud. The key as mentioned above is how this translates into effectiveness.

## Adblocking: cause, effect and resolution

I can’t see you, so you can’t see me.

Adblocking has alarmed both publishers and advertisers. For the former it means that total impressions served are not reflected in the amount of ad inventory available for sale. For the latter, the cost takes the form of lost potential reach rather than a direct financial penalty. There are many competing theories that purport to explain the rise of adblocking: latency of site performance, the cost of data for rendering ads, the clutter of sites, a resistance to ad tracking, irritation at being retargeted with a product already purchased and so on. Some or all of these are true some of the time.

There is also the broader “because I can” theory. Simply, if the content is available without ads it’s a superior consumer experience. The “covert” contract between user and publisher that called for the acceptance of advertising in exchange for content has been breached.

The range of responses to the problem are as varied as its causes. Some publishers warn the user with an adblocker installed that, in addition to ads, content will also be blocked.

Other publishers have engaged in aggressive site redesign to make for a better experience that includes ads. In doing that they are being more selective about the ads they run, the targeting engines that place them and the load / latency implications of both the ads themselves and the multiple tags they contain for verification, tracking and attribution.

Advertisers and the entities that place their ads have always sought relevance and engagement; the consumer has chosen to set a higher bar. Advertisers and the buyers of media have a further responsibility.

Until now, we have assumed almost all data are worth having. But however much he gathers, no advertiser commands complete, continuous data. This creates a risk that the advertiser’s left hand may not know what his right hand is doing. A customer who has already made a purchase may be bombarded with redundant repeat ads wherever he roams: what we might call the phenomenon of “repetitive irrelevance.” Even worse, several advertisers may be sharing the same data and using performance-oriented media, multiplying

Other publishers have engaged in aggressive site redesign to make for a better experience that includes ads.

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## The last fortress against adblocking is the mobile app ecosystem.

the “repetitive irrelevance.” Tracking and targeting intended to make advertising welcome makes it a nuisance. It is dysfunctional. The advertiser damages his reputation and pays to do so.

This brief analysis suggests that a partial solution to adblocking is a combination of design, technology, common sense and the ability to establish the point, across channels and vendors, at which the application of a particular data point becomes the poison of marketing rather than the antidote to ineffectiveness.

Others have alternative solutions. The creation of “paid inclusion” adblocker beaters seems insidious and tantamount to the use of the superhighway by superhighwaymen. The notion that approval of ads and advertisers by anyone other than the advertiser, publisher or consumer seems absurd.

Reports of the penetration and usage of adblockers and its cost to the digital advertising economy vary widely and wildly. Initially the received wisdom was that this was a desktop problem restricted to young male gamers in Central Europe. The logic was clear: gaming works best with minimal latency; ads add to that latency; so they block them. This diagnosis proved hopeful more than helpful. We now believe the problem to be widespread if not catastrophic; however, we believe the tide can be stemmed.

The last fortress against adblocking is the mobile app ecosystem, but it would be unwise to assume that this is a permanent redoubt. Today this security is created by the inability of third parties to insert the necessary code into any given application, but betting against the ingenuity of those who seek to change that seems risky at best.

The adblocking conundrum raises a further challenge to advertisers. The part of the digital experience served by the publisher’s content management system is readily accepted by users, but the part served by the ad management system is not. In consequence access to the former stream becomes an imperative.

Most commonly referred to as native advertising or content marketing, this precious real estate calls for a higher bar as the publisher has to consider the value of transparently-sponsored content to the user. This demands the creation of advertiser funded “stories” that are legitimately editorially relevant to the user. This should lead to a developing practice in “story finding” as opposed to story telling. Simply defined, story finding is the process of finding “authentic” editorial themes to which brands can attach their own narrative. Doing this requires close vendor collaboration and disclosure to the user. The approach is clearly going mainstream as vendors as diverse as Conde Nast, The Guardian, New York Times, Vice and Refinery29 have all invested heavily in content studios to satisfy this demand.

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Delivering this solution repeatedly and at scale will be onerous, but like so much in digital marketing nothing turns out to be as easy as it might have seemed.

## All change; there's an app for that.

Apps are familiar to any smartphone or tablet user. Increasingly they are familiar to smart TV and watch owners and to the buyers of new cars, home automation systems and household appliances. In the absence of precise data, certainly at a global level, it is estimated that 90% of time spent with a smartphone is mediated by an app. Most users have 30 to 50 apps installed. Of those, less than 10 represent 90% of aggregate usage. Those are dominated by Facebook (including Instagram, Messenger and WhatsApp) and Google (Gmail, search, maps and YouTube) along with Amazon and others. Users also, subject to the cost of data, will use a range of communication, entertainment, commerce and service apps (banking for example) and many, albeit a narrower group, will use health and gaming apps. Locally the names change but while some apps are near-global, regional analogs tell the same story. The dominant apps are united by ease of use, frequency of use and value. It is easier for a camel to pass through the eye of a needle than it is for a new application to break into the top 10.

The rise of the app ecosystem challenges two familiar narratives of the digital age. The first is that fragmentation is an exponential curve of fractured media control. It's not. All the evidence in the app environment suggests a consolidation of both usage and ownership. The second is that digital evolution has been described as "broadcast to desktop to mobile" when more accurately it can be characterized as "channels" (many), to sites (very very many) to apps (many created, many installed but remarkably few used with any frequency).

Channels  
to sites  
to apps.



Messenger  
services  
succeed  
because they  
are instant,  
intimate  
and require  
minimal  
bandwidth  
and device  
capability.

For advertisers, the creation of persistent relevance in the major apps is a challenge for now and the coming years. It may be that advertising is simply not enough, and that a new focus on content supporting a brand narrative and services that attract frequent engagement through utility will become a priority. This will not be cheap, easy or quick, but nor was the path to dominance by certain companies in commercial television. The general rule is that if your ambition is to deliver a return on scale you have to leverage that scale in the market; the ultimate dividend is persistent competitive advantage.

## The medium is the Messenger

Every generation or two has its communications channel of choice: from letters, to the telegram, to the telephone, email, SMS and now instant-messaging platforms. From WeChat and Line to WhatsApp, Facebook Messenger and Snapchat there are now in excess of two billion unduplicated users of messaging platforms. Far from being simply the IP version of SMS, messenger platforms are increasingly enriched by content, services, payments and commerce. The implications are substantial and have the potential to vaporize SMS as a revenue stream and disrupt activities as diverse as customer service and banking. Messaging has also enabled the rebirth of ancient language; hieroglyphics have been reinvented as emojis.

Messenger services succeed because they are instant, intimate and require minimal bandwidth and device capability. This drives adoption among the young, the time-starved and those to whom fiber-to-the-home is far from a near-term reality. Facebook's dominant position in the sector is a partial explanation for its commitment to internet.org, which will deliver sufficient bandwidth to many so far untouched by the internet. The unduplicated users of Facebook's two messenger platforms now match those of Facebook itself.



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## E-commerce. Retailers, e-tailers, marketplaces and selling on the edge

The rush to digital retailing is speeding up. Amazon continues its dominance in the West and Alibaba in the Far East. The companies are notable for their contrasting business models; Amazon, a conventional retailer that buys and holds stock, and Alibaba, a platform that connects buyers (millions) and sellers (tens of thousands). The Uber of e-commerce? They are not alone. China's No. 2 player JD.com follows the Amazon model, and Flipkart in India and MercadoLibre in Latin America follow Alibaba.

It's dangerous to predict the future, but there is a sense that the newer entrants will follow the marketplace connection model. Wish for example is a platform based in Europe that connects thousands of (mostly) Chinese merchants to markets across the world and uses nothing more complex than the postal service for fulfillment of goods that perform necessary functions and are rarely adorned with name brands. By contrast Flipkart, another marketplace, is likely to bet heavily on a logistics ground war in India. It will use that to fill the gaps in Indian infrastructure and is likely to license this asset beyond its own uses. This could be the world's first "ground cloud."

Interestingly, Wish and others are also key revenue drivers of Google and Facebook and are joining the top five advertisers on each of those platforms alongside online travel bookers and others. It's fairly certain that the Facebook and Google Top 100 look less and less like the Ad Age Top 100 every day.

Of course every retailer and every brand owner is prioritizing digital sales channels as consumer behavior shifts. That shift is accelerated by mobile adoption and that in turn is fueling the idea of "commerce at the edge." This idea follows the same logic as off-platform content distribution. As publishers can no longer rely on every user to visit their own destination they look to Facebook Instant Articles and elsewhere to spread their reach. Similarly merchants and brand owners are looking to make as many interactions as possible shoppable by taking commerce opportunities beyond their owned-and-operated properties. Media space is becoming shelf space. That the only commerce model is the "everything store" is no longer true as opportunities open up for more and more brands to sell directly to consumers rather than through either traditional or digital store intermediaries.

For many brand owners e-commerce sales still represent a tiny fraction of total volume, but all recognize that's a short-term situation and that "selling everywhere" is key to their future. In many cases brand owners who contemplate owned-and-operated commerce solutions do so in part for sales but also for the potential to collect first-party data that fuels targeting on the broadest array of platforms.

That media space is becoming shelf space is no longer a matter for conjecture.

A more competitive market in the communication channel that is most effective at building brands.

## A whole bundle of problems for television (as we know it)

Amazon and Netflix made aggregate profits of less than \$500 million in 2015. In 2016 they will spend \$10 billion creating content. The Walt Disney Company, by contrast, reported profits of \$8.4 billion for the year (may the force be with it). Netflix and Amazon have almost no barriers to market entry anywhere in the world that has enough affordable bandwidth and enough people that can pay each party \$100 per year for service. On its own this may be enough to catalyze long-term disruption. Clearly both companies need the tide of revenue and profit to rise sooner rather than later. An economic cold snap in the manner of 2009 could make services like Netflix seem like a “nice to have” addition to free-to-air television but not a necessity. Equally, a significant rise in energy costs could inflate Amazon’s already immense fulfillment costs and impact margins to a level that induces unease among its investors. The current bet is that Amazon video drives adoption of Prime and Prime breaks down the barrier of instant gratification across categories.

Assuming no such calamities, these companies represent an existential threat to the status quo in any country where the concept of “bundled subscription content” is the norm and where those bundles are prescribed by the provider of cable, satellite or broadband access. The bundle supports three things. First, a persistent and significant subscription revenue stream; second, the ability of many sub-prime channels to gain household distribution; and third, the mixed economy of subscription and advertising. In “Interaction 2012” we commented that Netflix was unlikely to be able to make and acquire content at sufficient speed to become a primary choice for consumers. We were wrong and the arrival of Amazon Instant Video in multiple markets merely amplifies the error in our analysis.

The implications are far-reaching. On the one hand Amazon and Netflix represent a new market for creators and producers and a new enticement for broadband for the unconnected and poorly connected. At the same time they represent a threat to suppliers of a connection and content bundle as the temptation to choose from the a la carte menu over the prix fixe increases. The greater threat is to those channel owners that are a component of the bundle that are paid for by many but watched by fewer. In an a la carte world the value of either Netflix or Amazon’s service seems superior to most competitors. Outside of the most basic subscription packages the adhesive in the bundle is live sport and the economic ramifications for sports broadcasters and rights holders of so called “cord cutting” are substantial. Incidentally “cord cutting” is a rather inaccurate descriptor. The broadband cord remains central, it’s the bundle that goes with it that does not.

There is no good news for advertisers in this series of developments. Netflix and Amazon, like HBO and other super-premium services, neither rely on nor pursue advertising as a significant revenue source and its



growth clearly reduces the amount of screen time available for advertising, particularly among younger and more affluent audiences. This leaves advertisers with a more competitive market in the communication channel that they know is most effective at building brands. Falling supply together with this usage imperative combines to increase costs for reaching an audience; an audience that is already compromised by non-live viewing and the fragmentation of attention caused by concurrent device usage. While there may be some mitigation of effect through the deployment of synchronous and asynchronous application of “second screens” it would appear that the tide does not favor the advertiser.

It's absurd to declare that either television or television advertising are dead and equally absurd not to recognize the role of the most familiar media brands in creating innovative advertising opportunities in both linear and non-linear environments.

The availability of data and the application of technology have refined the use of television. Where addressability to the set-top box is available, first- and third-party data sets are matched with subscriber files allowing delivery to only those homes that match the targeting requirement. Campaigns are reported on true set-top data enabling the advertiser to establish a direct link to sales or other events. In the USA we expected 50% of television households to be addressable by the end of the first quarter of 2016. At this scale, many large advertisers will adopt addressable advertising. Additionally almost all the legacy players have OTT (over the top) solutions accessible via broadband as opposed to the cable bundle. We believe that these parties could further advantage both themselves and the advertiser against their native digital competitors by collective action in respect of user data. If the advertiser had full visibility across all available inventory and associated transaction data we believe that ad-supported, on-demand, professional content would increase its share of the available video market. Television has moved significantly to embrace the potential of data yet there is little sign of market-level collaboration.

The availability of data and the application of technology have refined the use of television.



The effects of this evolution will play out over time and at different speeds around the world. In some markets, like China, advertisers are already advanced in the migration from television to digital video. In that case there is less of a commercial legacy to disrupt. In western markets the change will be slower but may redraw the economic landscape of television more dramatically.

## Data—the story unfolds bit by bit

It is now accepted that the CMO and CIO positions are interdependent in the business of managing customer data in pursuit of generating demand and growth. The simple notion is that the more data signals that can be harvested and applied to segmentation and media targeting the more effective the investment will be. It follows then that the CIO needs to create a platform for deployment by the CMO to the greatest effect.

One fundamental benefit to the smart data user is an advantage against both competitors and the suppliers of media inventory that comes from knowing something about a customer or a prospect or even an ad impression that the other party does not know. We might refer to this as achieving “data asymmetry,” perennially a key factor in media trading. Achieving the advantage of asymmetry applied to external markets requires organizations to achieve symmetry inside the organization. This in turn requires alignment on the right Data Management Platform, one that ingests and values data and keeps it secure while allowing it to be applied outside the organization.

One way to address the priorities of the CIO and CMO is to place data into two containers:

1. Data you own, typically about the customer you know
  - CRM, loyalty, transaction data, email databases and site-side analytics

For many advertisers that dividend has taken longer to arrive than many hoped or expected.



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2. Data you rent or buy or accrue as the consequence of other actions such as an ad campaign, typically about the customer you would like to know

- Third-party, campaign-level and social-community data that tends to be more ephemeral and often available to others or indeed controlled by others

The challenge is to conjoin that data for deployment and to increase the scale and value of the first container to reduce dependence on the second container over time. In so doing the dividend of data will be accrued most successfully. For many advertisers that dividend has taken longer to arrive than many hoped or expected. It's becoming clear that all data is not born equal; a hierarchy of data will emerge with transaction and first-party data at the top and loosely-inferred behaviors far behind. This will be as true in the programmatic application of data as it was in the days of purely manual processes.

To date the application of data has become most refined closest to a binary event, such as a sale. Its value as part of the fundamental evolution of marketing will depend on the ability to identify events or measures that are proxies for future sales and lifetime customer value. Omnichannel attribution including non-digital channels is central to the achievement of this goal.

As such it is inappropriate to rely on attribution by companies that are funded all or in part by advertising and whose value is imputed from how successfully they generate revenue. This makes imperative the creation of independent "data spines" that have the capability to connect people to devices and both people and devices to actions. Further, these data spines need to cross categories as the richest portrait comes from understanding holistic consumer behavior rather than behavior in isolated use cases.

Data spine development will be a key part of the strategies of leading marketing services companies and also of the giants of marketing technology as both assemble assets that endow the ability to segment and address audiences based on fact as well as faith.

GroupM and WPP have taken the view that the corporate end-game is to have the capability to apply "all the data, to all the inventory, all the time and in real time." Once equipped with this universe, we can refine the skill to apply the right data to the right inventory at the time of maximum opportunity. In pursuit of this goal we have determined that a meta-solution is superior to a rigid tech stack; simply put, this means having access to secured client data, our own data and third-party data and conjoining these for application to private (well-lit, high-quality) inventory sources via a broad range of interfaces unified on the desktops of our planners and analysts.

GroupM and WPP have taken the view that the corporate end game is to have the capability to apply "all the data, to all the inventory, all the time and in real time."

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We have commented before that digital channels and their addressable nature have enabled micro-segmentation and even audience delivery at the individual level. We concluded that the distribution side of advertising was well advanced in this regard but the creative or manufacturing side was not. Our conclusion has not changed. Advertisers are under pressure in creative terms from two sides. The first is to create messaging of sufficient relevance and specificity to exploit its granular delivery and the second is the need for platform-specific assets. The range of formats has exploded. Video that works on television does not work on YouTube and much less on Facebook, Twitter and Instagram. We believe that 2016 will be the year in which digital creative strategy and dynamic asset management needs to be as central to the success of digital marketing as media allocation, execution and measurement.

## Immutable truths amid the constancy of change

1. The integrity of the digital supply chain encompassing fraud, viewability and meaningful measurement are of existential importance to the digital advertising economy
2. Advertising stops working when it is avoided. Better design, greater value to the consumer, and the responsible use of data both in terms of cost to the consumer's data plan and privacy are essential
3. The app ecosystem represents both challenge and opportunity. The opportunity is for brand participation in the fast-growing mode of media consumption; the challenge is for brands to create impact and value and earn the attention of the consumer.
4. Selling everywhere rather than somewhere will be the new normal for retailers and brand owners. Where intent exists so does the need to satisfy it.
5. Consumers love video. They love it in short and long formats and increasingly they love it on demand and often free of advertising. Technology enables this. It also enables precision and relevance in targeting that will drive efficiency for advertisers and maintain "free video" as a key platform of marketing communication. This is just one part of the evolving economics of what we have traditionally referred to as television.
6. Data has changed advertising. It has not unequivocally changed it for the better. Our collection and application of data needs to be responsible in targeting and holistic in respect of attribution. Only then we will combine respect for the individual with true understanding of behavior.

We live in an era in which the discovery of content is as important as its delivery. The distribution systems of media are highly evolved and it's

Brand owners must crack the code of persistent presence in these environments.

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time for a creative renaissance that produces assets that are discoverable, valuable, relevant and specific to the environment of their intended consumption.

## And finally

2016 won't be a good year for the faint of heart. Despite the cyclical effect of the Olympics, Euro 2016 and the U.S. presidential election there are substantial headwinds. Persistent low economic growth, a dent in the Chinese dream and slow realization of the potential of Latin America and Africa all conspire to create a tense business environment. Today businesses are extra-cautious and many fear the disruption of activist investors who believe that management is failing to unlock sufficient shareholder value. In response many commentators observe that budgets are increasingly zero-based, new product development has slowed and with it the cycle of slow growth is repeated. There appears to be more rationalization of brand portfolios than product innovation.

The key issues we have identified for 2016 (and 2017) are, we believe, united by this; a day, a month or a year of reckoning is upon us. We are at the end of the beginning of digital marketing. We are not now, nor have ever been, at anything like a "steady-state," but we believe that a more profound sense of responsibility and transparency between business partners together with collective vigilance is an essential ingredient of re-engaging consumers with brand communications.

