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THE NUMBERS:
AUSTRALIA
CANADA
CHINA
FRANCE
GERMANY
INDIA
ITALY
MEXICO
SPAIN
UK
USA

GroupM

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In 2017, Facebook stopped growing users and time spent, and like YouTube and Twitter, found itself in the bull's-eye of controversy. Snapchat sputtered, and new media darlings from BuzzFeed to Vice missed financial expectations.

VR did not take a magic leap. The iPhone X was met with a collective shrug. And while SpaceX wowed the world, Tesla failed to meet its extraordinary expectations (by a distance).

Among legacy media players, transformative deals for Time Warner and 21st Century Fox remain unconsummated. Few new disruptors have emerged with obvious potential at scale.

A year of mounting investor pressure for greater returns weighed on some of the biggest advertisers.

Amazon, Alibaba and Tencent aside, 2017 was not a good-news year for most, although Google and Facebook were anything but a disappointment to their shareholders.

Brand safety and, more importantly, consumer safety issues consumed the narrative around major digital platforms, with an all-out assault on those platforms by legacy media and saber-rattling legislators concerned about negative economic, social and political ramifications of their unfettered aggregation of power, money and data. Much attention was paid to the weaponization of the same technologies that, until now, had only been seen as growth enablers.

In aggregate, it's fair to say that the year saw a substantial net reduction in the dewy-eyed admiration of the new. It's our view that it will take all of 2018 for the smoke to clear.

It's uncertain how legislators from the US to Brussels to Beijing will view the need or the feasibility of regulating trans-national digital platforms — or what actions they may attempt to force social responsibility or curtail market power. It's also worth noting that the views of regulators, advertisers and consumers are unlikely to be aligned.

Equally, it's difficult to predict if the looming EU GDPR regulations will further consolidate the power of these platforms – surely an unintended consequence – or signal a return to context as a proxy for relevant audiences, which might usher a renaissance for content-producing publishers.

2018 may also be the year in which some direct-to-consumer disruptors, which mostly continue to hemorrhage cash, become absorbed by those they have disrupted. The disrupted would be in pursuit of expedient business transformation to the direct economy, but should be wary of an overly vigorous pivot.

It's our view that it will take all of 2018 for the smoke to clear.

More than 90% of all goods are still purchased in shops or the digital manifestations of those shops.

Despite e-commerce's inexorable rise (we estimate it at \$2.4 trillion, globally, in 2018), or the broader range of influence that digital channels have in the purchase journey, more than 90% of all goods are still purchased in shops or the digital manifestations of those shops. Consequently, manufacturers remain a layer removed from customerlevel data. "Wholesale" relationships may frustrate manufacturers' goals around data acquisition and the application of knowledge, but they remain logistically efficient and economically preferable to a world vacuumed up by Amazon and Alibaba.

In response to transparency and quality concerns; new, direct-to-consumer competition; and a rapidly evolving distribution landscape, a vigorous narrative emerged from influential brand owners. They evangelize "re-taking control" of everything from customer relationships to data to AdTech and MarTech and, ultimately, relationships with media sellers.

This narrative is of obvious interest to GroupM and our agencies. We see four models emerging:

- Business as usual between clients and agencies based on contractually clear partnerships that are trusted but verified;
- 2. Advertisers taking direct control over all third-party AdTech and MarTech contracts, but outsourcing most or all operations to agencies (some more specialist than others);
- 3. Advertisers employing some in-house specialists to operate AdTech technology for programmatic buying, following a much longer established practice in categories like retail where direct advertiser operation of search has been "normal" for years; and
- **4.** Full in-housing of digital media services and the development of full in-house capabilities.

Full in-housing of all media services and the development of full in-house capabilities would be the fifth model – if it were real. If Amazon has no appetite for it, who does?

We believe that the first and second models are by far the most common, while the fourth is common among digitally native companies. Advertiser trade organizations and their consultants suggest that the third model will grow in importance as a logical extension of the deployment of in-house data management platforms. It is also a response to what has been articulated – mostly pejoratively – as the "AdTech tax."

By some measures this so-called tax has been calculated at up to 60% – the alleged amount of money "lost in the system" between the dollar that leaves the advertiser and the dollar that arrives at the publisher. In our

estimation, the real figure is 30%, split roughly evenly between activities representing the buy sides and sell sides of transactions.

The alternative articulation of the AdTech tax is the cost of processing billions of transactions with complex demand, supply, data, delivery and verification dynamics.

It's interesting that the MarTech language is different. Quite possibly that's a consequence of SaaS pricing vs. CPM (and therefore linear) pricing in AdTech. Logically all AdTech should be SaaS pricing in usage tiers, as the cost equation is clearly not linear.

One positive effect of advertiser, agency and (to a degree) regulatory scrutiny of the digital marketplace has been an increase in the demand for human, viewable and brand-safe inventory in short, reducing the demand for bad supply. The reverse of this argument, and one likely to be fueled by GDPR, is that supply scarcity, particularly following an unprecedented inventory glut, will cause inflation. Scrutiny has also shone a critical light on dubious metrics and issues such as excessive frequency delivery, despite the seeming precision of digital measurement.

This has created a more informed set of advertiser and agency buyers. If positive business impact is your goal, the relevant pursuit must be in-view, in-target impressions at effective CPMs. Our own work in the UK, Australia and other markets suggests that "run of exchange" – the bottom of the race to the bottom – is not where it is found.

The ultimate promise of digital marketing from the inception of biddable search was that, rather than a general expense, it would be classified as costs of goods sold, with all the predictability and precision that implies. Clearly such a proposition is in the interests of any seller who has a data advantage over other "less accountable" media forms.

For sellers of branded goods, it should be obvious that shifting too much budget to "the bottom of the funnel," as a proxy for performance, at the expense of cementing positive brand perceptions, is not a good bargain. This is especially true as e-commerce slowly erodes point-of-sale marketing, and new interfaces like voice are added to the shopping experience.

In 2005, A.G. Lafley, then CEO of Procter & Gamble, defined the "first moment of truth" as the first in-store interaction between a consumer and a brand. The second moment of truth was purchase, and the third, defined later, was experience and feedback. In 2011, Google's Jim Lecinski defined the "zero moment of truth" to describe the impact of online research on decision making. Today, marketers are faced with the "zero minus one moment of truth," sufficient resonance, relevance and recall, to ask for a brand by name. This may be all that Alexa understands.