Innovation in communications remains of extreme importance, but perhaps some emphasis will shift from "do it because we can" to "do it because we should" and, as a consequence, produce results that drive profitable outcomes and contribute to a new wave of product development and economic growth. ■

2016 won't be  
a good year  
for the faint  
of heart.



# A Short Walk Through the Numbers

# A SHORT WALK THROUGH THE NUMBERS

## The media day

This year we asked our contributors to be more specific about whether “time online” was for online users only, or averaged for the whole population. We have still not quite got to the bottom of this, but it is clear we were over-reporting online in the past. There are in any case reporting oddities, such as Italy and Germany recording only desktop time online, or China’s sample of 36 cities. We try to adjust for these. Country-by-country figures showing our calculations are all in the electronic version.

Linear TV’s share of the media day seems to be declining one percentage point a year, but of course some of this is retrieved online. A majority, perhaps: we will find out as measurement improves in the coming years. Legacy print and radio continue to donate share to online too, though these too may find a floor with digital variants.

### The world’s media day weighted by population

Agg avg. hours	2013	2014	2015	2016
Online	2.17	2.45	2.55	2.67
TV	3.40	3.36	3.33	3.28
Print	0.60	0.58	0.54	0.52
Radio	1.50	1.61	1.59	1.56
<b>Total</b>	<b>7.67</b>	<b>8.00</b>	<b>8.00</b>	<b>8.02</b>

Shares	2013	2014	2015	2016
Online	28	31	32	33
TV	44	42	42	41
Print	8	7	7	6
Radio	20	20	20	19
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

Avg. minutes	2013	2014	2015	2016
Online	130	147	153	160
TV	204	202	200	197
Print	36	35	32	31
Radio	90	97	96	93
<b>Total</b>	<b>460</b>	<b>480</b>	<b>480</b>	<b>481</b>

### The world’s media day weighted by local media investment

Agg avg. hours	2013	2014	2015	2016
Online	2.05	2.43	2.58	2.72
TV	3.81	3.70	3.65	3.58
Print	0.60	0.56	0.52	0.50
Radio	1.63	1.66	1.65	1.62
<b>Total</b>	<b>8.09</b>	<b>8.34</b>	<b>8.41</b>	<b>8.43</b>

Shares	2013	2014	2015	2016
Online	25	29	31	32
TV	47	44	43	42
Print	7	7	6	6
Radio	20	20	20	19
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

Avg. minutes	2013	2014	2015	2016
Online	123	146	155	163
TV	229	222	219	215
Print	36	34	31	30
Radio	98	100	99	97
<b>Total</b>	<b>485</b>	<b>501</b>	<b>505</b>	<b>506</b>

## E-commerce

33 countries again supplied e-commerce totals in our survey this year. The dollarised total is depressed about 5% from last year because of dollar appreciation, but still adds up to USD 1,574 billion for 2015 with a run-rate of growth of 15% to take us to a predicted USD 1,805 billion in 2016. Growth is slowing. In 2014 it was 31%, and in 2015, 24%. The main reason for this is China, which accounted for a third of the world's online retail in 2014 rising to a forecast 38% in 2016 – but growth is moderating from a plainly unsustainable 40% in 2015.

We predict the average online shop per user will be USD 777 in 2016. This is still growing faster than the number of online users in our universe, which has slowed from 16% in 2014 to 10% in 2015 and 7% forecast in 2016.

	2009	2010	2011	2012	2013	2014	2015	2016	CAGR 2013-2016
World total USD bn	306	358	426	750	970	1,270	1,574	1,805	23%
Average spend per user USD	356	363	371	490	571	644	727	777	11%

The UK again has easily the highest per-user e-commerce at USD 3,715 [Stg 2,666] expected in 2016, followed by Denmark at USD 3,266 (DKr 22,153). The UK has however lost its claim to be the most-digital ad economy. We think digital media will comprise 49% of total UK ad investment in 2016, fractionally behind Denmark and China, with Sweden leading on 52%.

The World Bank tells us household final consumption was USD 43tn in 2014, or 66% of global GDP. If we assume half this is retail, then total retail in 2016 should be in the order of 33% x US 72tn or USD 24tn. E-commerce of USD 1.805tn in 2016 would represent 8% of this, roughly a point higher than 2015.

## Programmatic and video

For present purposes “programmatic” means any online display investment which is transacted automatically as opposed to being a manual “insertion order.” We asked our correspondents to estimate what percentage of local digital display ad investment was automated. The result is a global average in 2015 of 37% (2014 = 21%). Excluding the USA, this is 16% (10%). We also asked what percentage online video comprised of local digital display. The global answer: 22% (20%), or 12% (13%) ex USA. Individual values appear in each country entry. ■

# Ad Fraud

# AD FRAUD

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Ad fraud is theft of the advertisers' money and reputation. No legitimate advertiser would want any part in what is a serious and organized global crime.

“Impression fraud” is ghost sites and malicious non-human traffic. “Non-impression fraud” includes ad stacking, pixel-stuffing, low-quality inventory (e.g., unsafe pages, poor viewability, ad clutter) and insertion-order infringements (e.g., disregarding blacklists or geographical limitation; or serving autoplay video ads when the advertiser specifies user-initiated). This overlaps with brand safety.

In open societies, it is unrealistic to expect government or law enforcement to stop ad fraud, much of which originates from a few rogue countries. The solution therefore lies in the free market, self-regulation and sharing best practices.

Attitude to fraud varies around the world. This might be because local prevention technology is still evolving (e.g., India, Czech Republic), or because it is regarded rightly or wrongly as less of a risk. In Brazil, advertisers think of fraud as something agencies fix, if they think of it at all. In South Korea, a famously advanced digital economy, independent verification is still not universal. In Taiwan, local advertisers are reluctant to pay third parties to validate publishers' claims. Spreading best practices is our priority. As GroupM Spain puts it: “The most powerful remedy is to follow internal and international GroupM practice guidelines.”

## The view from the front line

GroupM USA has been working with leading verification providers like DoubleVerify and Integral Ad Science since 2010. These partners detect both automated bot fraud and human-based “site-fraud” tactics. We can deploy these tools programmatically to pre-filter suspect domains or IP addresses, and we also use them to block server calls to fraudulent domains post-bid or in reserve buys. Coupled with clear contractual protections confirming that our clients didn't pay for fraud, GroupM ensures that our clients' ads are seen by real human beings who are in our target in an appropriate editorial environment.

## The company you keep

GroupM Italy observes “Protection from non-human traffic is mainly a planning issue.” Choosing trusted suppliers is the single most effective measure. The UK adds, “Set yourself hard-to-fake outcomes; know what realistic prices are; and investigate anomalies. If something is too good to be true, it probably is.”

Wherever it operates, GroupM has preferred partners or “Trusted Market Places.” The membership changes all the time and is kept under constant scrutiny. Lithuania praises its local news portals for averaging only 0.6% suspicious traffic. Australia remarks that “premium publishers may yield

Attitude to fraud  
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the world.



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only one or two percent non-human, ad-fraud traffic. Much traffic from ad exchanges is fraudulent. One 2015 case was 60% fraudulent, from fake sites. We recovered all funds.” GroupM Latin America has a standing preference for “above the fold” placements (i.e., in view on the first page load).

### **Whitelisting: pre-emption is better than cure**

It is especially important to practice safe selection when shopping for impressions in open markets in which you know little or nothing about the quality of the inventory. Russia: “In RTB buying we run fraud checks by default for all campaigns.” These controls are mostly pre-bid or post-reporting. Pre-bid cannot always detect fake impressions, but advances in machine-learning improve certainty in discriminating real from fake. This feeds back into DSPs to eliminate future purchases on the fraudulent networks.

Japan: “Our data science team in conjunction with planners routinely use ad-serving verification reports and client Google Analytics referrer/Adobe session data to identify outlier traffic patterns from suspect countries and IP addresses. We then actively extinguish inventory from suspicious sources.” SAD stands for “suspicious activity detection.” Methods include detecting poor viewability, bots, ad stacking and pixel stuffing, but as Denmark points out, monitors do not reveal too much of their methods to avoid informing the fraudsters.

Pre-bid cannot always detect fake impressions, but advances in machine-learning improve certainty in discriminating real from fake.





In some countries it is common for contracts to specify no payment for non-compliant impressions and heavy penalties for brand safety violations.

## Verification tools

Sizmek ranked top in our informal name-recognition survey in last year's Interaction. Other often-cited names include DoubleVerify, Integral Ad Science, comScore, Moat and trusted DSPs of which the largest is Google's DoubleClick. China has RTBAsia, a local provider that has become global. One weakness in today's technology is that different methods produce different results. South Africa remarks that it is possible to mitigate this by using multiple systems in conjunction.

Sweden: "These systems are not 100% but do spot the majority of fraud." Brazil: "Today, with the massive use of display networks and programmatic buying, we have greater confidence in the process made by these vendors to choose which sites will be part of their networks."

## Contracts shape behavior

In some countries it is common for contracts to specify no payment for non-compliant impressions and heavy penalties for brand safety violations. We have even heard of an employment contract which provides for dismissal if a violation limit is exceeded. One also finds arrangements to compensate clients with make-good inventory for non-human traffic. Publishers may offer reputable controls, but your contract should allow you to use any third-party verification you wish. New Zealand: "We retain the right to audit ad server logs, sites and network logs to identify suspicious behavior." ■

# Online Brands Advertising On TV

# ONLINE BRANDS ADVERTISING ON TV

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## Do online brands spend a lot on TV advertising?

22 countries in this report say online brands are big on TV, and another four describe this as a rising trend.

UK TV trade body Thinkbox uses Nielsen data to compile a non-standard “Online” ad category comprising all the big American tech names, comparison sites and other B2C online services. This represented 7% of all UK TV ad investment in 2015, making it the No. 2 ad category behind Food at No. 1. This was a repeat of 2014, except the Online category grew 14% in 2015 while total TV grew 7%. TV accounts for 60% of the big names’ ad budgets, well above TV’s normal 40% share of UK display investment.

22 countries in this report say online brands are big on TV, and another four describe this as a rising trend.

The main reasons given for upweighting TV are the ones you would expect: good reach, good awareness and a reasonable price – ideal for product launches and market penetration. Mainstream TV does however have high entry costs, which is one reason smaller online brands often confine themselves to digital options. This fixed-cost/benefit problem may also explain why online brands are less common on TV in small, rich countries like Finland, Norway and Sweden.

Malaysia quoted the highest TV share of online category investment at 85%, which is especially remarkable given print is still the dominant medium there. More in line with the U.K. figure are Spain at 70% and The Netherlands at 48%. TV’s “natural” share of global ad budgets is 41%. Japan and China are examples of highly digitized economies in which online brands upweight TV. Japan cites the attractiveness of TV’s naturally older profile (reflecting its aging society) and China values its mass coverage. A Chinese online used-car dealer, Youxin, paid RMB30m (USD4.6m) for a single spot in the popular variety show “Voice of China.” In Germany, some online brands are negotiating joint-venture and equity deals in exchange for airtime.

Our network picked out e-commerce as the most competitive online subcategory on TV, with travel, finance and fashion also mentioned. ■

# Traditional TV Brand Advertising Online

# TRADITIONAL TV BRAND ADVERTISING ONLINE

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## Do traditional TV advertisers spend a lot on digital video?

Most “TV” ad campaigns are actually “audio-visual” campaigns these days. Advertisers augment TV with digital video mainly to compensate for TV’s falling reach of younger viewers. Sometimes there is a price advantage. Some mainstream broadcasters incentivize advertisers to use their online channels. Entry cost to video might be lower than for mainstream TV.

The main constraint is the generally poor measurement of audiences away from the main TV screen. If advertisers knew more they would probably spend more: without all the facts, it is impossible to reckon either cost-per-impression or incremental value as accurately as one can on broadcast TV. Ad tech has spotted this gap in the market and devised useful synthetic measures based on inference, samples and modelling, but none is a “gold standard” for trading.

Turkey, Japan and India specifically mentioned the lack of a “gold standard” as holding back advertising on video. The USA has made the most progress toward deduplicated multiscreen measurement, but cannot yet predict with certainty when a single trading currency will emerge. Similar initiatives are underway in Europe, Latin America and Asia.

Advertiser investment in video is rising despite the lack of measurement. Canada is typical, reporting video budgets having grown 30% over three years to reach 12% of the total A/V investment. At the very high end we find FMCG and pharmaceutical advertisers in Italy devoting nearly half their A/V investment to video, and media & entertainment clients typically 35% or more. Denmark has instances of 33%. Chile reports 20% as typical.

Most countries report video allocation around 10% of the A/V appropriation, ranging 5%-20% according to the individual advertiser and the job in hand. Some advertisers are naturally more committed to digital, and others more conservative. Considerations include the body of established proof relating to TV; the solitary nature of the digital audience versus collective viewing to TV; screen size; and the digital risks of ‘value, viewability and verification.’ And of course the allocation will also be affected by the state of supply. Audience to premium video is often limited, sold out and unpredictable. ■

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# Adblocking

# ADBLOCKING

## How serious is adblocking in your market?

Our network reported the figures below in February 2016. As GroupM Australia says, “There is definitely a lack of hard facts around the impact of adblocking. It remains an area we continue to investigate and monitor.” The numbers below mix estimates, sources and definitions and are intended only to give an idea of the problem.

The industry distinguishes between “global” and “local” in publishing and ad serving and verification.

	USERS WITH ADBLOCKING INSTALLED %
Turkey	3
Latvia	15
Spain	15
Canada	16
Denmark	17
Brazil (midpoint estimate)	20
Greece	20
Hungary	20
Netherlands	20
UK	20
Argentina	23
Czech Republic (midpoint estimate)	25
Germany	25
USA (midpoint estimate)	25
Chile	26
Italy (any device)	27
France (desktop)	30
Poland	30
Austria (any device)	32
<b>Average of above</b>	<b>22</b>



More detailed information from a few countries suggests young men are the keenest blockers.

	USERS WITH ADBLOCKING INSTALLED %
Lithuania all	18
Lithuania under-35	30
Australia 16 to 24 mobile	41
Australia 25 to 34 mobile	42
Australia 35 to 44 mobile	34
Australia 45 to 54 mobile	25
Australia 55 to 64 mobile	20
Australia female mobile	33
Australia male mobile	40
France 16-24 desktop	53
France 25-34 desktop	39
UK all using (November 2015)	18
UK men using	23
UK women using	13
UK 18-24 using	35
UK 25-34 using	20
UK 35-44 using	16
UK 45-54 using	16
UK 55+ using	13
UK PC using	47
UK laptop using	71
UK tablet using	19
UK smartphone using	23
Norway desktop	23
Norway mobile	9
Norway tablet	8

As GroupM Australia says, “There is definitely a lack of hard facts around the impact of adblocking.”

Estimates of inventory lost to adblocking are scarce, but rates seem lower than adblocker penetration.

	ESTIMATED LOSS OF INVENTORY %
China mobile (midpoint estimate)	4
Australia	8
China PC (midpoint estimate)	11
India (midpoint estimate)	13
Russia	25
France	30

Adblocking is less common in Asia, though this may just be a matter of time: South Korea reports the recent arrival of blocking technology with Western-style consequences. Japan explains that the big blockers have not yet climbed over the language barrier. China points to lower awareness about blockers, and suggests they are less effective because most ads are served by publishers rather than third parties. Singapore reports little impact so far but remains alert. Taiwan also mentions low awareness. Indonesia remarks that its internet traffic is 70% mobile, so structurally less vulnerable. Hong Kong's advertisers take the positive view that adblocking is about improving the user experience and are ready to switch to video and native if necessary.

GroupM Italy surveyed 2,000 users in early 2016 and found 55% knew about adblocking, 27% had installed it, and 25% intended to install it soon. Contrary to signals elsewhere, it found 35-44s the heaviest installers, and women of 25 the most likely to install. The reasons for blocking were, in order, excessive intrusion; slow loading; and privacy. These are typical. The UK IAB found users would be most likely to block less "if the ads don't interfere with what I'm doing." GroupM Italy's most interesting finding was that many users were not actually against advertising, but wanted ads to be more "coherent with the key characteristics of the web: a simple user experience, customized contents and low cluttering." The UK IAB study found 61% of users would prefer to have free content with ads than having to pay. There would seem to be the makings of a compromise in there somewhere.

The USA has taken the initiative in the form of two IAB programs. LEAN ads (light, encrypted, ad choices supported, non-invasive) are voluntary standards for responsible ad formats and data collection that do not eat mobile data plans and do not cause "page latency" and other nuisances. The other is a publisher program called DNCC (detect, notify, choice constrain). This so-called "user choice" engine is code enabling publishers to detect ad blockers, deliver a message to those users about the free internet, give them the choice to turn off the blocker in exchange for free content, sometimes in an "ad-lite" format or deny content if they don't comply. ■

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# The Young TV Audience

# THE YOUNG TV AUDIENCE

A few countries report their young adult TV audience is stable, but with volume and reach dispersed over more and smaller channels. This is the best one can hope for. GroupM offices in the countries below put the loss in numbers.

<b>Australia</b>	The average 16-34 audience shrank 13% in 2015.
<b>Belgium 2013-2015</b>	16-34 viewing fell 10 minutes a day, and reach fell two percentage points (a fall of 4%). Viewing to other screens has gained one to two share points.
<b>Brazil 2010-2015</b>	Young adult viewing has fallen 16%, but 60% are heavy video users.
<b>Canada 2013-2015</b>	16-34 ratings shrank 7% in total, and average weekly hours are 11% down.
<b>Chile</b>	Since 2011 20-34s free-to-air viewing hours are down 18%, but pay-TV hours are up 44%.
<b>Finland</b>	Recent fall in double digits
<b>Hong Kong 2013-2015</b>	The average prime-time 16-34 rating fell from 15.3 to 12.6 and claimed daily reach fell from 93% to 89%. From 2013 to 2014 the percentage of 16-34s claiming to watch TV on a mobile device rose from 17% to 26%.
<b>Hungary 2011-2015</b>	16-34 TV reach dropped 5% and average daily hours by 15 minutes, but reach and hours are still substantial. Internet usage rose 10%.
<b>Ireland</b>	Down 7% in a year
<b>Italy</b>	15-34s shrank 7% in 2015, continuing in 2016, and affecting reach—though good weather reduced viewing generally. Viewing to other screens is not measured.

<b>Japan</b>	Between 2010 and 2015, according to NHK, the numbers of viewers in their 20s claiming never to watch TV rose from 8% to 16% and those in their 30s from 8% to 13%. Those in their 20s claiming “less than one hour a day” rose from 40% to 56% and those claiming to “prefer digital to terrestrial TV” rose from 49% to 56%.
<b>Latvia</b>	The 16-34 audience declined about 7% in 2015.
<b>Lithuania</b>	16-34 TV hours are about half the average, and 12% do not watch TV at all.
<b>Malaysia 2014-2015</b>	15-34s using other media including digital rose from 78% to 92%. Free-to-air viewership has fallen in recent years, but pay-TV is stable.
<b>Netherlands</b>	Hours fell 18% in 2015
<b>Norway 2010-2015</b>	Average daily minutes fell from 162 to 112 (31%).
<b>Russia</b>	16-34 reach is in slow steady decline amounting to several points over recent years.
<b>Spain 2011-2015</b>	The total typical TV audience 1% smaller, and the 16-34 part 22% smaller. Average 16-34 hours down 9%. These falls are for free and pay-TV.
<b>Sweden</b>	19-29s average 100 min/day online video of which YouTube ~40, Netflix ~20 and catch-ups ~25.
<b>UK 2011-2015</b>	All-adult ad impressions (free and pay) are unchanged, but 16-34s are down 11%.
<b>USA</b>	The 18-49 prime-time cable and broadcast audience shrank 11% in Q1 2015 vs. the prior-year period. The loss rate decelerated across the year and in Q1 2016 stood at -8% in broadcast and -3% in cable.