It should be obvious that shifting too much budget to "the bottom of the funnel," as a proxy for performance, at the expense of cementing positive brand perceptions, is not a good bargain.

In media, as in so many other areas, a helpful default position is that quality is safe – and it sells products. Excessive profits and false prophets should be judged with equal skepticism. It would benefit all market participants to reward value creation over hyperbole. This is the only path to renewed trust in the supply chain, and more importantly, to a sustainable bargain with the consumer who enjoys the content, goods and services available – but who does not always enjoy the price paid beyond the monetary, including privacy and intrusion sacrifices.

In media, as in so many other areas, a helpful default position is that quality is safe – and it sells products.

A WALK THROUGH THE NUMBERS



A WALK

The media day

This year we put India into our pool for the first time, as comScore now measures mobile internet use. On a population-weighted average, this has shortened the world's average media day by about 20 minutes, and extended linear TV's lead over online from 3 share points in 2017 to 13 points, which falls to a predicted 10 points in 2018. The underlying trend remains online gaining share and adding substantially to all time with media.

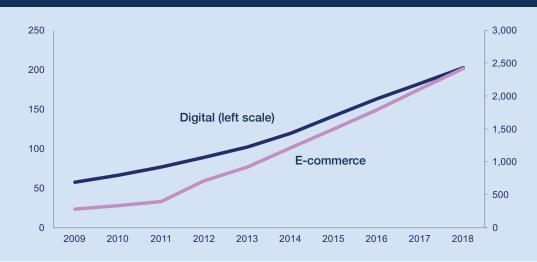
Weighting by advertising expenditure produces a bigger difference too, in part from a remarkable change in the UK method, which produces a 15-hour day instead of the former 10 hours. The new measure explicitly includes online time at work, and presumably some overlap as well. On this presentation, the world's media day stretches by about 40 minutes compared to what we reported a year ago. This also exaggerates the established pattern of high-advertising countries consuming more media generally. For 2018 we predict that ad-weighted time online will for the first time overtake time with linear TV, with online commanding a 38% share of hours to TV's 37%. We emphasize that TV's online distribution is lost in that online aggregate, and we are unfortunately little closer to measuring this properly than we were last year.

The world's media day weighted by population					The world's media day weighted by local media investment							
	Agg avg. hours	2015	2016	2017	2018		Agg avg. hours	2015	2016	2017	2018	
	Online	2.22	2.31	2.48	2.61		Online	2.70	3.19	3.53	3.69	
	Linear TV	3.14	3.31	3.43	3.41		Linear TV	3.78	3.76	3.71	3.63	
	Print	0.50	0.48	0.49	0.48		Print	0.68	0.66	0.70	0.68	
	Radio	1.22	1.27	1.27	1.27		Radio	1.67	1.71	1.74	1.73	
	Total	7.08	7.37	7.68	7.77	Total		8.83	9.31	9.68	9.73	
	Shares	2015	2016	2017	2018		Shares	2015	2016	2017	2018	
	Online	31	31	32	34		Online	31	34	36	38	
	Linear TV	44	45	45	44		Linear TV	43	40	38	37	
	Print	7	6	6	6		Print	8	7	7	7	
	Radio	17	17	17	16	Radio		19	18	18	18	
	Total	100	100	100	100	Total		100	100	100	100	
	Avg. minutes	2015	2016	2017	2018		Avg. minutes	2015	2016	2017	2018	
	Online	133	139	149	157		Online	162	191	212	221	
	Linear TV	189	199	206	205		Linear TV	227	226	222	218	
	Print	30	29	30	29		Print	41	39	42	41	
	Radio	73	76	76	76		Radio	100	102	104	104	
	Total	425	442	461	466		Total	530	559	581	584	

E-commerce

35 countries supplied e-commerce totals in our survey this year. The dollarized total for 2017 comes to USD 2,105 billion, representing 17% growth over the USD 1,794 billion in 2016, close to the 18% we forecast, and passing USD 2 trillion as expected. For 2018 we predict 15% growth to take us to USD 2,442 billion, and represent about 10% of all retail (in China, 16%) and more like 100% of its growth. The progress of e-commerce bears a striking coincidence to that of digital ad expenditure.

E-commerce and digital adex \$bn



Source: GroupM State of Digital 2018 and This Year Next Year Worldwide, December 2017

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Digital advertising	5 7.0	66.3	76.8	88.6	102.3	119.4	141.3	163.5	182.3	202.8
E-commerce	282.0	332.0	397.1	704.8	924.4	1,214.7	1,498.2	1,793.9	2,104.9	2,421.6

We predict the average annual online spend per user will grow 10% to USD 982 in 2018, having grown at the same rate in 2017. This is the first time we have seen shopping grow notably faster than internet usership, which rose 6% in 2017 and we predict 4% in 2018. Internet penetration is 60% of our 41-country sample population.

Taiwan has overtaken the UK as the highest per-capita shopper, with a predicted USD 4,326 spend in 2018, followed by Denmark at USD 4,403 and the UK at USD 3,675.

Programmatic and video

"Programmatic" means any online display investment that is transacted automatically as opposed to being a manual "insertion order." Weighted by the size of their ad economies, the average reported by our respondents was 44% in 2017 (2016: 31%), with 47% expected in 2018. Excluding the US, it was 19% in 2017 (2016: 13%), with 22% forecast for 2018.

The same proportions for video as a percentage of online display read 22% in 2017 (2016: 17%) and 24% forecast for 2018, and excluding the US, 13% in 2017 (2016: 12%) and 14% forecast.

DATA & TECHNOLOGY

Practical applications of blockchain

Blockchain is slow, clunky and expensive, so for now it seems likely to be confined to big problems that cannot be solved some simpler way (usually, by an honest, efficient, independent third party). It is peddled by self-interested suppliers and advisers, and in its present state could not keep up with the demands of real-time media.

Blockchain's main attraction is its "distributed ledger," which tells everyone everything, and thus kills or cures stand-alone monoliths and monopolies, public and private, party to cheating or inefficiency. Its Achilles' heel is having to keep every participating computer updated with everything. This might be solved by outsourcing – but this reintroduces the problem of the independent third party. The distributed ledger might also create problems with client confidentiality.

Small islands find it easier to innovate. To create competition in online payments, the Singapore government enabled an independent, unowned system: "Fast Track Trade" launched November 2017. Taiwan has projects in healthcare, notaries, the environment and finance. Alderney's government has a date-stamping engine to record all kinds of transactions.

Examples in marketing are few. Xiaomi announced its "Marketing Data Chain" in April 2017. The blockchain element enables collaboration, with the object of matching identities from different sources and developing the consumer portrait from other data. Mindshare Asia Pacific is investigating potential with blockchain platform Zilliqa. GroupM is using blockchain to support GDPR compliance, and considering what GroupM US describes as "blockchain-like applications" for such purposes as understanding and policing the money flow throughout the programmatic supply chain.

Marketers & first party data

Which types of marketers are most willing to share first-party data? This question would have been clearer if it had said "activate" rather than "share." "Share" has ambiguities such as meaning "being willing to sell," or tolerating the use of one's data by complementary or noncompeting others.

In the context of "activation," the US reports encouragingly that most if not all of our clients are using first-party data to inform and activate digital media. Many invest in enterprise data management platforms (DMPs) to do this, which GroupM actively encourages.

Blockchain is slow, clunky and expensive, so for now it seems likely to be confined to big problems that cannot be solved some simpler way.

DATA & TECH

Brands are increasingly aware of the value of their own data to their own marketing or others'.

GroupM UK finds most advertisers are willing in principle as long as they have such data; it will be kept safe; the proposed use is ethical; and they trust the counterparties. In practice, these criteria comprise a high bar, and the GDPR is a brake (a point also made by Finland). UK advertisers are more generally active in seeking collaboration with publishers and unique data owners who might complement their first-party data safely and ethically.

Sectors most likely to exploit first-party data are perhaps unsurprisingly "performance" advertisers, notably e-commerce; certain supermarkets with well-managed EPOS; auto; travel and hospitality; and banks. Germany and Slovakia noted local advertisers are more relaxed than multinationals. Ukraine says multinationals will act if led by hubs or headquarters.

Canada finds consumer goods companies are freer to act, because their data arises mainly from business-to-business relationships, and not B2C; France also singled out FMCG, perhaps for the same reason. Australia says few advertisers "share," but notes some have created controlled data environments or "safe havens," such as Woolworths' data company Quantum and Qantas' Red Planet.

GDPR aside, the law features elsewhere: Belgium says Germany's advertisers seem more rules bound (e.g., tagging, closed analytics), but Mexico's weaker rule of law means data-rich firms (e.g., travel agencies, top retailers, e-commerce) very rarely share anything.

Data-informed media spend

Brands are increasingly aware of the value of their own data to their own marketing or others'. At the same time, they are constrained by the rising risks of harvesting, storing and distribution – especially if the latter entails capture by the big walled gardens.

Scale is important. In many smaller countries or regions, data is poor or non-existent. Even Japan notes that its domestic advertisers do not use data much, which is connected to the fact that third-party ad serving is not in place. The advance of automation is a spur to using data.

Scale matters for clients, too. DMPs are often mentioned as the preserve of only the largest, though not all are adequately managed. Being large is not enough. GroupM UK notes the bigger obstacle is access to data rather than knowing how to use it: "people, policies and processes are just not where they need to be for more data-informed media strategies....most still have their customer data fragmented into multiple databases (CRM, sales, marketing, etc.) which makes it difficult to piece together that elusive single customer view," which is a shame when so many have excellent offline data skills, such as in mail.

DATA & TECH

GroupM US points out that weak industry measurement can be a serious constraint to brands. Taking the example of video, far too often it finds TV is targeted, planned, and purchased separately from online video (OLV) simply because the two lack common datasets. Consumers make less or no distinction between OLV and linear TV programming, so we must develop better datasets to take advantage of this shift in consumption behavior.

France urges improvement of "omnichannel" coordination: the offline consequences of online promotion, and vice versa. Slovakia makes the vital observation that clients work their data, but with the focus on short-term performance rather than assessing the long-term contribution of online media to brands.

There is a contrarian view that warns of excessive fixation with datadriven marketing at the expense of simpler, traditional methods that still offer benefits of heritage, trust, environment and scale.

Artificial intelligence in marketing communications

There is no settled standard for what constitutes AI, hence the joke that "AI is whatever hasn't been done yet."

Today's most advanced marketing tools are arguably the advanced algorithms that help analyze and inform brands on which creative or media placement is performing the best, at scale and speed. All big DSPs are similarly improving bidding strategies to direct resources to an outcome rather than merely a media output.

Thinking bigger, we can expect "real" AI to emerge in such spheres as fighting fraud that evades conventional rules-based solutions; helping humans decide when confronted with excess choice; and slowing the decay rate of diminishing returns.

At the risk of blowing our own trumpet, the most-cited example of practical AI was Xaxis' Copilot, which optimizes multiple criteria simultaneously, in real time, and the name of which emphasizes the importance of aiding, not replacing, human judgment.

The next most cited were chatbots, followed by image recognition and recommendation engines. Hungary mentioned voice recognition at call centers, and Poland, "social listening" (analyzing signals in internet traffic). GroupM Sweden is working with IBM Watson on smarter retargeting, and hoping thereby to reduce "ad hate," and GroupM Indonesia mentioned that Watson powers our [m]content.