Over half the  
TV viewing of  
UK 12-18s is  
now non-linear.

This year we will see if these loss rates continue, or stabilize owing to saturation of choice. Evidence from the UK suggests the generation to follow will however wreak more disruption. Over half the TV viewing of UK 12-18s is now non-linear. Analyst Decipher makes these observations of 20 “Millennials” (here meaning 12-18s), which offer hope for TV advertising if we can keep up with the audience:

- The big screen in the living room is still the dominant device for millennials, despite them rarely having control in this environment;
- Millennials are as engaged as ever with content, personalities and stories. Their definition of what constitutes “TV” is extremely broad;
- Young people are showing a growing loyalty to program brands, which they want to consume whenever, wherever and on whichever device;
- Millennials’ willingness to move between devices and services is unprecedented, as is their openness to experimenting with new video formats and services;
- Millennials’ TV and video viewing continues to be an important part of their social interaction with friends and family.

Source: [www.itvmedia.co.uk/news/television-and-12-18s-millennials-speak](http://www.itvmedia.co.uk/news/television-and-12-18s-millennials-speak)

# Viewability

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# VIEWABILITY



In December 2014 the US IAB encouraged marketers to aim for 70% viewability in 2015, meaning 70% of ads served would meet Media Research Council (MRC) criteria for viewable impressions. This is a demanding target.

The MRC published its viewability criteria in June 2014, running to 14 pages of extensive detail. In the simplest terms, they specify at least 50% of an ad's pixels must be in view for at least one continuous second and two seconds for video ads. Pending specific mobile standards (expected 2016) the MRC suggests applying the same standards to ads in mobile browsers. It notes that ads served in apps "are currently generally assumed to be viewable."

For example,  
GroupM  
in India is  
currently  
working to  
make 100%  
pixels  
the norm.

Most countries use this baseline. An international benchmark is practical: The MRC is therefore the de facto global standard. American leadership and clarity is therefore highly desirable, although advertisers, publishers and agencies are of course free to negotiate different terms in private.

Brazil makes the important point that its local IAB advises, not compels. It is all very well for experienced buyers and sellers to make their own arrangements, but we support the adoption of rules and conventions for everyone, and seek industry-wide consensus to shape these. For example, GroupM in India is currently working to make 100% pixels the norm.

## Quality and quantity

Standards should not limit expectations. GroupM in Germany remarks that quality is an important differentiator of agency service. We compete by aiming for the maximum achievable, both pixels-per-impression and impressions-per-campaign, and not settling for the minimum. To do this we find ways to relax the constraints on what publishers can deliver, and what technology can verify, and what auditors can see. GroupM has the scale to test all global and local verification.



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## The world is not flat

Awareness of and tolerance for viewability problems varies from country to country. We find the same with ad fraud. U.S. and European multinational advertisers expect and therefore promulgate consistency. It is local advertisers where the differences show up. Latin America has generally not acknowledged the North American standards: GroupM Argentina describes viewability more as something to be negotiated than as a quality control. There is similar disinterest in viewability in South Korea and Taiwan. Local advertisers in Japan took notice only in November after Google said it would charge only for viewable impressions.

GroupM Japan acted early, setting an internal standard that 65% of impressions be satisfactorily viewable. It achieves 70% with Xaxis video, which is now its general target for all automated buys. GroupM Hong Kong likes ads to load “above the fold,” so the audience can see it without scrolling. The market in Lithuania recognizes the MRC criteria, but for local portals GroupM mostly applies what it calls “inscreen buying,” which pays only if the whole ad is showing. GroupM USA similarly, and for video it requires evidence of a human audience that initiated the ad to play, with audio.

## WYSIWYG

GroupM Denmark typically achieves 45% campaign viewability on mobile video; 70% on static desktop; and 80% on desktop video. In mid-2014 it found the industry average for all display was around 40% and set itself a target of 70%, which it achieved in a few months and has since sustained. For video, it is normal to see a “completion rate” specified, meaning watched all the way to the end. GroupM USA works to 50%; Finland expects at least 75%. Sometimes you might agree some form of pro-rata pricing for “viewing persistence.” GroupM Turkey mentioned it sometimes requires two seconds’ dwelltime for static ads.

To beat the average for viewability means being fussy about the suppliers you deal with. Ask your agency how viewability scores compare between, say, Google, Facebook, Microsoft and Xaxis. One question will always lead to another!

## Put it in writing

GroupM guidance is to contract only for viewable impressions, and preferably only for those with 100% of pixels in view for the desired duration. Measurement discrepancies between sources are inevitable, so the small print should provide for reasonable tolerances. It’s not all about money: all data are a potential source of insight.

## Famous names

The industry distinguishes between “global” and “local” in publishing and ad serving and verification. Global server/verifier names our correspondents mentioned were AppNexus, Integral Ad Science, Adform, Sizmek, Rubicon, Improve Digital, Moat, Weborama and DoubleClick. ■

Awareness of and tolerance for viewability problems varies from country to country.



# Argentina

## SNAPSHOT

68%

2016e  
INTERNET USERS %

112

2016e E-COMMERCE PER  
ADULT INTERNET USER USD

20-30%

2015e AUTOMATED %  
OF ONLINE DISPLAY

Historic sources: Emarketer,  
Euromonitor, comScore, TGI

	2013	2014	2015	2016e
Smartphone penetration %	21	25	31	35
Tablet penetration %	10	13	15	18
<b>E-commerce in ARS bn (excluding travel)</b>	<b>18.2</b>	<b>30.1</b>	<b>45.1</b>	<b>51.1</b>
E-commerce per adult internet user ARS	728	1,111	1,555	1,715
<b>Adult media usage (hours per day in decimals)</b>				
Online (15+, ex mobile)	0.65	0.62	0.70	0.64
TV (18+)	3.40	3.20	3.15	3.60
Print (18+)		0.62	0.60	0.60
Radio (18+)	5.70	5.30	5.30	5.90
<b>Total</b>	<b>9.75</b>	<b>9.74</b>	<b>9.75</b>	<b>10.74</b>
<b>Adult media usage (percentages)</b>				
Online	7	6	7	6
TV	35	33	32	34
Print	0	6	6	6
Radio	58	54	54	55
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

Top websites	UNIQUE 000s (DEC 2015)*	AV MINUTES PER MONTH	OTT SVOD	ESTIMATED HOMES 000s	DAILY MINUTES PER SUBSCRIBER HH
Google search	15,243	29	Netflix	417	32
Facebook	15,102	426	Cablevisión on Demand	88	N/A
YouTube	12,436	338	DirecTV On Demand	79	N/A
Outlook.com	9,315	115			
Clarín.com	7,586	49			
Top apps	USERS 000s (DEC 2015)	AV MINUTES PER MONTH	Streaming audio	ESTIMATED USERS 000s	MONTHLY UNIQUE VISITORS
Dropbox App	1,271	9	Spotify	1,552	
Spotify App	1,022	7	SoundCloud	595	
WhatsApp	772	3	Mimp3.me	174	
Stream App	504	11	Last.fm	148	
			Goear.com	126	

\*ex mobile



# Australia

## SNAPSHOT

**91%**

2016e 16-64 INTERNET USERS %

**1,530**

2016e E-COMMERCE PER 16-64 INTERNET USER USD

**20%**

2015e VIDEO AD INVESTMENT OF ONLINE DISPLAY

**73%**

2015e AUTOMATED % OF ONLINE DISPLAY

Historic sources: Roy Morgan Asteroid; Nielsen; eMarketer; TNS; Quickflix; FetchTV; Akamai

	2013	2014	2015	2016e
Smartphone penetration % of online population	62	75	76	76
Tablet penetration % of online population	24	46	49	48
<b>Online retail in AUD bn</b>	<b>15.2</b>	<b>16.6</b>	<b>23.4</b>	<b>30.0</b>
E-commerce per adult internet user AUD (2016 = 16-64)	936	1,024	1,418	2,141
<b>Adult media usage (hours per day in decimals)</b>				
Online	2.42	2.56	2.57	2.60
TV	2.68	2.68	2.64	2.60
Print	0.51	0.48	0.45	0.40
Radio	1.73	1.82	1.87	1.90
<b>Total</b>	<b>7.34</b>	<b>7.54</b>	<b>7.53</b>	<b>7.50</b>
<b>Adult media usage (percentages)</b>				
Online	33	34	34	35
TV	37	36	35	35
Print	7	6	6	5
Radio	24	24	25	25
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

Top websites	UNIQUES 000s* (Dec 2015)	AV MINUTES PER MONTH	OTT SVOD	ESTIMATED HOMES 000s	DAILY MINUTES PER SUBSCRIBER HH
Google	14,985	134	Netflix	1,035,000	n/a
MSN/Outlook/Bing	10,843	132	Stan (NEC/Fairfax)	300,000	n/a
Facebook	10,175	332	FetchTV	140,000	n/a
YouTube	8,409	176	Quickflix	60,000	n/a
eBay	6,916	97	Presto	n/a	n/a
Top apps	ESTIMATED USERS 000s	AV MINUTES PER MONTH	Streaming audio	ESTIMATED USERS 000s**	
Facebook	18	12	Apple Music	8,010	
YouTube	14	10	Shazam	1,569	
Instagram	6	4	Google Play	1,067	
Google+	5	3	Spotify	1,548	
Twitter	5	3	Pandora	874	

\* ex mobile \*\* Nielsen Smartphone and Tablet inc Apps (Dec 2015)



# Austria

## SNAPSHOT

83%

2016e 14+  
INTERNET USERS %

25%

2015e VIDEO AD INVESTMENT  
OF ONLINE DISPLAY

Historic sources: Media Analyse,  
Media Server; ÖWA; AIM; Appanie

	2013	2014	2015	2016e
Smartphone penetration %	44	59	63	65
Tablet penetration %	27	37	40	41
<b>Adult media usage (hours per day in decimals)</b>				
Online	0.90	0.97	3.14	3.29
TV	2.30	2.42	3.14	3.14
Print	0.60	0.51	0.82	0.79
Radio	3.00	3.18	3.39	3.39
<b>Total</b>	<b>6.80</b>	<b>7.08</b>	<b>10.48</b>	<b>10.61</b>
<b>Adult media usage (percentages)</b>				
Online (average for whole 14+ population)	13	14	30	31
TV	34	34	30	30
Print	9	7	8	7
Radio	44	45	32	32
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

Top websites	UNIQUES 000s*	Top apps	ESTIMATED USERS 000s
willhaben.at	2,567	All apps together	3,693
derstandard.at	1,803	WhatsApp Messenger	1,800
gmx.at	1,568	Facebook Messenger	1,400
krone.at	1,539	Facebook	1,100
herold.at	1,387	Snapchat	600
OTT SVOD	ESTIMATED HOMES 00s	Streaming Audio	ESTIMATED USERS 000s
Netflix (last 4 weeks)	345	Spotify (last 4 weeks)	329
YouTube (last 4 weeks)	4,247		
My Video (last 4 weeks)	27		

\*ex mobile. Unique sites (not network aggregates)



# Belgium

## SNAPSHOT

**92%**

2016e 12+ INTERNET  
USERS %

**23%**

2015e AUTOMATED % AD  
INVESTMENT OF ONLINE  
DISPLAY

Historic sources: CIM TV/Radio/  
Digital; CIM/GfK

	2013	2014	2015	2016e
Smartphone penetration % of all 12+	41	43	58	64
Tablet penetration % of all 12+	16	30	39	44
<b>Adult media usage (hours per day in decimals)</b>				
Online				
TV	4.30	4.28	4.37	4.35
Print				
Radio	4.32	4.25	3.96	4.00
<b>Total</b>	<b>8.62</b>	<b>8.53</b>	<b>8.33</b>	<b>8.35</b>

Top websites	UNIQUE 000S	AV MINUTES PER MONTH
Het Laatste Nieuws	2,635	119
Nieuwsblad	2,265	101
Yellow Pages	2,224	6
2dehands / 2demain	1,984	83
Knack Le Vif	1,882	30

OTT SVOD	ESTIMATED HOMES 000s
Stieve	n/a
Yellow TV	380
Netflix	50 to 70

Streaming audio	ESTIMATED USERS 000s
Spotify accounts	420



# Brazil

## SNAPSHOT

### 3%

2015e AUTOMATED %  
OF ONLINE DISPLAY

### 75%

2016e 15+ INTERNET  
USERS %

### 96

2016e E-COMMERCE  
PER ADULT INTERNET  
USER USD

Historic sources: TGI Ibope;  
comScore; ABComm; PwC; Anatel;  
eMarketer; Euromonitor

	2013	2014	2015	2016e
Smartphone penetration % of phone users	27	34	38	43
Tablet penetration % of whole population	3	13	17	20
<b>E-commerce in BRL bn (excluding travel)</b>	<b>30</b>	<b>39</b>	<b>41</b>	<b>46</b>
E-commerce per adult internet user BRL	322	381	361	384
<b>Adult media usage (hours per day in decimals)</b>				
Online (per online user)	3.00	3.40	3.49	3.75
Online (average for all 15+)	1.83	2.25	2.53	2.83
TV	4.70	4.60	4.45	4.35
Print	1.00	1.00	1.01	1.00
Radio	2.50	2.50	2.48	2.45
<b>Total</b>	<b>10.03</b>	<b>10.35</b>	<b>10.47</b>	<b>10.63</b>
<b>Adult media usage (percentages)</b>				
Online	18	22	24	27
TV	47	44	42	41
Print	10	10	10	9
Radio	25	24	24	23
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

Top websites	UNIQUES 000s	AV MINUTES PER MONTH
Google Sites	89,968	1,103
Facebook	81,101	1,817
R7 Portal	70,625	35
Globo	65,581	102
UOL	64,120	64

Top apps	ESTIMATED USERS 000s
WhatsApp	45,663
Facebook	38,789
YouTube	29,460
Instagram	18,167
Twitter	6,874

#### OTT SVOD

Not reported. Netflix said to have ca. 4 million homes



# Canada

## SNAPSHOT

**58%**

2015e AUTOMATED %  
OF ONLINE DISPLAY

**82%**

2016e ADULT  
INTERNET USERS %

**1,046**

2016e E-COMMERCE PER  
ADULT INTERNET USER USD

Historic sources: comScore; Numeris  
INfoSys TV; PMB; NADbank; eMarketer

	2013	2014	2015	2016e
Smartphone penetration % of whole 18+ population	35	55	61	62
Tablet penetration % of whole 18+ population	33	38	42	45
<b>E-commerce in CAD bn (excluding travel)</b>	<b>22</b>	<b>25</b>	<b>30</b>	<b>34</b>
E-commerce per adult internet user CAD	987	1,153	1,283	1,443
<b>Adult media usage (hours per day in decimals)</b>				
Online (average for all 18+)	3.22	3.49	4.12	4.73
TV	3.32	3.27	3.24	3.21
Print	0.32	0.30	0.27	0.25
Radio	1.43	1.42	1.40	1.39
<b>Total</b>	<b>8.29</b>	<b>8.48</b>	<b>9.03</b>	<b>9.58</b>
<b>Adult media usage (percentages)</b>				
Online	39	41	46	49
TV	40	39	36	34
Print	4	4	3	3
Radio	17	17	16	15
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

Top websites	UNIQUES 000s*	AV MINUTES PER MONTH	OTT SVOD	ESTIMATED HOMES 000s	WEEKLY MINUTES PER SUBSCRIBER
Google.ca	23,140	1,955	Netflix	4,000	60
Google.com	20,909	2,543	Crave TV/Shomi	1 million combined***	50 combined
Facebook.com	x19,055	7,935			
YouTube.com	17,053	5,090			
Live.com	14,208	2,354			
Top apps	ESTIMATED USERS 000s**	AV MINUTES PER MONTH	Streaming audio	ESTIMATED USERS 000s	MONTHLY UNIQUE VISITORS
Facebook	14,411	13,242	Spotify	6,700	3,398
Facebook Messenger	12,874	4,058	Google Play		
YouTube	11,483	5,681	(formerly Songza)	6,000	1,212
Google Search	8,068	2,479	SoundCloud*	n/a	3,175
Google Play	7,462	272	RDIO*	n/a	238
			JANGO*	n/a	182

\* desktop only annual average \*\*mobile annual average \*\*\*individual subscriber numbers unavailable



# Chile

## SNAPSHOT

**58%**

2016e ADULT INTERNET  
USERS %

**335**

2016e E-COMMERCE PER  
ADULT INTERNET USER USD

Historic sources: comScore; TGI;  
Camara de Comercio; Ibope; Ipsos;  
Digital TV Research Ltd

	2013	2014	2015	2016e
Smartphone penetration % (of whole population)		64	76	80
Tablet penetration % (of whole population)		16	19	22
<b>E-commerce in USD bn (excluding travel)</b>	<b>1.6</b>	<b>2.0</b>	<b>2.3</b>	<b>2.6</b>
E-commerce per adult internet user USD		303	319	335
<b>Adult media usage (hours per day in decimals)</b>				
Online (per 18+ user)		1.05	0.95	0.92
Online (average for whole population)		0.53	0.52	0.54
TV (18+)	3.98	3.92	3.83	3.73
Print		0.40	0.37	0.33
RADIO		4.00	3.83	3.67
<b>Total</b>		<b>8.85</b>	<b>8.55</b>	<b>8.27</b>
<b>Adult media usage (percentages)</b>				
Online		6	6	6
TV		44	45	45
Print		5	4	4
Radio		45	45	44
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

Top websites	UNIQUES 000s	AV DAILY MINUTES
Google.cl	6,163	3
Facebook.com	4,988	17
Google.com	4,311	8
YouTube.com	4,162	24
Live.com	3,834	8

Top apps	ESTIMATED USERS 000s
Whatsapp Messenger	n/a
Messenger	n/a
Facebook	n/a
YouTube	n/a
Instagram	n/a

OTT SVOD	ESTIMATED HOMES 000s
Netflix	390
Bazuca	n/a
Google Play	n/a
Apple TV	n/a
iTunes Movies	n/a





# China

## SNAPSHOT

# 52%

2016e 20+ INTERNET  
USERS %

# 1,251

2016e ONLINE SHOPPING  
PER 20+ INTERNET USER  
USD

# 9%

2015e VIDEO AD  
INVESTMENT OF ONLINE  
DISPLAY

Historic sources: China National Resident Survey; CNNIC; iResearch China Online Shopping reports; MIT; iResearch 2015 media hours are January-June only