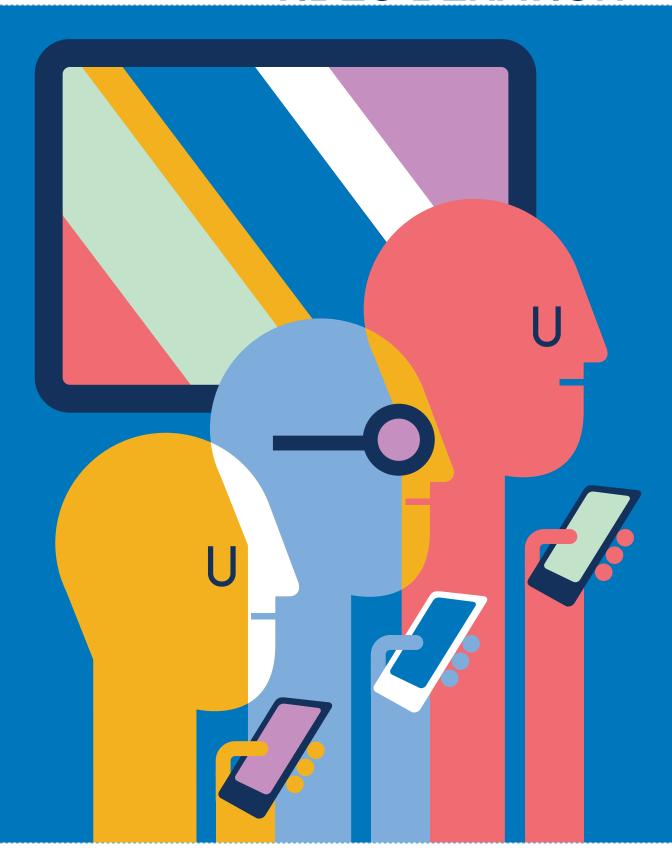
Clients work
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on short-term
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long-term
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brands.

DATA & TECH

In Latin America, Argentina has an online news source, Infobae, which uses AI to personalize news feeds, and Mexico was the birthplace of Adext, now residing in Silicon Valley, and which describes itself as "the first and currently only fully automated platform, using AI and machine learning to plan, deploy and buy paid ads cross-platform in Search, Social and Display to increase the sales of Small and Medium Businesses (SMBs) with very low budgets."

China's Baidu applies AI to voice and image recognition; augmented reality; the human-computer interface; and autonomous vehicles. Its "Duer-OS" helps connect smart devices and its "Apollo" helps connection to cars and the internet of things. Toutiao uses AI to match content to users. Alibaba's "Lu Ban" uses AI to assist design and dynamic creative.

VIDEO BEHAVIOR



VIDEO BEHAVIOR

The failure of TV audience measurement to keep up with the audience diaspora places everyone at a disadvantage.

Video disruption

The failure of TV audience measurement to keep up with the audience diaspora places everyone at a disadvantage: advertisers, content providers, agencies, and the audiences who have to put up with sub-optimal ad targeting. No country has a universal dataset for all screens, and few have even anecdotal evidence. We therefore asked our local offices to estimate what share of attention their incumbent TV brands command in aggregate, across all screens, and what share the "disruptors" have carved out. These percentages may not sum to 100, as some countries allow for DVD and other things.

Audiences are all individuals unless an age break is specified.

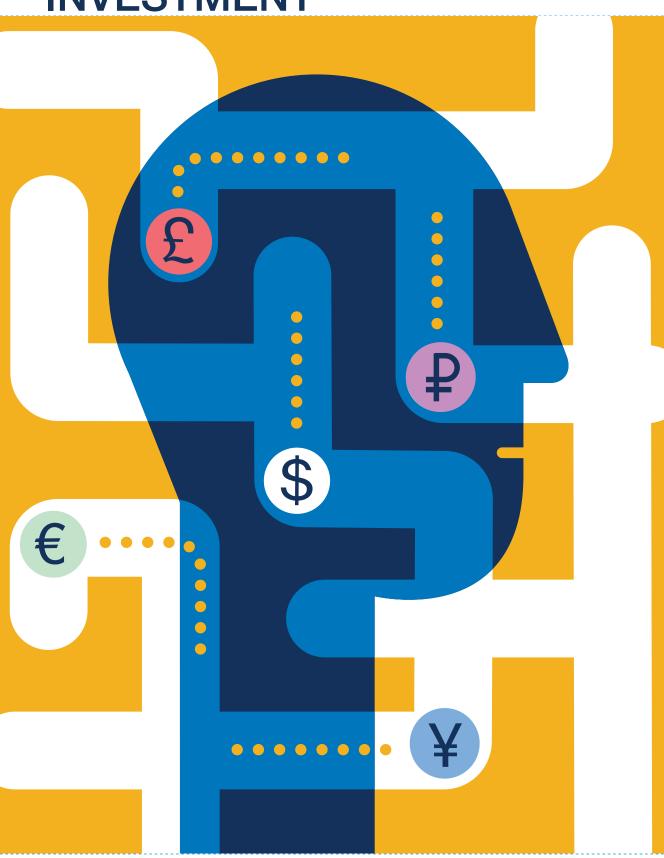
Our best guess is TV incumbents still command three-quarters of video hours, and the disruptors have 18%. A small sample of five countries answered a different question, which allows us tentatively to suggest TV incumbents occupy 29% of online video hours. If we focused on younger viewers only, we would not be surprised if these figures were a fifth less favorable to the incumbents.

VIDEO BEHAVIOR

Estimated percent share of all viewing							
	Incumbents	Disruptors					
Canada	70	30					
Austria 14+	88	6					
Belgium midpoint	65	17					
Czech Republic Denmark	80 75	10 16					
France 15+	90	8					
Germany	72	23					
Greece	78	-					
Hungary	80	13					
Latvia	70	20					
Netherlands	86	13					
Portugal	80	-					
Russia	69	-					
Slovakia	72	21					
Spain	84	15					
Sweden	50	40					
UK	75	16					
Ukraine	70	-					
Europe average	76	17					
Australia	90	-					
China (disruptors=top 10 apps)	57	25					
Indonesia	60	20					
Japan	85	15					
Philippines midpoint	78	22					
Taiwan (terrestrial broadcast)	72	-					
Asia-Pacific average	74	21					
Mexico	72	18					
South Africa	84	16					
Average	75	18					

Incumbents' share o	of online video
Lithuania	30
Poland	23
Hong Kong	19
South Korea	24
Taiwan	50
Average	29.2

INVESTMENT



Digital media in-housing

The UK response would probably resonate with many countries: inhousing is more discussed than done, as many clients have the will but not the means. There is however a rising tide of client interest in tech and data, and a desire to be involved in selecting the tech stack, which we encourage. We stand ready to advise, build and maintain. In-housing affects the sell side too, for example when clients take over what ad networks currently do for them. Clients which manage performance directly with vendors rarely "do the doing": those who do tend to focus on biddable media (search and social). One pattern we see is for small, fast-growing firms to start out doing their own social (and sometimes search) but hire agencies when they need to build a brand.