	2013	2014	2015	2016e
Smartphone penetration % of phone users	33	45	60	70
Tablet penetration % of whole population	13	17	16	18
<b>E-commerce in CNY billion (including B2B, travel, O2O, excluding group buying)</b>	<b>10,116</b>	<b>13,100</b>	<b>15,900</b>	<b>18,500</b>
(online shopping only)	1,892	2,785	3,900	4,500
(online shopping via PCs)	1,618	1,844	1,900	1,500
(online shopping via mobile devices)	274	941	2,000	3,000
(online shopping only) per adult internet user CNY	4,130	5,686	7,459	8,182
<b>Adult media usage (hours per day in decimals) Ages 15-69 36 cities</b>				
Online (per online user)	3.26	3.58	3.37	3.42
TV (per viewer)	2.70	2.61	2.61	2.55
Print (per reader)	0.64	0.61	0.56	0.53
Radio (per listener)	0.81	1.11	1.04	0.92
<b>Total</b>	<b>7.41</b>	<b>7.91</b>	<b>7.57</b>	<b>7.42</b>
<b>Adult media usage (percentages)</b>				
Online	44	45	44	46
TV	36	33	34	34
Print	9	8	7	7
Radio	11	14	14	12
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

### Top websites

qq.com [腾讯]  
baidu.com [百度]  
360.cn [360安全中心]  
haosou.com [好搜]  
taobao.com [淘宝网]

### UNIQUE 000s\*

458,426  
469,445  
311,046  
340,344  
324,606

### AV MINUTES PER MONTH

123  
103  
27  
24  
112

### Top apps

WeChat [微信]  
QQ  
iQIYI [爱奇艺]  
Mobile Taobao [手机淘宝]  
Sogou Input [搜狗手机输入法]

### ESTIMATED USERS 000s\*\*

543,039  
500,987  
273,024  
235,103  
214,216

### AV MINUTES PER MONTH

492  
471  
517  
119  
n/a (input apps  
run in parallel)



# Czech Republic

## SNAPSHOT

### 77%

2016e ADULT INTERNET USERS %

### 345

2016e E-COMMERCE PER ADULT INTERNET USER USD

### 12%

2015e VIDEO AD INVESTMENT OF ONLINE DISPLAY

### 5%

2015e AUTOMATED % OF ONLINE DISPLAY

Historic sources: MML-TGI; NetMonitor; Mediaresearch; APEK

	2013	2014	2015	2016e
Smartphone penetration % of phone users	11	33	45	50
Tablet penetration % of phone users	2	13	18	22
<b>E-commerce in EUR bn (excluding travel)</b>	<b>1.6</b>	<b>1.9</b>	<b>2.1</b>	<b>2.2</b>
E-commerce per adult internet user EUR	240	274	301	314
<b>Adult media usage (hours per day in decimals)</b>				
Online (per 15+ user)	1.86	2.40	2.70	2.80
Online (average for whole population)	1.37	1.84	2.08	2.17
TV	3.58	3.68	3.70	3.50
Print	0.31	0.20	0.20	0.18
Radio	2.17	2.28	2.40	2.25
<b>Total</b>	<b>7.43</b>	<b>8.00</b>	<b>8.38</b>	<b>8.10</b>
<b>Adult media usage (percentages)</b>				
Online	18	23	25	27
TV	48	46	44	43
Print	4	2	2	2
Radio	29	28	29	28
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

Top websites	UNIQUES 000s	AV MINUTES PER MONTH
seznam.cz	5,749	814
novinky.cz	4,063	124
idnes.cz	3,690	107
super.cz	3,217	59
heureka.cz	2,810	34

OTT SVOD	ESTIMATED HOMES 000s
O2 TV	200
Netflix	n/a
UPC Horizon Go	n/a



# Denmark

## SNAPSHOT

**97%**

2015e ADULT INTERNET  
USERS %

**3,266**

2016e E-COMMERCE PER  
ADULT INTERNET USER USD

Historic sources: Danskernes mdievaner;  
Danish Chamber of Commerce; Gemius;  
eMarketer; Bloomberg

	2013	2014	2015	2016e
Smartphone penetration %	60	73	81	83
Tablet penetration %	41	58	69	73
<b>E-commerce in DKr bn excluding travel</b>	<b>58.7</b>	<b>69.7</b>	<b>87.8</b>	<b>95.5</b>
E-commerce per adult internet user DKr	14,379	16,607	20,845	22,153
<b>Adult media usage (hours per day in decimals)</b>				
Online	1.57	1.62	1.70	1.81
TV	2.26	2.21	2.19	2.18
Print	0.52	0.46	0.45	0.43
Radio	1.35	1.33	1.32	1.31
<b>Total</b>	<b>5.70</b>	<b>5.62</b>	<b>5.66</b>	<b>5.73</b>
<b>Adult media usage (percentages)</b>				
Online	28	29	30	32
TV	40	39	39	38
Print	9	8	8	8
Radio	24	24	23	23
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

Top websites	UNIQUES 000s	AV MINUTES PER MONTH	OTT SVOD	ESTIMATED HOMES 000s	DAILY MINUTES PER SUBSCRIBER HH
dr.dk	1,850	n/a	Netflix	494	15
tv2.dk	1,500	n/a	Viaplay	156	14
ekstrabladet.dk	1,300	n/a	Tv2 Play	130	13
bt.dk	1,000	n/a	YouBio	78	12
krak.dk	1,350	n/a	Tv3 Play	78	11
Top apps	ESTIMATED USERS 000s	AV MINUTES PER MONTH	Streaming audio	ESTIMATED USERS 000s	
TV 2 Nyhedscenter	n/a	33,400,807	Spotify	400	
TV TID	n/a	40,997,940	Tidal	150	
DBA	n/a	49,596,562	TDC Play	50	
TV 2 Vejrcenter	n/a	1,962,961	Deezer	25	
Billbasen	n/a	11,074,348	Napster	20	



# Finland

## SNAPSHOT

### 82%

2016e ADULT INTERNET USERS %

### 2,475

2016e E-COMMERCE PER ADULT INTERNET USER USD

### 10%

2015e VIDEO AD INVESTMENT OF ALL ONLINE

### 15%

2015e AUTOMATED AD INVESTMENT OF ALL ONLINE

Historic sources: TNS Atlas; comScore

	2013	2014	2015	2016e
Smartphone penetration % of whole population	56	66	70	75
Tablet penetration % of whole population	21	40	46	52
<b>E-commerce in EUR bn (excluding travel)</b>	<b>7.6</b>	<b>6.7</b>	<b>7.5</b>	<b>8.0</b>
E-commerce per adult internet user EUR	2,342	1,926	2,113	2,228
<b>Adult media usage (hours per day in decimals)</b>				
Online (per online user)	2.30	2.45	2.60	2.86
Online (average for all 18+)	1.72	1.95	2.10	2.32
TV	2.57	2.53	2.45	2.36
Print	0.95	0.83	0.80	0.78
Radio	1.72	1.60	1.55	1.52
<b>Total</b>	<b>6.96</b>	<b>6.91</b>	<b>6.90</b>	<b>6.98</b>
<b>Adult media usage (percentages)</b>				
Online	25	28	30	33
TV	37	37	36	34
Print	14	12	12	11
Radio	25	23	22	22
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

Top websites	UNIQUES 000s	AV MINUTES PER MONTH
MSN	2,157	139
Facebook	2,147	528
Ilta-Sanomat	1,848	136
Ilta1ehti	1,837	140
YouTube	1,826	538

#### Top apps

Facebook  
YouTube  
Google Maps  
WhatsApp  
Gmail

#### OTT SVOD ESTIMATED HOMES 000s

Netflix 668

#### Streaming audio ESTIMATED USERS 000s

Spotify 600



# France

## SNAPSHOT

### 78%

2016e 12+ INTERNET USERS %

### 1,758

2016e E-COMMERCE PER ADULT INTERNET USER USD

### 30%

2015e VIDEO AD INVESTMENT OF ONLINE DISPLAY

### 40%

2015e AUTOMATED AD INVESTMENT OF ONLINE DISPLAY

Historic sources: Médiamétrie, 126 000, NetRatings, Media In Life (GroupM); IP; Les Echos; ARCEP; SRI UDECAM

2013 2014 2015 2016e

Smartphone penetration % of whole population	53	56	58	62
Tablet penetration % of whole population	19	36	38	45
<b>E-commerce in EUR bn (including travel)</b>	<b>50.0</b>	<b>57.0</b>	<b>65.0</b>	<b>70.0</b>
E-commerce per 12+ internet user EUR	1,182	1,317	1,479	1,582
<i>E-commerce excluding travel is not available</i>				
<b>Adult media usage (hours per day in decimals)</b>				
Online	1.48	1.61	1.77	1.88
TV	4.03	3.85	3.88	3.92
Print	0.80	0.78	0.75	0.72
Radio	2.47	2.38	2.37	2.40
<b>Total</b>	<b>8.78</b>	<b>8.62</b>	<b>8.77</b>	<b>8.92</b>
<b>Adult media usage (percentages)</b>				
Online	17	19	20	21
TV	46	45	44	44
Print	9	9	9	8
Radio	28	28	27	27
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

Top websites*	UNIQUES 000s	AV MINUTES PER MONTH
Google	39,353	2.27
Facebook	25,011	4.90
YouTube	22,589	2.52
Amazon	21,118	0.58
Orange	18,451	2.40

OTT SVOD***	ESTIMATED USERS 000s
Netflix	2,192
CanalPlay	2,154
iTunes	2,154
myTF1vod	1,928
Google Play	1,663

Top apps**	ESTIMATED USERS 000s
Samsung Apps	13,262
Game center	9,052
Deezer	3,886
Waze	3,698
Orange	3,520

Streaming audio*	ESTIMATED USERS 000s
Deezer	3,339
Dailymotion Music	1,507
NRJ	1,144
La coccinelle du Net	723
SoundCloud	605

\*MNR/Mediametrie/Desktop\*\*MNR/ Mediametrie/Mobile\*\*\* GroupM Panel/November 2015



# Germany

## SNAPSHOT

# 84%

2016e 10+ INTERNET  
USERS %

# 836

2016e E-COMMERCE PER  
ADULT INTERNET USER USD

# 25%

2014e VIDEO AD  
INVESTMENT OF ONLINE  
DISPLAY

Historic sources: ZDF/ARD; Statista.  
de; AGOF; Goldmedia; Bitkom

	2013	2014	2015	2016e
Smartphone penetration %	41	50	55	61
Tablet penetration %	25	33	38	43
<b>E-commerce in EUR bn (excluding travel)</b>	<b>33.1</b>	<b>37.1</b>	<b>41.7</b>	<b>42.5</b>
E-commerce per10+ internet user EUR	637	667	743	752
<b>Adult media usage (hours per day in decimals)</b>				
Online (desktop only, whole population)	1.91	1.80	1.78	1.60
TV	3.68	3.68	3.47	3.40
Print	0.46	0.48	0.50	0.50
Radio	2.28	2.50	2.89	2.89
<b>Total</b>	<b>8.33</b>	<b>8.46</b>	<b>8.64</b>	<b>8.39</b>
<b>Adult media usage (percentages)</b>				
Online	23	21	21	19
TV	44	44	40	41
Print	6	6	6	6
Radio	27	30	33	34
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

Top websites*	UNIQUES 000s
T-Online	31,360
gutefrage.net	21,470
eBay.de	21,300
FOCUS Online	19,450
Web.de	19,370
Bild	19,120

OTT SVOD	ESTIMATED HOMES 000s
Amazon Prime	9,083
Maxdome	5,109
Netflix	3,690
Watchever	1,987
Snap by Sky	1,703

Top apps**	ESTIMATED USERS 000s
Web.de	3,560
Wetter.de	3,450
GMX	2,860
Mobile.de	2,800
TV Spielfilm	2,540

Streaming audio	ESTIMATED USERS 000s
Spotify	12,600
Google Play Music	3,600
Deezer	2,800
Napster	2,200
Simfy	1,600

\* AGOF October 2015 \*\*AGOF



# Greece

## SNAPSHOT

64%

2016e INTERNET USERS %  
OF 13-70s

Historic sources: TGI; FocusBari;  
Web-id; Ened; Google Analytics

	2013	2014	2015	2016e
Smartphone penetration % of phone users	35	45	52	55
Tablet penetration %	5	11	15	18
<b>Adult media usage (hours per day in decimals)</b>				
Online		2.20	2.35	2.35
TV		2.50	2.50	2.50
Print		0.59	0.50	0.50
Radio		1.90	1.90	1.90
<b>Total</b>		<b>7.19</b>	<b>7.25</b>	<b>7.25</b>
<b>Adult media usage (percentages)</b>				
Online		31	32	32
TV		35	34	34
Print		8	7	7
Radio		26	26	26
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

Top websites	UNIQUES 000s
Newsbomb.gr	4,597,280
Lifo.gr	4,124,339
Protothema.gr	4,028,107
iEfimerida.gr	3,966,362
Newsit.gr	3,952,248

Streaming Audio	ESTIMATED USERS 000s
Spotify	650,000



# Hong Kong

## SNAPSHOT

89%

2016e ADULT INTERNET  
USERS %

Historic sources: Nielsen Media Index;  
comScore

	2013	2014	2015	2016e
Smartphone penetration %	53	62	80	85
Tablet penetration %	21	24	34	40
<b>Adult media usage (hours per day in decimals)</b>				
Online	2.40	2.43	2.85	2.95
TV	2.75	2.23	2.15	2.11
Print	1.17	1.12	1.10	1.07
Radio	1.10	1.05	1.02	1.01
<b>Total</b>	<b>7.42</b>	<b>6.83</b>	<b>7.12</b>	<b>7.14</b>
<b>Adult media usage (percentages)</b>				
Online	32	36	40	41
TV	37	33	30	30
Print	16	16	15	15
Radio	15	15	14	14
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

Top websites	UNIQUE 000s	AV MINUTES PER MONTH
Yahoo.com.hk	3,655	7.2
Google.com.hk	3,272	3.9
Yahoo.com	2,465	5.1
Facebook.com	2,405	13.7
Google.com	2,402	7.5
Top apps	ESTIMATED USERS 000s	AV MINUTES PER MONTH
Next Media Interactive Ltd.	3,989	78.6
Oriental Press Group	2,415	14.5
Yahoo Sites	2,295	20.7
HKET Holdings	1,987	10.9
OpenRice	1,977	27.9

### OTT SVOD

Netflix launched Jan 2016  
LeEco





# Hungary

## SNAPSHOT

**64%**

2015e 18+ INTERNET USERS %

**307**

2016e E-COMMERCE PER ADULT INTERNET USER USD

**30%**

2015e AUTOMATED % OF ONLINE DISPLAY

Historic sources: Gemius-Ipsos; Nielsen; Millward Brown TGI; Ipsos/GfK; IAB

2013 2014 2015 2016e

Smartphone penetration % of whole population	24	31	41	55
Tablet penetration % of whole population	6	11	15	18
<b>E-commerce in HUF bn (including travel)</b>	<b>210</b>	<b>273</b>	<b>355</b>	<b>447</b>
E-commerce per adult internet user HUF	44,322	54,688	69,690	86,628
<b>Adult media usage (hours per day in decimals)</b>				
Online (per online user)	1.71	1.90	2.55	3.10
Online (average for all adults)	0.99	1.17	1.60	1.97
TV	5.02	5.02	4.98	4.95
Print	0.36	0.35	0.35	0.35
Radio	2.95	2.85	3.00	3.00
<b>Total</b>	<b>9.32</b>	<b>9.39</b>	<b>9.93</b>	<b>10.27</b>
<b>Adult media usage (percentages)</b>				
Online	11	12	16	19
TV	54	53	50	48
Print	4	4	4	3
Radio	32	30	30	29
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

Top websites	UNIQUE 000s	AV MINUTES PER MONTH
origo.hu	1,409	26
blog.hu	1,294	4
arukereso.hu	1,180	5
index.hu	1,158	50
jofogas.hu	1,120	21

Top apps	ESTIMATED USERS 000s
Facebook	2,000
Facebook Messenger	1,500
YouTube	1,000
Viber	800
Instagram	600

OTT SVOD ESTIMATED HOMES 000s

Netflix 50

Streaming audio ESTIMATED USERS 000s

Spotify 150  
Deezer 90  
SoundCloud 80



# India

## SNAPSHOT

**43%**

2016e 12+ INTERNET USERS %

**89**

2016e E-COMMERCE PER 12+ INTERNET USER USD

**30%**

2015e VIDEO AD INVESTMENT OF ONLINE DISPLAY

**>50%**

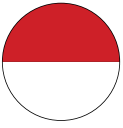
2015e AUTOMATED % OF ONLINE DISPLAY

Historic sources: IAMA; PwC; comScore; publishers; GroupM estimates

	2013	2014	2015	2016e
Smartphone penetration % (of all handset users)	14.8	21.0	26.0	28.3
Tablet penetration % (of all internet users)	2.0	2.7	3.9	13.0
<b>E-commerce in USD bn (including travel)</b>	<b>13</b>	<b>16</b>	<b>21</b>	<b>38</b>
E-commerce per 12+ internet user USD	67	63	61	89
<b>Adult media usage (hours per day in decimals)</b>				
Online (average of 12+users)	3.40	3.77	3.90	3.27
Online (average for all 12+)	0.68	1.03	1.41	1.41
TV	2.42	2.59	2.66	3.15
Print (top 10 titles)	0.34	0.28	n/a	n/a
Radio	0.47	0.47	n/a	n/a
<b>Total</b>	<b>3.91</b>	<b>4.37</b>	<b>4.07</b>	<b>4.56</b>
<b>Adult media usage (percentages)</b>				
Online	17	23		
TV	62	59		
Print	9	6		
Radio	12	11		
<b>Total</b>	<b>100</b>	<b>100</b>	<b>n/a</b>	<b>n/a</b>

Top websites	UNIQUE 000s	AV MINUTES PER MONTH
Google Sites	72,653	180
Facebook	47,590	156
Microsoft Sites	34,991	35
Yahoo Sites	33,224	70
Amazon Sites	29,323	19
BitTorrent Network	26,693	1
Flipkart sites	24,255	20
Times Internet Limited	20,718	26
Jabong.com	19,750	6

OTT SVOD
Hotstar (Star India)
Sony Live
dittoTV (Zee)
ErosNow
HOOQ (Sony/Warner)
VOOT (Viacom)
ALT Digital (Balaji; June 2016)
Frost & Sullivan estimates 1.3 million OTT paid video subscribers



# Indonesia

## SNAPSHOT

40%

2016e INTERNET USERS %

60

2016e E-COMMERCE PER INTERNET USER USD

Historic sources: eMarketer; comScore; Technasia, Jakarta Post; Merdeka.com

	2013	2014	2015	2016e
Smartphone penetration % of phone users	17	24	29	40
Tablet penetration % of whole population	2	8	10	13
<b>E-commerce in USD bn (excluding travel)</b>	<b>1.1</b>	<b>1.6</b>	<b>3.4</b>	<b>6.2</b>
E-commerce per internet user USD	15	19	36	60