GroupM US has not seen much in-housing among its own clients. One that did took on about half of its volume of programmatic but retained us for strategy, floor pricing, etc. P&G is moving in this direction and some clients do tend to follow its lead. However, buying digital, especially programmatic, is difficult in terms of finding and keeping the right talent, and knowing how to evaluate DSPs and how to make sure inventory is bought in a well-lit environment.

The view from China is many clients have in-house media expertise of some kind, but so far have mostly left digital to agencies. This may change as more clients set up their own DMPs and use more MarTech. Singapore, a popular hub, notes interest is found mostly among certain industry sectors, and separately, MNCs worried about transparency and control.

Several European countries agree that in-housing is mainly by the largest advertisers doing the simplest things, with the Netherlands noting the Google stack is popular for its comprehensiveness. Canada, Russia and South Africa singled out finance and data-rich concerns as the most likely to in-house; France and the Czech Republic cited clients with digital distribution channels, with India stating that generally, performance in-houses, and brand does not.

Many countries reported hybrid arrangements, with clients often happy to take on strategy but leave risky and expensive execution to agencies. Several observed clients were hiring more digital staff, and a few noted that some clients preferred specialist agencies to the big generalists. Market scale is a factor too, with Belgium a small, bilingual country, which makes in-housing impractical for SMBs, and Finland pointing out that even the few clients that have in-housed still rely on media agency scale to secure Google and Facebook on sensible terms. It is interesting to note Finland is a mature digital market, unusually with price deflation.

In-housing is more discussed than done, as many clients have the will but not the means.

INVESTMENT

The two main

inflation drivers
are the high
demand for
premium,
brand-safe
content, and
the lack of
measurement
on many of
these platforms

(OTT, mobile,

etc.), which

leaves little

"measurable"

inventory to

plan and buy,

which in turn

drives up

pricing.

Norway reports a few clients have in-housed, mostly to guard their data and improve transparency.

Mexico estimates a third of large advertisers buy their own digital media, noting this set includes web endemics that have always done it this way, and there is no accelerating trend to in-house.

Australia is the only country that describes a strong trend to in-housing, so it is a market to watch. Names include the midsize advertisers Foxtel, CommBank and Coles (supermarket).

Inflation hotspots

North America

GroupM US highlights premium digital video, ranging 5%-13% up on the year, dependent upon supplier, weight of investment, and whether one is buying in-demo guaranteed. The two main inflation drivers are the high demand for premium, brand-safe content, and the lack of measurement on many of these platforms (OTT, mobile, etc.), which leaves little "measurable" inventory to plan and buy, which in turn drives up pricing.

The US also sees effective CPMs rise across programmatic display and video ecosystem as sites improve viewability rates. This, with consolidation into fair, clean, and authorized exchanges, has cut out the low-quality supply that we could buy at cheaper prices, but do not buy for the sake of client protection and campaign performance.

Canada flags up video too, notably YouTube's seeking 2018 rate increases of 19%-25% for "reserve" (non-auction) sales.

Europe

The four countries of Scandinavia show it is tricky to generalize. Denmark reports low-single-digit inflation. Finland has unusually seen prices deflate for several years, but like Norway sees growing optimization to quality (viewability) instead of price as a source of potential inflation. Sweden picks out a single format, Panorama, because it is popular with gaming advertisers.

France and Italy report low-single-digit inflation for premium publishers and in-stream video, but zero for run-of-market. Inflation becomes more evident when costs are reconciled to viewability, which more advertisers

are doing. Spain notes that many publishers have unsuccessfully tried to impose 4%-5% increases in reserve inventory rates.

The UK market is large but quite "dark." Quality video is however in short supply, and we have seen evidence of rates rising more than 30% in non-broadcast inventory. Risks are rising for advertisers seeking cheaper inventory without reliable advice. Potential hotspots in 2018 are static display inventory sold by header bidding, because this allows publishers more control of yield, and Facebook, especially with new News Feed restrictions. GDPR might change the demand profile and thus create an inflation risk. This is another area where using agencies can mitigate pricing risk, with bonus/malus arrangements.

Miscellaneous specifics:

Hungary: PPC 5% (demand-driven)

Lithuania: Expects 20% inflation in 2018 for prime positions in

local portals

Poland: Static display 3%; video 8%; display viewable CPM (vCPM)

50% premium to ordinary CPM

Russia: Static display average 5%-7%; video 8%-10%

Turkey: Independent sources sampling top 20 publishers calculate Rich Media 20%; standard static formats 40%; weighted video average 40%

Ukraine: Mobile 25%-35%; online video 40%-50%

Asia-Pacific

Australia:

Independent industry monitors suggest static display

3.5% and video

8.6%

China: Sources suggest 2017 averaged 16%, with similar prospects for mobile formats in 2018 but midsingle-digits for desktop.

India: Rapid growth in reach is inflating the price of "impact display" mobile formats.

Hong Kong: 2017 inflation was

15% in static display

17% in mobile

18% in video

Indonesia:

Inflation about

most apparent in premium inventory.

INVESTMENT

Japan: Demand from safety-conscious advertisers for premium video alternatives to YouTube far exceeds supply.

Sri Lanka: We have maintained zero inflation, but some publishers have raised prices for premium banner inventory.

South Korea: We note only YouTube masthead, by **15%.** No inflation in social media pre-roll.

Singapore: 300 x 600 +17% in 2017. Large formats popular with ents and creatives, and better for interaction. 300 x 50 +23% mobile formats in demand.

Taiwan: 3%-15%

Programmatic tech tax

Canada: 16%-35% depending on the specific inventory. Rates for programmatic have moved towards the bottom of this range as access to working media has become cleaner.

USA: We routinely audit the programmatic ecosystem, and find technology fees can vary widely depending on the DSP business model and exchange fee structures. We confine investment to the most efficient and fair DSPs and exchanges to maximize the funds available for working media. On the DSP side, we see an average of 9.5% across our platforms, partners, and on the exchanges side, we see an average of 10%. This brings the total to 19.5%.

UK: DSP 6%-12%. Viewability, brand safety and fraud detection adds 0.5%-2%. SSP 8%-10%, taken from the vendor's end. Data management on what is still a minority of campaigns 1%-5%. Typical total is therefore 15% from the buy side plus the SSP from the sell side. Buy-side costs can easily reach 20%-25% where tech and media are bundled and negotiation is poor. One of our agencies thinks it can reach or exceed 30%, noting clients are sometimes billed for things we do not see, particularly with open exchange buys.

Tech tax % of working media (estimated market averages)

	DSP	SSP	Total
Canada		I	16-35
USA	9.5	10	19.5
Austria			15-20
Belgium	9	10	19
Czech Republic	16	10	26
Denmark			20
Finland			15
France	18	7-12	25-32
Germany			12
Hungary			23
Italy			20
Latvia			15
Lithuania			14
Netherlands			9-15
Norway			15
Poland			10-20
Portugal			12-14
Russia			25
Slovakia			20
Spain			15-16
Sweden			15-20
Turkey			25
Ukraine			30
UK	6-12	8-10	14-22
Europe average using midpoints			19
Australia	10	10	20
Hong Kong	.0	10	20-25
India	9-10	10-15	19-25
Indonesia	0 10	10 10	20
Japan			27
Asia-Pacific average using midpoints			22
Total Casho average doing mapoints			
Global average using midpoints			20

INVESTMENT

Marketing technology: stimulating or depleting working media investment?

In general, both are growing, which suggests stimulation.

It depletes in the short term as it is initially funded from media budgets. As client understanding of value grows, it yields economies rather than just consuming working media investment. These economies can therefore be saved or respent on other options technology may reveal.

We see this as a necessary strategic investment for our clients. It improves cohesive and comprehensive audience creation, audience targeting, optimization, inventory transparency and activation, and measurement across various channels and media strategies.

Rather than being top-sliced from the working media budget, we recommend it be budgeted and scrutinized as a separate investment. Finland remarks that accusations of excessive charges recently threatened to undermine advertiser trust, a situation that has fortunately been stabilized.

Scrutiny is vital. If technology fails to raise efficiency, it merely depletes. Client procurement is right to recognize that "tech tax" is material and needs to be managed. A percentage point saved in agency service is a false economy if in consequence you are paying more points of tech tax above the best in your sector market.

MarTech may not be for every advertiser. Mexico articulates a theme from our network: "It stimulates sophisticated advertisers, but depletes investment from the more basic."

A percentage point saved in agency service is a false economy if in consequence you are paying, say, 3% more points of tech tax above the best in your sector market.

The duopoly & digital spend

Does the duopoly of Facebook and Google deter spending on digital advertising, or make it easier and cause more spending? This question is defeated by its own "counterfactual": we cannot know what the world would do in the absence of the duopoly. But its purpose is to draw out opinions, not literal-minded, yes-or-no answers.

Several non-English-speaking countries chose the same word, calling the duopoly a "locomotive" that grew the market and captured most, all or more of this growth for itself at the same time. Spain spoke for many markets by observing the main effect was to reduce share to larger rivals and endanger smaller ones. France saw the benefit of such competition, as it encouraged rivals, digital and traditional, to focus on brand safety, data collection, audience aggregation and inventory quality. Denmark noted it encourages advertisers to seek better deals and higher brand safety from local publishers.

Praise for the duopoly included speed to market, standardization of creative, cheap reach and easily accessed campaign metrics. Brand safety is a threat, but also an opportunity to reassure advertisers that it will be fixed. India noted ease of use for smaller self-serve advertisers, which we think is by far the largest source of growth, as by our estimate 70% of advertising investment comes from the long tail. South Africa went as far as to say its advertisers expect to depend upon it, especially performance advertisers controlling conversion cost.

The UK flags the risk that dominant platforms crowd out independent AdTech, which is a wellspring of innovation. Copying or acquiring innovators encourages them to overspecialize, infilling niches in hopes of an early buyout, and deters investors who see better returns in other fields. The duopoly does however seem less of a threat to content development, so investment flows more freely here: WPP's recent increase to 100% ownership of Hogarth is an example.

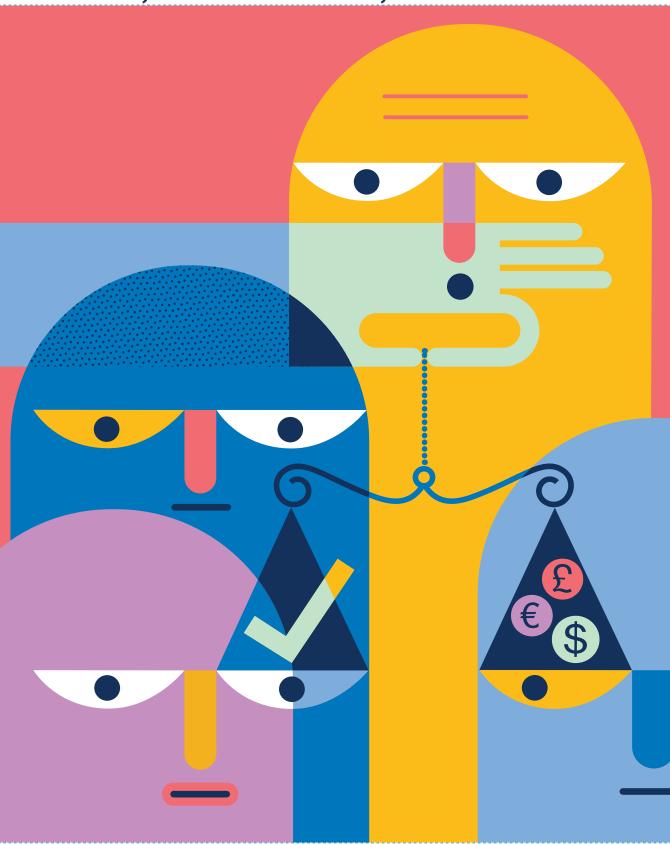
Dominant platforms crowd out independent AdTech, which is a wellspring of innovation.