Top websites	UNIQUE 000s	AV MINUTES PER MONTH
Google Sites	22,057	209
Facebook	16,006	151
Yahoo sites	10,941	53
Lazada Sites	10,158	4
WordPress.com	7,319	2

Top apps	ESTIMATED USERS 000s	AV MINUTES PER MONTH
Whatsapp	n/a	180
BBM	55,000	690
Instagram	n/a	n/a
Facebook	n/a	n/a
LINE	30,000	150

Streaming audio	AVG. VISIT (JAN 2015)
Deezer	555,808
Spotify.com	171,949
Melon.co.id	62,295
langitmusik.co.id	53,055
Guvera	24,696



# Ireland

## SNAPSHOT

### 93%

2016e ADULT INTERNET USERS %

### 2,260

2016e E-COMMERCE PER ADULT INTERNET USER USD

### 27%

2015e VIDEO AD INVESTMENT OF ONLINE DISPLAY

### 20%

2015e AUTOMATED % OF ONLINE DISPLAY

Historic sources: Eir Household Survey; GWI; Ecommerce Europe; GroupM; comScore

	2013	2014	2015	2016e
Smartphone penetration % of phone users	64	70	74	80
Tablet penetration (% of pop. having access to a tablet)	21	29	31	49
<b>E-commerce in EUR bn</b>	<b>4.6</b>	<b>5.3</b>	<b>6.0</b>	<b>7.0</b>
E-commerce per adult internet user EUR	1,390	1,558	1,744	2,034
<b>Adult media usage (hours per day in decimals)</b>				
Online (per online user, ex streaming)				3.39
Online (average for all 18+, ex streaming)	2.02	2.40	2.50	3.15
TV	2.81	2.60	2.55	2.28
Print				0.83
Radio	2.22	2.42	2.42	1.74
<b>Total</b>	<b>7.05</b>	<b>7.42</b>	<b>7.47</b>	<b>8.00</b>
<b>Adult media usage (percentages)</b>				
Online	29	32	33	39
TV	40	35	34	29
Print	0	0	0	10
Radio	31	33	32	22
<b>Total</b>	<b>100</b>	<b>100</b>	<b>n/a</b>	<b>n/a</b>

Top websites	UNIQUE 000s*	AV MINUTES PER MONTH
RTE.ie	807,000	20
Inpdependent.ie	748,000	33
Irish Times	732,000	19
Wikipedia	728,000	14
BBC	709,000	23

OTT SVOD	ESTIMATED HOMES 000s
Netflix	150,000
Google Play	
Sky Go	
BBC iPlayer	
Vimeo	

Top apps	ESTIMATED USERS 000s	AV MINUTES PER DAY
Color Switch	n/a	
FB Messenger	n/a	18
Whatsapp	n/a	13
Snapchat	n/a	8
Facebook	n/a	45

Streaming audio
iTunes
Spotify
Apple Music
Google Play Music
SoundCloud

\*ex mobile



# Italy

## SNAPSHOT

### 54%

2016e 15+ INTERNET USERS %

### 394

2016e E-COMMERCE PER ADULT INTERNET USER USD

### 25%

2015e VIDEO AD INVESTMENT OF INTERNET DISPLAY

### 21%

2015e AUTOMATED % OF ONLINE DISPLAY

Historic sources: Eurisko; Audipress; Audiweb; Auditel; Politecnico di Milano; Mobile Next; Sinottica/TSSP; comScore; Mobilens; Ookla Net Index

	2013	2014	2015	2016e
Smartphone penetration % of all 15+	45	48	57	66
Tablet penetration % of households	16	23	24	25
<b>E-commerce in EUR bn (excluding travel)</b>	<b>6.6</b>	<b>7.5</b>	<b>8.8</b>	<b>10.2</b>
E-commerce per adult internet user EUR	262	288	322	355
<b>Adult media usage (hours per day in decimals)</b>				
Online (average for all adults)	0.64	0.85	0.90	0.97
TV	4.45	4.45	4.32	4.28
Print	0.28	0.25	0.23	0.22
Radio	2.17	2.20	2.20	2.20
<b>Total</b>	<b>7.54</b>	<b>7.75</b>	<b>7.65</b>	<b>7.67</b>
<b>Adult media usage (percentages)</b>				
Online	8	11	12	13
TV	59	57	56	56
Print	4	3	3	3
Radio	29	28	29	29
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

Top websites	UNIQUES 000s	AV MINUTES PER MONTH
Google	25,340	245
Facebook	22,602	766
YouTube	20,038	101
Amazon	15,980	44
Yahoo	14,835.5	46

Top apps	UNIQUES 000s	AV MINUTES PER MONTH
WhatsApp	16,955	586
Google Play	15,397	29
Facebook	15,168	752
Google Search	14,111	61
Facebook Messenger	12,212	94

OTT SVOD	ESTIMATED USERS 000s
Sky Go (active unique users)	2,400
Sky Ondemand (mysky connected)	2,000
Netflix (unique users websites)	1,277
Premium Play (subscription hh)	950
Infinity (unique users websites)	875
Sky online (unique users websites)	672

Streaming audio	ESTIMATED USERS 000s
Spotify	3,334
SoundCloud	451
Jango Music	418
Deezer	308
Cubomusica	267



# Japan

## SNAPSHOT

### 95%

2016e ADULT INTERNET USERS %

### 730

2016e ONLINE SHOPPING PER ADULT INTERNET USER USD

### 10%

2015e VIDEO AD INVESTMENT OF ONLINE DISPLAY

### 46%

2015e AUTOMATED % OF ONLINE DISPLAY

Historic sources: Video Research; Nielsen; comScore; Hakuhodo; eMarketer

	2013	2014	2015	2016e
Smartphone penetration %	37	40	41	44
Tablet penetration %	18	24	27	29
<b>E-commerce in JPY tn (excluding travel)</b>		<b>6.4</b>	<b>7.5</b>	<b>8.6</b>
E-commerce per adult internet user JPY		62,684	72,394	81,818
<b>E-commerce in JPY tn (total)</b>		<b>9.4</b>	<b>10.7</b>	<b>12.0</b>
<b>E-commerce in JPY tn (travel only)</b>		<b>3.0</b>	<b>3.2</b>	<b>3.4</b>
<b>Adult media usage (hours per day in decimals)</b>				
Online	2.19	2.31	2.45	2.51
TV	2.53	2.52	2.55	2.52
Print	0.64	0.64	0.55	0.52
Radio	0.52	0.52	0.48	0.47
<b>Total</b>	<b>5.88</b>	<b>5.99</b>	<b>6.03</b>	<b>6.01</b>
<b>Adult media usage (percentages)</b>				
Online	37	39	41	42
TV	43	42	42	42
Print	11	11	9	9
Radio	9	9	8	8
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

Top websites	UNIQUE 000s	AV MINUTES PER MONTH
Google	55,363	99
Yahoo Japan	54,959	360
LINE Corp	38,241	26
FC2.com	37,888	32
Amazon.co.jp	34,864	48
Rakuten	32,690	72

OTT SVOD	ESTIMATED HOMES 000s
dTV	4,600,000
Hulu	1,000,000
U-NEXT	160,000
Netflix	n/a
Amazon Prime	n/a

Top apps	ESTIMATED USERS 000s
LINE	39,479
Facebook	25,663
Twitter	16,809
Yahoo Japan	13,740

Streaming audio
Amazon Prime Music
Google Play Music
Apple Music
AWA
LINE Music

Note: awareness is low for SVOD and streaming audio



# Latvia

## SNAPSHOT

78%

2016e ADULT INTERNET USERS %

14%

2015e VIDEO AD INVESTMENT OF ONLINE DISPLAY

5%

2015e AUTOMATED % OF ONLINE DISPLAY

Historic sources: TNS; Gemius; Media House estimates

	2013	2014	2015	2016e
Smartphone penetration % of whole population	18	28	32	40
Tablet penetration % of whole population	46	12	20	25
Adults who ever shop online %	37%	40%	50%	55%
<b>Adult media usage (hours per day in decimals)</b>				
Online (average per user)	0.96	0.96	0.98	1.10
Online (average for all adults)	0.71	0.71	0.74	0.86
TV	2.76	2.86	2.81	2.75
Print	0.42	0.38	0.35	0.35
Radio	4.20	4.27	4.33	4.45
<b>Total</b>	<b>8.09</b>	<b>8.22</b>	<b>8.23</b>	<b>8.41</b>
<b>Adult media usage (percentages)</b>				
Online	9	9	9	10
TV	34	35	34	33
Print	5	5	4	4
Radio	52	52	53	53
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

Top websites	UNIQUE 000s	AV MINUTES PER MONTH
inbox.lv	860	399
delfi.lv	835	221
tvnet.lv	804	205
draugiem.lv	680	615
kasjauns.lv	366	56

Top apps	ESTIMATED USERS 000s
Google	258
Facebook	236
YouTube	215
WhatsApp	188
Inbox	154

### OTT SVOD

Netflix launched January 2016

### Streaming audio ESTIMATED USERS 000s

Spotify (free)	65
Spotify (paid)	10-20



# Lithuania

## SNAPSHOT

68%

2016e ADULT INTERNET  
USERS %

Historic sources: TNS; TG; Gemius

	2013	2014	2015	2016e
Smartphone penetration %	28	34	44	52
Tablet penetration %	3	7	14	20
<b>Adult media usage (hours per day in decimals)</b>				
Online	2.03	2.15	2.31	2.42
TV	3.92	3.65	3.87	3.79
Print	0.63	0.57	0.51	0.46
Radio	2.55	2.42	2.57	2.49
<b>Total</b>	<b>9.13</b>	<b>8.79</b>	<b>9.25</b>	<b>9.16</b>
<b>Adult media usage (percentages)</b>				
Online	22	24	25	26
TV	43	42	42	41
Print	7	6	6	5
Radio	28	28	28	27
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

Top websites*	UNIQUE 000s	AV MINUTES PER MONTH
Google	1,319	n/a
delfi.lt	1,051	241
Facebook	897	n/a
15min.lt	863	148
YouTube	843	n/a

OTT SVOD	UNIQUE 000s	AV MINUTES PER MONTH
YouTube	843	n/a
delfi TV (free, local)	415	11
Lrytas online TV (free, local)	138	17
TV3Play (free, local)	182	55
LNKGo (free, local)	154	31
Netflix (Media House estimate)	73**	n/a

Streaming audio	ESTIMATED USERS 000s
Spotify	42

\*Source: TNS LT (international sites), Gemius 2015 dec (local sites)





# Malaysia

## SNAPSHOT

**82%**

2016e INTERNET  
USERS %

**24%**

2015e VIDEO AD  
INVESTMENT OF ONLINE  
DISPLAY

**20%**

2015e AUTOMATED %  
OF ONLINE DISPLAY

Historic sources: MCMC Q2 2015  
Pocket Book Of Statistics; 3D Malaysia;  
comScore; App Annie

\*2014 drop explained as a reduction in  
average dwelltime on free-to-air channels

	2013	2014	2015	2016e
Smartphone penetration % (of all 15-54)	57	65	79	84
Tablet penetration % (of all 15-54)		8	12	13
<b>Adult media usage (hours per day in decimals)</b>				
Online (average per user)	2.71	2.72	2.45	2.47
Online (average per person)	1.76	1.82	1.94	2.03
TV*	3.35	1.88	1.89	1.19
Print	0.56	0.82	0.49	0.68
Radio	1.63	1.57	0.95	0.84
<b>Total</b>	<b>7.30</b>	<b>6.09</b>	<b>5.27</b>	<b>4.74</b>
<b>Adult media usage (percentages)</b>				
Online	24	30	37	43
TV	46	31	36	25
Print	8	13	9	14
Radio	22	26	18	18
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

Top websites*	UNIQUES 000s	MILLION MINUTES PER MONTH
Google.com	10,883	1,253
Facebook.com	8,917	3,080
YouTube.com	7,583	2,236
Google.com.my	5,411	172
Yahoo.com	4,117	377

OTT SVOD	ESTIMATED HOMES 000s
Total all providers	950

Top apps	TOTAL DOWNLOADS 000s	AV TIME PER USER PER MONTH
WhatsApp Messenger	16,129	18:09:35
Facebook	10,568	18:20:40
WeChat	9,568	7:55:11
Facebook Messenger	9,143	26:11
Instagram	5,448	4:24:39

Streaming audio**	ESTIMATED USERS 000s
SoundCloud	745
Spotify	458
Joox	33
PandoraBeats	22
MixCloud	17

\*comScore Media Metrix Jan 2016 \*\* Source: comScore Media Metrix Jan 2016



# Mexico

## SNAPSHOT

**50%**

2016e 6+ INTERNET USERS %

**245**

2016e B2C ECOMMERCE PER INTERNET USER USD

**25%**

2015e VIDEO AD INVESTMENT OF ONLINE DISPLAY

**20%**

2015e AUTOMATED % OF ONLINE DISPLAY

Historic sources: INEGI/MODUTIH 2014; allpago; comScore; GroupM

	2013	2014	2015	2016e
Smartphone penetration % of whole population	19.2	25.0	38.0	53.2
Tablet penetration % of whole population	4.3	8.0	12.0	14.4
<b>E-commerce in USDbn (all B2C)</b>	<b>7.9</b>	<b>9.8</b>	<b>11.4</b>	<b>13.5</b>
E-commerce per adult internet user USD	172	207	224	245
<b>Adult media usage (hours per day in decimals)</b>				
Online (average per user)	2.50	2.40	2.50	2.75
Online (average for all 6+)	1.09	1.07	1.18	1.38
TV	2.67	2.53	2.45	2.33
Print	0.60	0.60	0.50	0.40
Radio	0.59	0.56	0.70	0.74
<b>Total</b>	<b>4.95</b>	<b>4.75</b>	<b>4.83</b>	<b>4.85</b>
<b>Adult media usage (percentages)</b>				
Online	22	22	24	28
TV	54	53	51	48
Print	12	13	10	8
Radio	12	12	14	15
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

Top websites	UNIQUE 000s	AV MINUTES PER MONTH
Google.com.mx	21,094,000	3.8
Facebook.com	17,657,000	17.2
Live.com	17,284,000	7.1
MSN.com	15,590,000	2.5
Youtube.com	15,280,000	30

Top apps	ESTIMATED DOWNLOADS 000s
Spotify	3,575,000
Shazam	2,011,000
Disney apps	595,000

OTT SVOD	ESTIMATED USERS 000s	DAILY MINUTES PER SUBSCRIBER HH
Netflix	4,300	3.44
Claro	1,500	

Streaming audio	ESTIMATED USERS 000s
Apple Music	11,000
Spotify	10,000
Deezer	6,000



# Netherlands

## SNAPSHOT

**89%**

2016e ADULT INTERNET USERS %

**1,196**

2016e E-COMMERCE PER ADULT INTERNET USER USD

**18%**

2015e VIDEO AD INVESTMENT OF ONLINE DISPLAY

**27%**

2015e AUTOMATED % OF ONLINE DISPLAY

Historic sources: IAB; MMS; GfK; Thiuswinkel.org; SKO; NLO

	2013	2014	2015	2016e
Smartphone penetration % of whole population	67	76	80	81
Tablet penetration % of whole population	53	61	65	66
<b>E-commerce in EUR bn (excluding travel)</b>	<b>6.7</b>	<b>8.7</b>	<b>11.9</b>	<b>14.0</b>
E-commerce per 13+ internet user EUR	531	681	925	1,076
<b>Adult media usage (hours per day in decimals)</b>				
Online (average for whole population)	1.89	2.00	2.16	2.18
TV	3.38	3.47	3.32	3.38
Print		0.37	0.35	0.33
Radio	3.12	2.97	2.93	2.91
<b>Total</b>	<b>8.39</b>	<b>8.81</b>	<b>8.76</b>	<b>8.80</b>
<b>Adult media usage (percentages)</b>				
Online	22	23	25	25
TV	40	39	38	38
Print	0	4	4	4
Radio	37	34	33	33
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

Top websites*	UNIQUES 000s	AV MINUTES PER MONTH
Facebook	11,055	22
Google Search	10,383	4
YouTube	9,579	13
WhatsApp Messenger	7,552	13
Bol.com	7,508	5
Top apps	ESTIMATED USERS 000s	AV MINUTES PER MONTH
Facebook, App	8,172	19
WhatsApp Messenger, App	7,552	13
YouTube, App	6,894	15
Facebook Messenger, App	6,250	11
Google Search, App	5,855	2

ON-DEMAND AND OTT MUSIC AND VIDEO % WHO USED THE FOLLOWING SERVICES LAST MONTH			
Netflix	16	BBC iPlayer	2
Spotify	16	Amazon video	2
Google Play	14	Hulu	2
RTL XL	10	Rdio	2
iTunes	9	HBO Go	2
SoundCloud	5	Musify	2
Google Play Music	3	Pandora	1
Apple music	3	Tidal	1
Vimeo	3	Audible	1
Videoland	3	Crackle	1
Deezer	3		

\*sites and apps; all platforms



# Norway

## SNAPSHOT

**88%**

2016e ADULT INTERNET USERS %

**1,400**

2016e E-COMMERCE PER ADULT INTERNET USER USD

**7%**

2015e VIDEO AD INVESTMENT OF ALL ONLINE

**20%**

2015e AUTOMATED % OF ONLINE DISPLAY

Historic sources: Advantage; Interbuss; Postnord; Forbruker & Media/TNS Gallup

	2013	2014	2015	2016e
Smartphone penetration % of whole population	80	84	87	89
Tablet penetration % of whole population	47	63	66	70
<b>E-commerce in NOK bn (exc. travel and events)</b>	<b>27.0</b>	<b>32.3</b>	<b>38.3</b>	<b>45.0</b>
E-commerce per adult internet user NOK	7,955	8,820	10,379	12,195
<b>Adult media usage (hours per day in decimals)</b>				
Online (average for whole population)	1.70	2.12	2.60	2.65
TV	2.90	2.89	2.88	2.90
Print	0.48	0.76	0.72	0.68
Radio	2.15	2.15	2.17	2.15
<b>Total</b>	<b>7.23</b>	<b>7.92</b>	<b>8.37</b>	<b>8.38</b>
<b>Adult media usage (percentages)</b>				
Online	24	27	31	32
TV	40	36	34	35
Print	7	10	9	8
Radio	30	27	26	26
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

Top websites*	UNIQUES 000s	AV MINUTES PER MONTH
startsiden.no	350,000	870
NRK.no	1,050,000	690
sol.no	181,233	660
VG Nett	1,300,000	600
Teknikks Ukeblad.no	33,000	570