INVESTMENT

Some countries remind us that the duopoly does not always have dominion: Ukraine, South Korea, Japan and Russia, for example. The US, on the other hand, gives the most comprehensive answer to why we value strategic partnership with Google and Facebook, and for that matter Amazon, Alibaba, Tencent and the leading MarTech providers:

- Google Search remains a critical component of our clients' marketing efforts.
- 2. YouTube is also increasingly important for scaled and "premium" video inventory. While YT has had some brand, safety issues, it is working hard to address them. For clients who want to reach younger targets who are light TV viewers, this is the platform of choice.
- 3. Google Display Network is a large marketplace of programmatic inventory. We have concerns with policing the material from these millions of websites, so we advise clients to invest in Google AdX via DoubleClick Bid Manager (DBM) wherever possible to allow for full transparency and blocking tags.
- 4. More and more clients are choosing DBM for programmatic campaigns, because this allows the advertiser to buy YouTube with other digital media and access to Google's proprietary audience segmentation. While DBM is a sophisticated enterprise DSP, we do however find challenges with the configurability of the DSP when compared to DBM's peers.
- 5. Our Facebook investment rises, thanks mainly to Instagram's capacity for reaching younger audiences. In general, display/rich media units are more viewable than its video products, although FB is working hard to improve video by testing preroll and mid-roll video within more premium environments.

Some countries remind us that the duopoly does not always have dominion.



Vetting viewability

The Media Research Center first published its viewability criteria in June 2014. It specifies at least 50% of an ad's pixels must be in view for at least one continuous second for static display, two seconds for video, and two audible seconds for audio.

should not,
however, limit
expectations.
GroupM's
standard is
100% viewable,
for one second
if static, and
50% of duration
with sound on if
video, witnessed
by a real person
who is a member

of the desired

audience.

Standards

Standards should not, however, limit expectations. GroupM's standard is 100% viewable, for one second if static, and 50% of duration with sound on if video, witnessed by a real person who is a member of the desired audience.

We naturally aspire to, and if appropriate will only pay for, impressions conforming to GroupM viewability standards, so from that perspective the only answer to "what is a good success rate?" is 100%.

Few, if any, suppliers achieve this in practice, even if paid only for the perfect percentage. The purpose of this question is to gauge what we think is a reasonable effort, and to identify good practice.

In December 2014 the US IAB encouraged marketers to aim for 70% inview, meaning 70% of ads served would meet MRC criteria for viewable impressions. Three years later, this still looks like a stretch, with our survey deeming 66% a "good success rate" for MRC compliance – and that's with some countries expressly pitching "success" typically 10 points above local natural delivery.

Successful in-view rates (MRC standard)

	Static	Video
Canada	70	50
USA	70	
Austria	60	
Belgium	75	
Czech Republic	60	
Finland	60	
France (mobile)		62
Germany	65	
Greece	50	
Hungary	80	
Italy	65	75
Latvia	75	
Lithuania	65	
Netherlands	80	
Norway	70	
Poland	65	
Portugal	65	
Russia	50	60
Slovakia	60	
Spain	55	
Turkey	75	
UK	75	
Europe average	66	66
Australia	80	
Hong Kong	60	
India	50	
Indonesia	50	
Japan	50	
Singapore	60	
South Korea	80	
Taiwan	70	
Asia-Pacific average	63	
Mexico	70	
South Africa	70	
Global average	65	62

Tier 1 quality web-based video inventory in the US, such as Google Preferred, Hulu and NBC, achieves in-view rates approaching 90%. At the other end of the size scale, Slovakia expects 60% from standard-quality inventory and 75% from premium. The UK would agree with this, and like some other countries points out that particular clients and particular objectives will influence outcomes: for example, performance advertisers might be motivated to optimize at least ahead of natural delivery, and brand-building campaigns might wish to do substantially better than that.

It is understandable to desire 100% viewable impressions, but overall lower intrusion can be more welcome to the user, and so leave a more favorable impression of the brand, particularly in mobile environments.

Other perspectives are the importance of demanding 100% opportunity-to-see, whatever the eventual in-view rate, and Malaysia's remark that it prefers to optimize to viewing persistence (and finds 14 seconds a good benchmark). S.E. Asia timelengths are typically shorter, driving up frequency in TV/video campaigns. We have noted before the nonchalance of Japan's advertisers and vendors toward standards, another facet of which is the fact that viewability is not yet tradeable there. Trading on viewability depends on a sufficient volume of traffic being measured this way. In India, viewability is a new concept, and only a minority of apps are covered. GroupM China notes only about 30% of views can presently be tagged, whereas it thinks 80% is required for trading on viewability.

We conclude this section with a contrarian opinion. It is understandable to desire 100% viewable impressions, but overall lower intrusion can be more welcome to the user, and so leave a more favorable impression of the brand, particularly in mobile environments. It may be worth layering a qualitative element onto viewability that pairs a high viewable threshold with the best video formats from a consumer experience point of view.

YouTube completion rate

GroupM US wisely explains that TrueView is sold on a cost per view, so views are a function of budget. GroupM US finds the average skip rate is between 70% and 75%, so view-through rates over 20%-25% are successful on this platform. And one of the keys to outperformance is ensuring you have short, catchy content to grab the consumers' attention.

Our survey average falls in line with this US position, making 26% the threshold for successful TrueView view-through. A sample of 16 countries suggests 60% completion as successful for forced-view.

There is also widespread agreement that short and catchy is indeed best, with 15-20 seconds mentioned by some. The UK goes as far as saying there is little reason to make timelengths up to 20 seconds skippable on Google Preferred, and that the controlled risk of YouTube makes 10%-

15% completion acceptable on timelengths of 30 seconds and under – but expects 90% view-through on YouTube's new six-second bumpers.

Facebook video

Is there an emerging consensus on an optimal timelength for Facebook video? The short answer to this is no, but general opinion, as articulated by Argentina and South Africa, is "the shorter the better, with a strong start." The average of the 18 countries venturing an opinion came out at 11 seconds, with Europe at 13 and Asia-Pacific at a less patient 7 seconds. We could do with some more science around this, but the US and UK offer some analysis:

US: When performance is measured by what percentage of the spotlength remains in view, then it is a mathematical certainty that the shorter it is, the better its chances of success. Around 17% of advertisements with creative length under six seconds are at least 50% in view at 50% completion. This is over three times better than creative lengths 10s-15s (~5%) and about five times better than creative lengths 30s-60s (~3%). If, however, performance is measured on absolute duration in view, longer executions (30s+) perform best. At the very least, Facebook (and all social video) creative should focus on impactfully conveying the brand's message within the first second or so.