OTT SVOD	ESTIMATED HOMES 000s
Netflix	723
Tv2 Sumo	203
Viaplay	158
HBO	158

### Top apps

Vipps by DNB  
 Snapchat  
 Messenger  
 Instagram  
 Facebook

### Streaming audio ESTIMATED USERS 000s

Spotify 1,800,000  
 WIMP 740,000  
 Apple Music 370,000



# Philippines

## SNAPSHOT

**49%**

2016e INTERNET  
USERS %

**25**

2016e E-COMMERCE  
PER ONLINE USER USD

Historic sources: IWS; Nielsen CMV;  
Radio Advisor; SimilarWeb; comScore

	2013	2014	2015	2016e
Smartphone penetration % of whole population		23	59	65
Tablet penetration % of whole population		18	21	27
<b>Adult media usage (hours per day in decimals)</b>				
Online (average for whole population)	1.50	1.60	2.70	3.00
TV	4.80	4.80	4.80	4.80
Print	1.00	0.80	0.77	0.70
Radio	1.30	1.30	1.30	1.30
<b>Total</b>	<b>8.60</b>	<b>8.50</b>	<b>9.57</b>	<b>9.80</b>
<b>Adult media usage (percentages)</b>				
Online	17	19	28	31
TV	56	56	50	49
Print	12	9	8	7
Radio	15	15	14	13
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

Top websites	UNIQUE 000s
Lazada.com.ph	3,274
philippines-mmm.net	1,206
Abs-cbn Digital media	1,123
y8.com	977
olx.ph	952
Inquirer.net	734

Top apps
Color Switch
Google Photos
musical.ly
Snapchat
Messenger

OTT SVOD
ABS CBN BlackBox

Streaming audio	ESTIMATED USERS 000s
Spotify	633
SoundCloud.com	166
8tracks.com	15



# Poland

## SNAPSHOT

**68%**

2016e ADULT INTERNET USERS %

**357**

2016e E-COMMERCE PER ADULT INTERNET USER USD

**8%**

2015e VIDEO AD INVESTMENT OF ONLINE DISPLAY

**16%**

2015e AUTOMATED % OF ONLINE DISPLAY

Historic sources: NetTrack/SMG; AGB Nielsen; PBC/SMG; Radio Track/SMG; GUS; Megapanel; Interaktywnie.com/IAB; PMR; IAB

	2013	2014	2015	2016e
Smartphone penetration %	50	58	60	64
Tablet penetration %	8	18	21	23
<b>E-commerce in PLN bn (excluding travel)</b>	<b>26</b>	<b>27</b>	<b>33</b>	<b>35</b>
E-commerce per 7+ internet user PLN	1,232	1,267	1,500	1,429
<b>Adult media usage (hours per day in decimals)</b>				
Online	1.26	1.30	1.83	2.00
TV	4.12	4.30	4.27	4.33
Print	0.48	0.47	0.27	0.23
Radio	4.53	4.48	4.45	4.53
<b>Total</b>	<b>10.39</b>	<b>10.55</b>	<b>10.82</b>	<b>11.09</b>
<b>Adult media usage (percentages)</b>				
Online	12	12	17	18
TV	40	41	39	39
Print	5	4	2	2
Radio	44	42	41	41
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

Top websites	UNIQUES 000s	AV MINUTES PER MONTH
Google	23,285	n/a
Facebook	19,805	n/a
YouTube	18,433	n/a
WP.pl	17,926	305
Onet.pl	17,665	274

Top apps	ESTIMATED USERS 000s
OpenFM	2,099
Gadu-Gadu	1,678
Ipla	1,403
Tlen	386
Program TV WP	240

OTT SVOD	ESTIMATED HOMES 000s	DAILY MINUTES PER SUBSCRIBER HH
vod.pl	4,002	40
player.pl	1,382	358
ipla.tv	881	136
vod.tvp.pl	644	154
kinoplex.pl	196	46

Streaming audio	ESTIMATED USERS 000s
Spotify	670
Deezer	278
WIMP	n/a
Rdio	n/a
Google Play	n/a



# Portugal

## SNAPSHOT

62%

2015e ADULT INTERNET  
USERS %

25%

2015e VIDEO AD INVESTMENT  
OF ONLINE DISPLAY

15%

2015e AUTOMATED % OF  
ONLINE DISPLAY

Historic sources: Bareme Internet; MRW  
TGI; Netpanel; MMW Telereport; MMW  
Radioreport; MMW Multimeios

	2013	2014	2015	2016e
Smartphone penetration % of whole 15+ population	40	50	59	65
Tablet penetration % of whole 15+ population	15	28	40	45
<b>Adult media usage (hours per day in decimals)</b>				
Online (average of home users)	0.71	0.78	0.67	0.75
Online (average over whole population)	0.42	0.47	0.41	0.47
TV	5.10	5.07	4.85	5.00
Print n/a				
Radio	3.22	3.27	3.18	3.20
<b>Total</b>	<b>8.74</b>	<b>8.80</b>	<b>8.45</b>	<b>8.67</b>
<b>Adult media usage (percentages)</b>				
Online (from home)	5	5	5	5
TV	58	58	57	58
Print	0	0	0	0
Radio	37	37	38	37
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

### Top websites\*

google.pt  
facebook.com  
google.com  
youtube.com  
sapo.pt

### UNIQUE 000s

5,117  
5,039  
4,989  
4,957  
4,723

### AV MINUTES PER MONTH

143  
1,167  
208  
566  
248



# Russia

## SNAPSHOT

# 81%

2016e URBAN 16-64  
INTERNET USERS %

# 339

2016e E-COMMERCE PER  
ADULT INTERNET USER  
USD

Historic sources: TNS Web Index,  
ComScore, TNS TV Index,  
PaloMARS, Galileo

	2013	2014	2015	2016e
Smartphone penetration % of whole population	35	42	45	47
Tablet penetration % of whole population	15	24	28	29
<b>E-commerce in RUB bn</b>				
<b>(payments, retail, content, games)</b>	<b>800</b>	<b>1,150</b>	<b>1,430</b>	<b>1,500</b>
E-commerce per adult internet user RUB	18,908	25,732	31,066	26,128
<b>Individual 10+ media usage</b>				
<b>(urban; hours per day in decimals)</b>				
Online (desktop only, average for whole population)	2.26	2.16	2.13	2.20
TV	2.61	2.70	2.71	2.80
Print	0.28	0.26	0.25	0.20
Radio	1.99	1.91	1.90	1.85
<b>Total</b>	<b>7.14</b>	<b>7.04</b>	<b>6.99</b>	<b>7.05</b>
<b>Media usage (percentages)</b>				
Online	32	31	30	31
TV	37	38	39	40
Print	4	4	4	3
Radio	28	27	27	26
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

Top websites*	UNIQUES 000s	AV MINUTES PER MONTH
Mail.ru Sites	75,249	16
VK.com	57,759	30
Odnoklassniki	49,157	29
Yandex Sites	66,233	29
Google Sites	55,381	18
Top apps**	ESTIMATED USERS 000s	AV MINUTES PER MONTH (DAILY)
YouTube	10,105	18
VK.com	10,054	36
Google	8,920	3
WhatsApp	8,806	11
Viber	7,451	8

\*comScore, December 2015, urban 6+





# Singapore

## SNAPSHOT

**79%**

2016e ADULT INTERNET USERS %

**656**

2016e E-COMMERCE PER ADULT INTERNET USER USD

Historic sources: We Are Social/ eMarketer; Telmar/3D; SingStat/ Google/Nielsen; Alexa; Netindex

	2013	2014	2015	2016e
Smartphone penetration %	78	87	90	95
Tablet penetration %	42	45	50	54
<b>E-commerce in SGD bn</b>	<b>1.2</b>	<b>1.7</b>	<b>2.5</b>	<b>3.7</b>
E-commerce per adult internet user SGD	345	472	625	925
<b>Adult media usage (hours per day in decimals)</b>				
Online		7.33	7.33	7.45
TV		2.33	2.20	2.10
Print		0.33	0.30	0.27
Radio		0.25	0.25	0.25
<b>Total</b>		<b>10.24</b>	<b>10.08</b>	<b>10.07</b>
<b>Adult media usage (percentages)</b>				
Online		72	73	74
TV		23	22	21
Print		3	3	3
Radio		2	2	2
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

Top websites*	UNIQUE 000s	AV MINUTES PER MONTH
Google Sites	3,849	1,358
Yahoo Sites	3,046	290
Microsoft Sites	2,664	278
Facebook	2,403	604
SPH Digital	1,626	60

### Top apps

EndGods  
Color Switch  
SG Live  
Grab  
WhatsApp

### OTT SVOD

StarHub Go  
Netflix  
Toggle  
HOOQ

### Streaming audio

Spotify  
Guvera  
Deezer  
Lastfm  
8tracks



# Slovak Republic

## SNAPSHOT

**88%**

2016e ADULT INTERNET  
USERS %

**231**

2016e E-COMMERCE PER  
ADULT INTERNET USER  
USD

Historic sources: MML; TNS;  
AIMonitor; TNS PMT

	2013	2014	2015	2016e
Smartphone penetration %	30	60	62	64
Tablet penetration %		16	20	26
<b>E-commerce in EUR bn (excluding travel)</b>	<b>0.6</b>	<b>0.7</b>	<b>0.7</b>	<b>0.8</b>
E-commerce per adult internet user EUR	201	197	203	210
<b>Adult media usage (hours per day in decimals)</b>				
Online	1.50	1.32	1.18	1.25
TV		3.50	3.94	3.85
Print		0.41	0.10	0.09
Radio		2.86	2.29	2.03
<b>Total</b>	<b>1.50</b>	<b>8.09</b>	<b>7.51</b>	<b>7.22</b>
<b>Adult media usage (percentages)</b>				
Online		16	16	17
TV		43	52	53
Print		5	1	1
Radio		35	30	28
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

Top websites	WEEKLY UNIQUES 000s	AV MINUTES PER WEEK
www.azet.sk	2,638	58
www.zoznam.sk	2,265	24
www.sme.sk	1,858	21

Top apps	ESTIMATED USERS 000s
Instagram	300
WhatsApp	
Snapchat	60

Streaming audio	ESTIMATED USERS 000s
Spotify	95
Deezer	n/a



# South Africa

## SNAPSHOT

# 49%

2016e INTERNET PENETRATION  
% OF 16-64S (000S)

# 30

2016e E-COMMERCE PER  
16-64 USER USD

Historic sources:GWI, Worx

	2013	2014	2015	2016e
Smartphone penetration % of phone users		85	85	85
Tablet penetration % of phone users		43	53	53
<b>E-commerce in ZAR bn (excluding travel)</b>		<b>6.0</b>	<b>6.0</b>	<b>8.0</b>
E-commerce per adult internet user ZAR		359	354	471
<b>Adult media usage (hours per day in decimals)</b>				
OOnline (average of users)		4.95	4.92	4.85
Online (average of all 16-64)		2.43	2.41	2.36
TV		2.37	2.34	2.32
Print		0.74	0.69	0.70
Radio		2.08	1.98	2.01
<b>Total</b>		<b>7.61</b>	<b>7.42</b>	<b>7.39</b>
<b>Adult media usage (percentages)</b>				
Online		32	33	32
TV		31	32	31
Print		10	9	9
Radio		27	27	27
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

Top websites	UNIQUE 000s	AV MINUTES PER MONTH
News24	6,204	36
Gumtree.co.za	5,360	17
Timeslive.co.za	2,953	31
iol.co.za	2,746	9
msn.co.za	2,185	37

Top apps	ESTIMATED USER S 000s
WhatsApp	11,251
Facebook	10,620
Google Maps	8,196
YouTube	7,999
Facebook Messenger	7,222

### OTT SVOD

Netflix  
Amazon Video  
Hulu  
HBO Go

### Streaming audio

Google Play Music  
SoundCloud  
Apple Music  
Rdio  
Spotify



# South Korea

## SNAPSHOT

**76%**

2016e ADULT INTERNET  
USERS %

**1,800**

2016e E-COMMERCE  
PER ADULT INTERNET  
USER USD

Historic sources: Korea Communications Commission; Statistics Korea; KISA; Korea Online Shopping Assoc.; Nielsen Korea-click; Akamai; Xaxis; HRC Media Index

	2013	2014	2015	2016e
Smartphone penetration %	80	85	86	87
Tablet penetration %	12	14	18	20
<b>E-commerce in KRW bn (excluding travel)</b>	<b>54,750</b>	<b>58,664</b>	<b>67,463</b>	<b>74,209</b>
E-commerce per adult internet user KRW 000s	1,744	1,799	2,045	2,221
<b>Adult media usage (averaged from monthly)</b>				
Online (average of 12+ users)	3.85	4.18	4.31	4.50
Online (average all 12+)	2.77	3.11	3.23	3.41
TV	3.11	2.83	2.79	2.75
Print	0.49	0.49	0.49	0.49
Radio	1.07	1.07	1.08	1.07
<b>Total</b>	<b>7.44</b>	<b>7.50</b>	<b>7.60</b>	<b>7.72</b>
<b>Adult media usage (percentages)</b>				
Online	37	41	42	44
TV	42	38	37	36
Print	7	7	6	6
Radio	14	14	14	14
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

Top websites	UNIQUES 000s*	AV MINUTES PER MONTH	OTT SVOD	ESTIMATED HOMES 000s	DAILY MINUTES PER SUBSCRIBER HH
naver.com	30,603	329	skbtv.co.kr	2,541	182
daum.net	23,478	161	pooq.co.kr	1,179	327
tistory.com	17,698	11	tving.com	1,137	97
gmarket.co.kr	12,890	24	netflix.com	346	38
11st.co.kr	12,755	22	watcha.net	55	2
Top apps	ESTIMATED USERS 000s**	AV MINUTES PER MONTH	Streaming audio	ESTIMATED USERS 000s	
Google Play Store	29,283	70	Melon	7,099	
Kakao Talk	29,039	809	Genie (KT Music)	1,769	
YouTube	20,407	505	Mnet	1,325	
Naver (search)	20,170	703	Bugs	1,035	
Google (search)	15,803	44	Soribada	320	



# Spain

## SNAPSHOT

### 75%

2016e + INTERNET  
USERS %

### 585

2016e E-COMMERCE PER  
ADULT INTERNET USER USD

### 18%

2015e VIDEO AD INVESTMENT  
OF ONLINE DISPLAY

### 13%

2015e AUTOMATED % OF  
ONLINE DISPLAY

Historic sources: EGM; CNMC; GWI;  
comScore

2013 2014 2015 2016e

Smartphone penetration % of all 14+	37	59	70	75
Tablet penetration % of all 14+	15	26	32	35
<b>E-commerce in EUR bn (excluding travel)</b>	<b>8.4</b>	<b>9.7</b>	<b>12.6</b>	<b>16.0</b>
E-commerce per 16+ internet user EUR	330	353	436	527
<b>Adult media usage (hours per day in decimals)</b>				
Online (average per online user)	1.48	1.65	1.69	1.74
Online (average for whole 16+ population)	0.96	1.13	1.21	1.30
TV	4.07	3.98	3.98	3.94
Print	1.10	1.01	0.92	0.84
Radio	1.86	1.82	1.77	1.73
<b>Total</b>	<b>8.00</b>	<b>7.94</b>	<b>7.88</b>	<b>7.82</b>
<b>Adult media usage (percentages)</b>				
Online	12	14	15	17
TV	51	50	51	50
Print	14	13	12	11
Radio	23	23	22	22
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

Top websites	UNIQUES 000s	AV MINUTES PER MONTH	App usage	EsTIMATED USERS 000s	AV MINUTES PER MONTH
Google	21,952	170	Spotify	3,512	84
YouTube	20,734	522	Shazam	3,360	10
El Pais	16,629	24	Marca	1,652	125
Facebook	15,180	322	Elmundo.es	317	96
El Mundo	14,654	30	Expansión	83	62
Top apps	ESTIMATED USERS 000s		OTT SVOD	ESTIMATED HOMES 000s	
WhatsApp	15,536		Wuaki.TV	1,400	
Facebook	15,399		Yomvi	700	
YouTube	12,331		Vodafone	500	
Google Maps	9,452		TV Orange	150	
Facebook Messenger	7,409		TotalChannel	100	
			Streaming audio	ESTIMATED USERS 000s	
			Spotify	6,000	
			SounCloud	1,300	
			GoEar	300	
			Deezer	100	



# Sweden

## SNAPSHOT

# 91%

2016e 16-80 INTERNET  
USERS %

# 947

2016e E-COMMERCE PER  
16-80 INTERNET USER USD

Historic sources:  
Historic sources: Orvesto Konsument;  
E-barometern; KIA-index; Twitter;  
Google; Internetstatistik; IRM; iis.se

	2013	2014	2015	2016e
Smartphone penetration %	65	74	76	78
Tablet penetration %	36	53	55	58
<b>E-commerce in SEK bn (excluding travel)</b>	<b>37.3</b>	<b>42.9</b>	<b>50.0</b>	<b>56.0</b>
E-commerce per adult internet user SEK	5,468	6,173	7,194	8,076
<b>Adult media usage (averaged from monthly)</b>				
Online	1.12	1.75	1.80	2.09
TV	1.82	1.95	2.10	2.35
Print	0.45	0.44	0.42	0.66
Radio	0.93	0.94	0.94	1.49
<b>Total</b>	<b>4.32</b>	<b>5.08</b>	<b>5.26</b>	<b>6.58</b>
<b>Adult media usage (percentages)</b>				
Online	26	34	34	32
TV	42	38	40	36
Print	10	9	8	10
Radio	22	19	18	23
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

Top websites	UNIQUES 000s	AV MINUTES PER VISIT
aftonbladet.se	5,244	13
expressen.se	3,400	8
blocket.se	2,296	-
hitta.se	2,046	-
dn.se	1,808	12
OTT SVOD	WEEKLY HOMES REACH %	
Netflix	13	
SVT play	9	
Viaplay	5	
TV4 play	3	

Top apps	Penetration % 2015
Chrome	88
Facebook	76
Kamera	71
BankID	65
Gmail	65
Messenger	53
YouTube	53
Instagram, Maps (47%)	47
Maps	47
Hangout	41
Spotify	41
Snapchat	35
Tradera	35

Streaming audio	ESTIMATED USERS 000s
Spotify (paid)	2,385
Spotify (free)	1,431



# Taiwan

## SNAPSHOT

### 78%

2016e 12+ INTERNET USERS %

### 2,482

2016e E-COMMERCE PER 12+ INTERNET USER USD

### 15%

2015e VIDEO AD INVESTMENT OF ONLINE DISPLAY

### 3%

2015e AUTOMATED % OF ONLINE DISPLAY

Historic sources: Nielsen; UDN.com; twinc.net.tw; comScore; DMA

	2013	2014	2015	2016e
Smartphone penetration % of all 12+	27	65	71	76
Tablet penetration % of all 12+	16	29	33	35
<b>E-commerce in NTD bn (excluding travel)</b>	<b>637</b>	<b>883</b>	<b>1,069</b>	<b>1,362</b>
E-commerce per 12+ internet user NTD	38,601	54,422	65,988	82,545
<b>Adult media usage (hours per day in decimals)</b>				
Online (average for whole population 12+)	2.87	2.75	3.00	3.00
TV	2.65	2.48	2.51	2.50
Print	0.61	0.33	0.34	0.35
Radio	0.69	0.65	0.68	0.64
<b>Total</b>	<b>6.82</b>	<b>6.21</b>	<b>6.52</b>	<b>6.49</b>
<b>Adult media usage (percentages)</b>				
Online	42	44	46	46
TV	39	40	38	39
Print	9	5	5	5
Radio	10	11	10	10
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

Top websites	UNIQUES 000s*	AV MINUTES PER MONTH	OTT SVOD	ESTIMATED HOMES 000s	DAILY MINUTES PER SUBSCRIBER HH
Yahoo.com.tw	12,820	272	CHT MOD	1,298	30
Google.com.tw	10,579	83			
Facebook	9,483	439			
Google.com.tw	8,381	69			
Yahoo	7,699	21			
Top apps	ESTIMATED USERS 000s	AV MINUTES PER MONTH	Streaming audio	ESTIMATED USERS 000s	
AppleDaily Taiwan	1,183	177	Shazam	422	
104	452	26	SoundHound	269	
Shazam	422	7	Spotify	229	
Twitch	293	433	SoundCloud	100	
SoundHound	269	5	TuneIn Radio	91	

\*three-month average 4Q 2015



# Thailand

## SNAPSHOT

**62%**

2016e INTERNET  
USERS %

**34%**

2015e VIDEO AD  
INVESTMENT OF  
ONLINE DISPLAY

**5%**

2015e AUTOMATED %  
OF ONLINE DISPLAY

Historic sources: World Bank; DAAT;  
Truehits, Comscore

2013 2014 2015 2016e

Smartphone penetration % of whole population			70	75
Tablet penetration % of whole population			18	25
<b>Adult media usage (hours per day in decimals)</b>				
Online (average per online user)				5 to 6
Online (average for whole population)				3 to 3.70
TV				1 to 2
Print				<0.5
Radio				0.5 to 1
<b>Total</b>				<b>n/a</b>

Top websites	UNIQUES 000s	AV MINUTES PER MONTH	OTT SVOD	ESTIMATED HOMES 000s	DAILY MINUTES PER SUBSCRIBER HH
Google	13,895	281	LINE TV	100,000	7
Facebook	11,461	335			
LINE	5,516	191			
Sanook	5,086	115			
Kapook	4,855	97			
Top apps	ESTIMATED USERS 000s	AV MINUTES PER MONTH	Streaming audio	ESTIMATED USERS 000s	
LINE	38,000	600	Joox	9,000	
Facebook	34,000	900	LINE Music	9,000	
YouTube	30,000	1,200			





# Turkey

## SNAPSHOT

**57%**

2016e INTERNET  
USERS %

**221**

2015e E-COMMERCE PER  
ADULT INTERNET USER USD

Historic sources:  
Historic sources: TGI; Gemius; World  
Bank/ITU; Tubisad/Ecommerce News;  
GroupM

	2013	2014	2015	2016e
Smartphone penetration %	14	29	36	40
Tablet penetration %	2	3	6	8
<b>E-commerce in TRL bn (including travel)</b>	<b>14.0</b>	<b>18.9</b>	<b>25.0</b>	<b>30.0</b>
E-commerce per adult internet user TRL	391	473	581	652
<b>Adult media usage (hours per day in decimals)</b>				
Online (average of users)	2.40	2.54	2.73	2.80
Online (average of whole population)	1.11	1.30	1.48	1.60
TV	2.90	3.10	3.27	3.36
Print	0.46	0.44	0.42	0.40
Radio	1.05	1.05	0.99	0.97
<b>Total</b>	<b>5.52</b>	<b>5.89</b>	<b>6.16</b>	<b>6.34</b>
<b>Adult media usage (percentages)</b>				
Online	20	22	24	25
TV	53	53	53	53
Print	8	7	7	6
Radio	19	18	16	15
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

Top websites	UNIQUES 000s	AV MINUTES PER MONTH
live.com	133,334	6.1
google.com.tr	32,005	2.6
facebook.com	28,502	16.7
youtube.com	25,462	22.9
yandex.com.tr	17,674	2.2

Top apps	ESTIMATED USERS 000s
Shazam	1,409
Mackolik	1,298
Spotify	771
Sahadan	437
Bloomberg	361

OTT SVOD	ESTIMATED HOMES 000s
Digiturk	3,000
Dsmart	1,100
Tivibu	300
Netflix	7
Filbox	3

Streaming audio	ESTIMATED USERS 000s
Spotify	850
Karnaval	500
Deezer	450
Apple Music	n/a



# United Kingdom

## SNAPSHOT

### 90%

2016e 16+ INTERNET USERS %

### 3,715

2016e E-COMMERCE PER ADULT INTERNET USER USD

### 23%

2015e VIDEO AD INVESTMENT OF ONLINE DISPLAY

### 52%

2015e AUTOMATED % OF ONLINE DISPLAY

Historic sources: IMRG Cap Gemini; ONS; Ofcom; IPA Touchpoints; comScore; TGI

\*Averaged Mon-Fri and Sa-Su

2013 2014 2015 2016e

Smartphone penetration % of all 16+ (q1)	51	61	66	70
Tablet penetration % of households (q1)	22	44	54	57
<b>E-commerce in GBP bn (including travel)</b>	<b>91</b>	<b>104</b>	<b>114</b>	<b>126</b>
E-commerce per 16+ internet user GBP	2,047	2,273	2,451	2,666
<b>Adult media usage (hours per day* in decimals)</b>				
Online		2.12	2.52	3.32
TV	3.87	3.45	3.62	3.61
Print		0.37	0.35	0.33
Radio		1.52	1.60	1.67
<b>Total</b>	<b>3.87</b>	<b>7.46</b>	<b>8.09</b>	<b>8.94</b>
<b>Adult media usage (percentages)</b>				
Online		28	31	37
TV		46	45	40
Print		5	4	4
Radio		20	20	19
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

Top websites	UNIQUES 000s	AV MIN PER VISITOR	AV MIN PER VISIT
Google.co.uk	43,914	113	2
Google.com	40,677	104	3
Facebook.com	39,994	881	8
Youtube.com	41,911	602	24
BBC.co.uk	35,750	45	3
Amazon.co.uk	32,179	57	5

Top app genres	USERS (000) LAST 4 WEEKS
Games	16,475
Social Networking	14,906
Instant Messaging	12,394

OTT SVOD	ESTIMATED HOMES 000s	DAILY MINS BY VIEWER
Netflix	3,611	51
Amazon Prime	1,795	39
Now TV	951	n/a
Blinkbox	493	20

Streaming audio	ESTIMATED USERS 000s
Spotify	9,184
SoundCloud	2,589
Google Play Music	2,259
Tune in Radio	1,542
Last FM	1,463



# Ukraine

## SNAPSHOT

**66%**

2016e ADULT INTERNET USERS %

**41**

2016e E-COMMERCE PER ADULT INTERNET USER USD

**27%**

2015e VIDEO AD INVESTMENT OF ONLINE DISPLAY

**4%**

2015e AUTOMATED % OF ONLINE DISPLAY

Historic sources: TNS, GfK, Nielsen, Gemius

	2013	2014	2015	2016e
Smartphone penetration %	14	24	28	30
Tablet penetration %	2	7	10	12
<b>E-commerce in UAH bn (excluding travel)</b>	<b>13.9</b>	<b>16.8</b>	<b>21.2</b>	<b>26.9</b>
E-commerce per adult internet user UAH	824	844	882	1,120
<b>Adult media usage (hours per day in decimals)</b>				
Online	0.99	1.08	1.48	1.70
TV	3.67	4.45	4.15	4.15
Print	0.29	0.26	0.20	0.19
Radio	0.60	0.61	0.60	0.60
<b>Total</b>	<b>5.55</b>	<b>6.40</b>	<b>6.43</b>	<b>6.64</b>
<b>Adult media usage (percentages)</b>				
Online	18	17	23	26
TV	66	70	65	63
Print	5	4	3	3
Radio	11	9	9	9
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

### Top websites

### UNIQUES 000s

### AV MINUTES PER MONTH

google.com	14,687	507
vk.com	12,858	413
mail.ru	12,020	133
youtube.com	11,804	93
yandex.ua	11,434	193



# USA

## SNAPSHOT

# 77%

2016e PC INTERNET  
PENETRATION % OF 15+

# 1,962

2016e E-COMMERCE  
PER 15+ PC INTERNET  
USER USD

Historic sources:  
Historic sources: Nielsen; eMarketer;  
US Dept. of Commerce/Census  
Bureau; Netflix

	2013	2014	2015	2016e
HH PC with internet %	75	76	77	73
HH Smartphone Penetration %				77
HH Tablet Penetration %	16	27	44	52
HH Multimedia Device %	0	0	14	18
HH Smart TV Penetration %	0	0	13	15
HH Netflix Penetration %	21	26	31	35
<b>Retail e-commerce in USD bn</b>	<b>261</b>	<b>298</b>	<b>341</b>	<b>385</b>
Retail e-commerce per 15+ PC with internet USD	1,334	1,488	1,674	1,962
All retail sales USD bn	4,469	4,623	4,785	4,953
Retail e-commerce % of all retail	6%	6%	7%	8%
Retail m-commerce USD bn	42	56	75	96
<b>Adult media usage (hours per day in decimals)</b>				
Online	1.53	2.18	2.40	2.52
TV	4.88	4.68	4.58	4.43
Print		0.52	0.48	0.47
Radio	1.92	1.85	1.82	1.78
<b>Total</b>	<b>8.33</b>	<b>9.23</b>	<b>9.28</b>	<b>9.20</b>
<b>Adult media usage (percentages)</b>				
Online	18	24	26	27
TV	59	51	49	48
Print	0	6	5	5
Radio	23	20	20	19
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

Top websites	UNIQUES 000s age 2+	MINUTES PER MONTH (M)	AV DAILY MINUTES PER UNIQUE
Google Sites	248,385	176,685	23
Facebook	218,640	251,369	38
Yahoo Sites	204,885	54,288	9
Amazon Sites	198,719	19,772	3
Microsoft Sites	191,507	26,932	5
AOL, Inc.	181,209	10,696	2
Comcast NBC Universal	154,848	8,629	2
CBS Interactive	150,669	5,150	1
Mode Media	143,788	2,855	1
Apple Inc.	142,396	74,847	17

Top music sites	UNIQUES 000S AGE 2+	MINUTES PER MONTH (M)	AV. DAILY MINUTES PER UNIQUE
Pandora.com	89,702	95,557	35
Vevo	50,034	2,710	2
Spotify	49,364	19,849	13
iHeartRadio Network	48,395	12,269	8
Yahoo Music	12,915	64	0.2

Top video sites	UNIQUES 000S AGE 2+	MINUTES PER MONTH (M)	AV. DAILY MINUTES PER UNIQUE
Google Sites	177,220	54,303	10.1
LiveRail	151,561	1,351	0.3
AOL, Inc.	144,979	4,240	1.0
BrightRoll Platform	135,232	1,388	0.3
SpotX Video Advertising Platform	95,989	833	0.3
Facebook	90,601	16,807	6.1
Specific Media	87,513	300	0.1
Altitude Digital	75,080	319	0.1
Yahoo Sites	74,024	10,503	4.7
RockYou.com	67,589	751	0.4
Netflix Inc	20,208	19,011	30.9



# Venezuela

## SNAPSHOT

**59%**

2016e ADULT INTERNET  
USERS %

**15%**

2015e AD INVESTMENT  
OF ONLINE DISPLAY

**5%**

2015e AUTOMATED % OF  
ONLINE DISPLAY

Historic sources: comScore; AGB  
Nielsen; GSMA

	2013	2014	2015	2016e
Smartphone penetration %				30
Tablet penetration %				n/a
<b>Adult media usage (hours per day in decimals)</b>				
Online		1.01	1.03	1.03
TV	1.32	1.27	1.23	1.22
Print				
Radio				
<b>Total</b>	<b>1.32</b>	<b>2.28</b>	<b>2.26</b>	<b>2.25</b>

### Top websites

### UNIQUES 000s

### AV DAILY MINUTES

Google Sites	10,805	11
Facebook	8,991	19
Microsoft Sites	5,419	7
MercadoLibre	4,869	10
Yahoo Sites	4,620	4



# Vietnam

## SNAPSHOT

65%

2016e ADULT INTERNET  
USERS %

20

2016e E-COMMERCE  
PER 15+ USD

Historic sources: comScore; Internet  
Live Stats; Nielsen; compare.vn

	2013	2014	2015	2016e
Smartphone penetration %	24	30	36	44
Tablet penetration %			24	28
<b>Adult media usage (hours per day in decimals)</b>				
Online (average for whole population)	1.35	1.08	1.05	1.20
TV	2.10		1.80	1.75
Print	0.80		0.67	0.60
Radio	0.20		0.10	0.12
<b>Total</b>	<b>4.45</b>	<b>1.08</b>	<b>3.62</b>	<b>3.67</b>
<b>Adult media usage (percentages)</b>				
Online	30		29	33
TV	47		50	48
Print	18		18	16
Radio	4		3	3
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

Top websites	UNIQUE 000s	AV MINUTES PER USAGE DAY
zing.vn	15,519	8.60
coccoc.com	12,271	2.20
google.com	9,908	4.20
nhaccuatui.com	9,274	3.70
facebook.com	9,003	42.10

Top apps	ESTIMATED USERS 000s
SoundCloud	159
Shazam	129
SpeedTest	126
Where's my water (2)	87
Where's my water	50

Video	ESTIMATED VIEWERS 000s	MINUTES PER VIEWER
YouTube.com	14,145	433
QuizGroup@Youtube	11,743	46.4
Fullscreen	6,831	18.3
Facebook	6,521	110.1
Bluseed.TV	6,511	3.9

Streaming audio	ESTIMATED USERS 000s
Warner Music	5,034
nhaccuatui.com	2,077

# Appendices

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# Digital Ad Investment USD m

## (from This Year Next Year December 2015)

	2013	2014	2015f	2016f		2013	2014	2015f	2016f
<b>NORTH AMERICA</b>	<b>41,506</b>	<b>46,539</b>	<b>51,883</b>	<b>56,016</b>	<b>ASIA-PACIFIC (all)</b>	<b>31,328</b>	<b>40,036</b>	<b>50,908</b>	<b>62,792</b>
Canada	2,643	2,987	3,435	3,813	Australia	2,939	3,414	3,876	4,381
USA	38,862	43,552	48,448	52,203	Bangladesh	2	4	9	19
					India	382	516	706	947
<b>LATIN AMERICA</b>	<b>1,930</b>	<b>1,948</b>	<b>3,005</b>	<b>3,768</b>	Japan	7,631	8,556	9,639	10,454
Argentina	333	481	673	761	New Zealand	305	382	420	428
Brazil	925	700	1,451	1,957	Pakistan	6	11	14	16
Chile	92	115	132	151	Sri Lanka	5	6	7	8
Colombia	69	83	85	102					
Dominican Republic					<b>NORTH ASIA</b>	<b>19,725</b>	<b>26,627</b>	<b>35,455</b>	<b>45,436</b>
Ecuador					China	17,268	24,106	32,761	42,589
Mexico	399	471	565	678	Hong Kong	335	414	522	614
Peru	31	38	47	64	South Korea	1,706	1,615	1,569	1,538
Puerto Rico	16	23	28	32	Taiwan	416	492	604	695
Uruguay	16	19	22	23					
Venezuela	48	18	2	1	<b>ASEAN</b>	<b>334</b>	<b>519</b>	<b>781</b>	<b>1,104</b>
					Indonesia	95	136	193	269
<b>WESTERN EUROPE</b>	<b>23,952</b>	<b>26,503</b>	<b>29,445</b>	<b>32,553</b>	Malaysia	89	125	161	205
Austria	519	580	661	727	Philippines				
Belgium	395	434	447	473	Singapore				
Denmark	712	794	873	950	Thailand	118	170	226	286
Finland	257	284	312	343	Vietnam	31	88	202	343
France	2,996	3,108	3,264	3,421					
Germany	4,190	4,466	4,913	5,454	<b>MIDDLE EAST &amp; AFRICA</b>	<b>1,104</b>	<b>1,470</b>	<b>1,594</b>	<b>1,706</b>
Greece					Egypt				
Ireland	155	176	195	211	GCC and Pan Arab				
Italy	1,571	1,690	1,860	2,018	Israel	1,000	1,330	1,400	1,450
Netherlands	1,347	1,499	1,605	1,732	Jordan				
Norway	643	693	754	828	Kenya				
Portugal	76	91	100	108	Lebanon				
Spain	962	1,027	1,119	1,231	Nigeria	33	55	86	121
Sweden	1,066	1,229	1,433	1,629	South Africa	71	85	108	135
Switzerland	638	718	778	840					
UK	8,427	9,713	11,131	12,590	<b>WORLD</b>	<b>102,436</b>	<b>119,421</b>	<b>139,981</b>	<b>160,173</b>
<b>CENTRAL &amp; EASTERN EUROPE</b>	<b>2,618</b>	<b>2,923</b>	<b>3,146</b>	<b>3,339</b>					
Bulgaria	16	17	19	21					
Croatia	16	18	21	21					
Czech Republic	140	145	143	139					
Estonia	14	17	18	21					
Hungary	114	135	146	155					
Latvia	13	11	13	14					
Lithuania	12	14	16	16					
Montenegro	2	3	3	4					
Poland	615	646	677	710					
Romania	33	39	45	50					
Russia	1,079	1,274	1,373	1,451					
Serbia	15	17	19	21					
Slovak Republic	64	73	79	84					
Slovenia	13	13	14	15					
Turkey	385	411	460	509					
Ukraine	87	90	101	109					



# Digital Ad Investment Change Year-On-Year %

	2013	2014f	2015f	2016f		2013	2014f	2015f	2016f
<b>NORTH AMERICA</b>	<b>9.8</b>	<b>12.1</b>	<b>11.5</b>	<b>8.0</b>	<b>ASIA-PACIFIC (all)</b>	<b>28.7</b>	<b>27.8</b>	<b>27.2</b>	<b>23.3</b>
Canada	14.3	13.0	15.0	11.0	Australia	20.8	16.2	13.5	13.0
USA	9.5	12.1	11.2	7.8	Bangladesh	30.0	169.2	114.3	100.0
<b>LATIN AMERICA</b>	<b>30.9</b>	<b>1.0</b>	<b>54.2</b>	<b>25.4</b>	India	30.0	35.0	37.0	34.1
Argentina	58.9	44.4	39.8	13.0	Japan	8.1	12.1	12.7	8.5
Brazil	26.6	-24.2	107.1	34.9	New Zealand	28.7	25.1	10.0	1.9
Chile	22.3	24.7	15.2	14.0	Pakistan	0.2	100.0	25.0	13.3
Colombia	45.9	20.1	2.0	20.0	Sri Lanka	15.4	13.3	17.6	18.0
Dominican Republic					<b>NORTH ASIA</b>	<b>40.0</b>	<b>35.0</b>	<b>33.2</b>	<b>28.1</b>
Ecuador					China	46.1	39.6	35.9	30.0
Mexico	42.8	18.0	20.0	20.0	Hong Kong	32.9	23.7	26.0	17.8
Peru	55.0	22.0	24.3	36.2	South Korea	2.5	-5.3	-2.8	-2.0
Puerto Rico	25.5	43.8	21.7	14.3	Taiwan	17.9	18.3	22.8	15.0
Uruguay	33.3	18.8	15.8	4.5	<b>ASEAN</b>	<b>57.1</b>	<b>55.6</b>	<b>50.4</b>	<b>41.3</b>
Venezuela	-44.8	-63.7	-89.0	-65.7	Indonesia	48.6	43.7	41.3	39.6
<b>WESTERN EUROPE</b>	<b>10.0</b>	<b>10.7</b>	<b>11.1</b>	<b>10.6</b>	Malaysia	40.0	40.2	28.0	28.0
Austria	21.1	11.9	13.8	10.0	Philippines				
Belgium	14.0	10.0	3.0	5.7	Singapore				
Denmark	10.7	11.5	10.0	8.8	Thailand	91.9	44.0	33.0	26.7
Finland	7.5	10.8	9.9	10.0	Vietnam	35.0	180.0	130.0	70.0
France	3.4	3.8	5.0	4.8	<b>MIDDLE EAST &amp; AFRICA</b>	<b>6.5</b>	<b>33.2</b>	<b>8.4</b>	<b>7.0</b>
Germany	8.0	6.6	10.0	11.0	Egypt				
Greece					GCC and Pan Arab				
Ireland	22.9	13.9	11.0	7.9	Israel	3.8	33.0	5.3	3.6
Italy	2.7	7.6	10.0	8.5	Jordan				
Netherlands	8.4	11.3	7.0	8.0	Kenya				
Norway	16.2	7.8	8.8	9.8	Lebanon				
Portugal	14.8	18.9	10.0	8.0	Nigeria	103.1	69.2	54.5	41.2
Spain	1.8	6.7	9.0	10.0	South Africa	23.0	19.6	27.0	25.0
Sweden	14.3	15.3	16.6	13.6	<b>WORLD</b>	<b>15.6</b>	<b>16.6</b>	<b>17.2</b>	<b>14.4</b>
Switzerland	12.2	12.6	8.4	7.8					
UK	14.1	15.3	14.6	13.1					
<b>CENTRAL &amp; EASTERN EUROPE</b>	<b>21.9</b>	<b>11.7</b>	<b>7.6</b>	<b>6.1</b>					
Bulgaria	-0.7	10.2	10.0	10.0					
Croatia	15.0	11.3	17.2	0.7					
Czech Republic	5.0	4.1	-1.5	-3.0					
Estonia	10.4	20.8	6.3	13.5					
Hungary	14.1	18.7	8.1	5.9					
Latvia	6.1	-9.7	11.0	9.0					
Lithuania	14.7	17.9	8.8	3.4					
Montenegro	20.0	38.9	28.0	9.4					
Poland	6.4	5.0	4.8	5.0					
Romania	22.7	18.5	15.6	12.4					
Russia	27.4	18.0	7.8	5.7					
Serbia	16.7	14.3	9.0	10.0					
Slovak Republic	46.3	13.3	8.8	5.4					
Slovenia	0.0	4.2	4.0	7.7					
Turkey	29.4	6.6	12.0	10.7					
Ukraine	201.5	3.2	11.9	7.9					

# Digital Share Of All Media Investment

	2013	2014	2015f	2016f		2013	2014	2015f	2016f
<b>NORTH AMERICA</b>	<b>23.8</b>	<b>25.9</b>	<b>28.4</b>	<b>29.9</b>	<b>ASIA-PACIFIC (all)</b>	<b>21.7</b>	<b>26.2</b>	<b>31.5</b>	<b>36.2</b>
Canada	28.0	31.8	36.0	39.8	Australia	32.3	37.1	40.7	44.1
USA	23.5	25.6	28.0	29.3	Bangladesh	0.6	1.4	2.6	4.6
<b>LATIN AMERICA</b>	<b>6.8</b>	<b>6.5</b>	<b>9.3</b>	<b>11.0</b>	India	6.5	7.8	9.4	10.9
Argentina	14.1	17.3	18.4	19.9	Japan	21.6	23.3	25.7	27.1
Brazil	6.1	4.3	8.3	10.5	New Zealand	21.8	25.9	28.3	28.7
Chile	9.3	12.4	14.7	17.1	Pakistan	0.8	1.5	1.6	1.7
Colombia	3.9	4.2	4.0	4.4	Sri Lanka	3.0	3.0	3.2	3.4
Dominican Republic					<b>NORTH ASIA</b>	<b>24.6</b>	<b>31.2</b>	<b>38.8</b>	<b>45.9</b>
Ecuador					China	25.5	33.1	41.8	49.8
Mexico	9.3	10.7	12.2	14.0	Hong Kong	13.6	16.1	20.1	23.0
Peru	4.7	5.5	7.1	9.2	South Korea	20.7	19.2	18.1	17.3
Puerto Rico	2.9	4.5	5.7	6.4	Taiwan	24.3	28.6	34.8	36.1
Uruguay	6.6	7.5	8.2	8.4	<b>ASEAN</b>	<b>2.9</b>	<b>4.3</b>	<b>6.0</b>	<b>7.8</b>
Venezuela	12.9	15.0	17.5	18.5	Indonesia	5.4	6.9	9.2	11.9
<b>WESTERN EUROPE</b>	<b>27.6</b>	<b>29.8</b>	<b>32.4</b>	<b>34.6</b>	Malaysia	7.3	10.7	13.9	17.1
Austria	14.0	15.2	16.2	17.2	Philippines				
Belgium	18.3	20.1	20.8	21.9	Singapore				
Denmark	39.4	43.1	46.2	48.8	Thailand	4.0	5.9	7.8	9.5
Finland	19.8	22.5	25.4	28.2	Vietnam	2.2	5.0	10.1	14.8
France	25.5	26.9	28.5	29.8	<b>MIDDLE EAST &amp; AFRICA</b>	<b>6.5</b>	<b>8.5</b>	<b>9.1</b>	<b>9.4</b>
Germany	23.4	24.7	26.7	29.3	Egypt				
Greece					GCC and Pan Arab				
Ireland	19.9	22.3	24.0	25.2	Israel	18.1	24.3	25.6	26.6
Italy	20.2	21.9	23.8	25.3	Jordan				
Netherlands	34.4	37.5	40.0	42.5	Kenya				
Norway	33.2	36.6	40.1	43.8	Lebanon				
Portugal	14.0	15.3	16.2	16.8	Nigeria	4.0	7.9	13.0	14.5
Spain	21.0	21.1	21.8	22.8	South Africa	2.8	3.2	4.0	5.0
Sweden	37.9	42.4	47.8	52.4	<b>WORLD</b>	<b>22.1</b>	<b>24.8</b>	<b>28.1</b>	<b>30.8</b>
Switzerland	17.1	19.9	21.9	23.6					
UK	40.1	43.2	46.1	48.7					
<b>CENTRAL &amp; EASTERN EUROPE</b>	<b>21.7</b>	<b>23.6</b>	<b>26.2</b>	<b>27.0</b>					
Bulgaria	5.8	6.2	6.5	7.0					
Croatia	8.8	9.8	11.3	11.4					
Czech Republic	21.4	21.8	20.8	20.0					
Estonia	17.3	20.0	20.3	22.0					
Hungary	23.6	25.9	27.1	28.2					
Latvia	15.9	14.1	15.3	16.1					
Lithuania	11.4	13.4	14.2	14.3					
Montenegro	6.4	8.8	11.2	12.6					
Poland	31.5	32.2	32.7	33.3					
Romania	10.7	12.2	13.2	13.8					
Russia	21.9	24.9	30.8	31.9					
Serbia	9.2	10.3	11.0	12.0					
Slovak Republic	22.9	25.6	26.9	27.5					
Slovenia	11.1	12.3	13.1	13.4					
Turkey	19.5	19.9	21.0	22.0					
Ukraine	18.9	24.3	28.9	29.4					

# Digital Ad Investment Per User USD

	2013	2014f	2015f	2016f		2013	2014f	2015f	2016f
<b>NORTH AMERICA</b>	<b>191</b>	<b>209</b>	<b>229</b>	<b>255</b>	<b>ASIA-PACIFIC (all)</b>	<b>33</b>	<b>35</b>	<b>39</b>	<b>44</b>
Canada	121	136	149	162	Australia	196	220	239	270
USA	199	217	238	266	Bangladesh				
<b>LATIN AMERICA</b>	<b>12</b>	<b>10</b>	<b>14</b>	<b>17</b>	India	2	2	2	2
Argentina	13	18	23	26	Japan	75	84	93	100
Brazil	10	7	13	16	New Zealand				
Chile		17	18	19	Pakistan				
Colombia					Sri Lanka				
Dominican Republic					<b>NORTH ASIA</b>				
Ecuador					China	38	49	63	77
Mexico	9	10	11	12	Hong Kong	74	94	121	139
Peru					South Korea	54	50	48	46
Puerto Rico					Taiwan	25	30	37	42
Uruguay					<b>ASEAN</b>				
Venezuela		2	0	0	Indonesia		2	2	3
<b>WESTERN EUROPE</b>	<b>98</b>	<b>104</b>	<b>112</b>	<b>121</b>	Malaysia	5	6	7	8
Austria	98	98	110	116	Philippines				
Belgium	59	65	50	53	Singapore				
Denmark	175	189	207	220	Thailand	4	5	6	7
Finland	79	81	88	96	Vietnam	1	2	5	7
France	71	72	74	77	<b>MIDDLE EAST &amp; AFRICA</b>				
Germany	81	80	88	97	Egypt				
Greece					GCC and Pan Arab				
Ireland	47	52	57	61	Israel				
Italy	63	65	68	70	Jordan				
Netherlands	107	117	124	133	Kenya				
Norway	190	189	204	224	Lebanon				
Portugal	14	17	18	19	Nigeria				
Spain	38	37	39	41	South Africa		5	6	8
Sweden	156	177	206	235	<b>WORLD</b>	<b>60</b>	<b>61</b>	<b>65</b>	<b>69</b>
Switzerland									
UK	190	212	239	266					
<b>CENTRAL &amp; EASTERN EUROPE</b>	<b>20</b>	<b>20</b>	<b>20</b>	<b>20</b>					
Bulgaria									
Croatia									
Czech Republic	21	21	21	20					
Estonia									
Hungary	24	27	29	30					
Latvia	10	9	10	11					
Lithuania	8	9	10	10					
Montenegro									
Poland	29	30	31	29					
Romania									
Russia	26	29	30	25					
Serbia									
Slovak Republic	23	22	22	22					
Slovenia									
Turkey	11	10	11	11					
Ukraine	5	5	4	5					

# E-commerce Per USD

	2013	2014	2015	2016f		2013	2014	2015	2016f
<b>NORTH AMERICA</b>					<b>ASIA-PACIFIC (all)</b>				
Canada	714	834	927	1,043	Australia	728	766	1,034	1,328
USA	1,334	1,488	1,674	1,962	Bangladesh				
					India	67	63	61	89
<b>LATIN AMERICA</b>					Japan	0	561	648	732
Argentina	48	73	102	112	New Zealand				
Brazil	81	95	90	96	Pakistan				
Chile		243	222	206	Sri Lanka				
Colombia									
Dominican Republic					<b>NORTH ASIA</b>				
Ecuador					China	632	870	1,141	1,252
Mexico	172	207	224	245	Hong Kong				
Peru					South Korea	1,413	1,458	1,657	1,800
Puerto Rico					Taiwan	1,161	1,636	1,984	2,482
Uruguay									
Venezuela					<b>ASEAN</b>				
					Indonesia		19	36	60
<b>WESTERN EUROPE</b>					Malaysia				
Austria					Philippines				
Belgium					Singapore	245	335	443	656
Denmark	2,120	2,449	3,074	3,266	Thailand				
Finland	2,577	2,119	2,324	2,451	Vietnam				
France	1,301	1,449	1,627	1,740					
Germany	701	734	818	828	<b>MIDDLE EAST &amp; AFRICA</b>				
Greece					Egypt				
Ireland	1,529	1,715	1,919	2,238	GCC and Pan Arab				
Italy	288	317	354	391	Israel				
Netherlands	584	749	1,017	1,184	Jordan				
Norway	912	1,011	1,189	1,397	Kenya				
Portugal					Lebanon				
Spain	363	388	480	580	Nigeria				
Sweden	641	724	844	947	South Africa		23	23	30
Switzerland									
UK	2,853	3,168	3,416	3,715	<b>Mean</b>	<b>571</b>	<b>644</b>	<b>727</b>	<b>777</b>
					<b>Median</b>	<b>473</b>	<b>388</b>	<b>480</b>	<b>656</b>
<b>CENTRAL &amp; EASTERN EUROPE</b>									
Bulgaria									
Croatia									
Czech Republic	264	301	331	345					
Estonia									
Hungary	157	194	247	307					
Latvia									
Lithuania									
Montenegro									
Poland	310	319	378	360					
Romania									
Russia	245	333	403	339					
Serbia									
Slovak Republic	221	216	223	231					
Slovenia									
Turkey	133	161	198	222					
Ukraine	30	31	32	41					

# Total E-commerce in USD

## (Billions)


	2013	2014f	2015f	2016f		2013	2014	2015	2016f
<b>NORTH AMERICA</b>					<b>ASIA-PACIFIC (all)</b>				
Canada	16	18	21	25	Australia	11	12	17	22
USA	261	298	341	385	Bangladesh				
					India	13	16	21	38
<b>LATIN AMERICA</b>					Japan	0	57	67	77
Argentina	1	2	3	3	New Zealand	0	0	0	
Brazil	8	10	10	12	Pakistan				
Chile	2	2	2	2	Sri Lanka				
Colombia									
Dominican Republic					<b>NORTH ASIA</b>				
Ecuador					China	290	426	597	689
Mexico	8	10	11	14	Hong Kong				
Peru					South Korea	44	48	55	60
Puerto Rico					Taiwan	19	27	32	41
Uruguay									
Venezuela					<b>ASEAN</b>				
					Indonesia	1	2	3	6
<b>WESTERN EUROPE</b>					Malaysia				
Austria					Philippines				
Belgium					Singapore	1	1	2	3
Denmark	9	10	13	14	Thailand				
Finland	8	7	8	9	Vietnam				
France	55	63	72	77					
Germany	36	41	46	47	<b>MIDDLE EAST &amp; AFRICA</b>				
Greece					Egypt				
Ireland	5	6	7	8	GCC and Pan Arab				
Italy	7	8	10	11	Israel				
Netherlands	7	10	13	15	Jordan				
Norway	3	4	4	5	Kenya				
Portugal					Lebanon				
Spain	9	11	14	18	Nigeria				
Sweden	4	5	6	7	South Africa		0	0	1
Switzerland									
UK	127	145	159	176	<b>WORLD USD bn</b>	<b>970</b>	<b>1,270</b>	<b>1,574</b>	<b>1,805</b>
<b>CENTRAL &amp; EASTERN EUROPE</b>									
Bulgaria									
Croatia									
Czech Republic	2	2	2	2					
Estonia									
Hungary	1	1	1	2					
Latvia									
Lithuania									
Montenegro									
Poland	7	7	8	9					
Romania									
Russia	10	15	19	19					
Serbia									
Slovak Republic	1	1	1	1					
Slovenia									
Turkey	5	6	8	10					
Ukraine	1	1	1	1					

# Adult Internet Users

## (Thousands)

	2013	2014	2015	2016f		2013	2014	2015	2016f
<b>NORTH AMERICA</b>	<b>217,338</b>	<b>222,303</b>	<b>226,754</b>	<b>219,829</b>					
Canada	21,893	22,001	23,101	23,563					
USA	195,445	200,302	203,653	196,266					
<b>LATIN AMERICA</b>	<b>164,081</b>	<b>193,654</b>	<b>212,575</b>	<b>224,031</b>					
Argentina	25,000	27,100	29,000	29,800					
Brazil	93,081	102,387	113,700	119,800					
Chile		6,593	7,208	7,764					
Colombia									
Dominican Republic									
Ecuador									
Mexico	46,000	47,400	51,000	55,000					
Peru									
Puerto Rico									
Uruguay									
Venezuela		10,174	11,667	11,667					
<b>WESTERN EUROPE</b>	<b>245,035</b>	<b>255,810</b>	<b>263,099</b>	<b>268,158</b>					
Austria	5,296	5,938	6,032	6,273					
Belgium	6,700	6,700	8,871	9,000					
Denmark	4,079	4,197	4,213	4,311					
Finland	3,256	3,489	3,550	3,591					
France	42,287	43,290	43,950	44,250					
Germany	51,923	55,600	56,100	56,500					
Greece	4,934	5,002	5,033	5,120					
Ireland	3,309	3,401	3,440	3,441					
Italy	25,062	26,052	27,355	28,734					
Netherlands	12,629	12,785	12,900	13,010					
Norway	3,394	3,662	3,690	3,690					
Portugal	5,423	5,480	5,604	5,700					
Spain	25,465	27,517	28,901	30,346					
Sweden	6,822	6,950	6,950	6,934					
Switzerland									
UK	44,456	45,746	46,510	47,258					
<b>CENTRAL &amp; EASTERN EUROPE</b>	<b>133,108</b>	<b>144,196</b>	<b>153,465</b>	<b>170,740</b>					
Bulgaria									
Croatia									
Czech Republic	6,657	6,940	6,974	7,009					
Estonia									
Hungary	4,738	4,992	5,094	5,160					
Latvia	1,271	1,242	1,251	1,270					
Lithuania	1,552	1,594	1,570	1,586					
Montenegro									
Poland	21,111	21,539	22,000	24,500					
Romania									
Russia (urban)	42,310	44,691	46,032	57,410					
Serbia									
Slovak Republic	2,743	3,306	3,547	3,806					
Slovenia									
Turkey	35,831	39,985	43,000	46,000					
Ukraine	16,895	19,907	23,997	24,000					
					<b>ASIA-PACIFIC (all)</b>	<b>939,330</b>	<b>1,139,078</b>	<b>1,292,700</b>	<b>1,422,704</b>
					Australia	14,976	15,546	16,236	16,207
					Bangladesh				
					India	189,000	260,000	350,000	426,000
					Japan	101,228	102,100	103,600	104,500
					New Zealand				
					Pakistan				
					Sri Lanka				
					<b>NORTH ASIA</b>	<b>510,655</b>	<b>543,028</b>	<b>576,383</b>	<b>604,309</b>
					China	458,244	489,806	522,880	550,000
					Hong Kong	4,509	4,395	4,318	4,404
					South Korea	31,400	32,602	32,985	33,405
					Taiwan	16,502	16,225	16,200	16,500
					<b>ASEAN</b>	<b>123,470</b>	<b>218,403</b>	<b>246,481</b>	<b>271,688</b>
					Indonesia		83,700	93,400	102,800
					Malaysia	19,200	20,140	24,209	25,418
					Philippines	36,035	39,471	47,100	50,470
					Singapore	3,480	3,600	4,000	4,000
					Thailand	28,900	34,900	38,000	42,000
					Vietnam	35,855	36,592	39,772	47,000
					<b>MIDDLE EAST &amp; AFRICA</b>				
					Egypt				
					GCC and Pan Arab				
					Israel				
					Jordan				
					Kenya				
					Lebanon				
					Nigeria				
					South Africa		16,705	16,928	17,000
					<b>WORLD (million)</b>	<b>1,699</b>	<b>1,972</b>	<b>2,166</b>	<b>2,322</b>





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