UK: GroupM research shows only 17% of video is watched beyond 5 seconds; 10% beyond 10 seconds and 3% to completion. Facebook video is better used as near-subliminal "digital OOH" than an interactive experience. Facebook recommends clients cram key messages in the first three seconds, but this does not always resonate with client expectations. Others recommend keeping it under 10 seconds, or under 15. Planners are not always this disciplined. Facebook's viewable CPM can be disconcertingly high, but in-stream shows promise, with one of our agencies finding 84% persistence at three seconds compared to 19% for in-feed.

Cross-platform measurement

It is more common to find "three-screen" measures (PC, tablet, handset) than "four-screen," which cover the main TV screen, too.

In France, Mediametrie offers four-screen audience measurement for TV shows. Asia-Pacific markets including Japan, India and Taiwan have Bridge, a tool from Miaozhen Systems, which calculates deduplicated reach pre- and post-buy across TV and OTV.

"The shorter the better, with a strong start."

Kantar's CrossMedia, a collaboration with comScore, is live in the Netherlands and Argentina.

There are several works in progress. In the US, GroupM has had extensive discussions with measurement companies and the major video publishers on how to move the industry forward in a controlled and responsible way, with the goal of measuring ad-supported video audiences wherever they are. We are currently working with Nielsen to test a UC7 measurement approach that we estimate will add 12%-15% to broadcast prime audience levels.

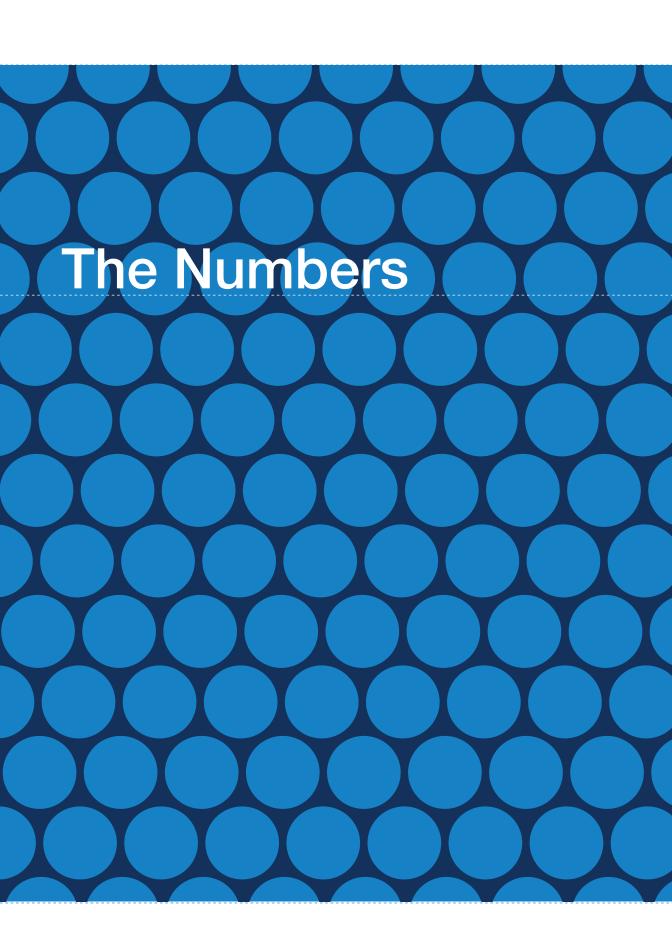
In the UK, BARB Dovetail will provide four-screen program ratings from September 2018. Commercial impressions may follow in 2019 if participating content owners manage to tag all the ads they play out.

In Hong Kong, HKTAM (powered by Kantar and CSM Media Research) will cover three screens (TV, desktop and mobile) by end-2018. This will be a rating and trading currency.

Nielsen DAR is the leading three-screen metric. In the USA it added the mobile app audience from mid-2017. Separately, there is some progress being made in US CTV/OTT, promising to measure about 50% of Roku apps, and Hulu is expected to be 100% measurable in the first half of 2018.

ComScore's Xmedia offers deduplicated unduplicated audience measurement across TV content and digital media in a single tool.

In Canada, GroupM and Google have jointly developed a tool incorporating Numeris (joint-industry audience measurement) and YouTube data. We hope to see this extended to include other video sources. In France, Nielsen recently included YouTube in its DAR, which allows good post-campaign analysis of three-screen video. Nielsen is launching its Total Audience measure in Mexico, but this does not collect ad impressions to enable deduplication of campaign reach. In 2019 GroupM Mexico hopes to discuss fusing Total Audience with DAR to improve understanding of video and TV synergy.





	2015	2016	2017e	2018f
Estimated smart speaker household penetration% Estimated programmatic % of online display investment Estimated video % of online display investment		20 23	5 35 30	10 48 35
Online retail in AUD bn E-commerce per internet user AUD E-commerce per internet user USD	19.1	21.7	25.0	28.4
	984	1,099	1,240	1,339
	753	841	949	1,025
Adult media usage (hours per day in decimals) Online TV Print Radio Total	2.57	2.77	2.90	3.05
	2.64	2.59	2.53	2.50
	0.45	0.41	0.39	0.35
	1.87	2.09	2.04	2.00
	7.53	7.86	7.86	7.90
Adult media usage (percentages) Online TV Print Radio Total	34	35	37	39
	35	33	32	32
	6	5	5	4
	25	27	26	25
	100	100	100	100

Historic sources: Global Web Index , eMarketer, GroupM estimate, NAB Online Retail Index, Roy Morgan



Most major advertisers use DMPs now, with Adobe the most popular.

It isn't possible to generalize on view-through, as creative is a big influence, and so is the choice between forced-view or skippable.

There is no progress on cross-platform TV and video measurement. The leading monitors cannot agree.

"



	2015	2016	2017e	2018f	
Estimated programmatic % of online			10	10	
display investment			16	16	
Estimated video % of online display investment		58	64	68	
E-commerce in CAD bn (excluding travel)	22.4	26.2	34.0	42.9	
E-commerce per adult internet user CAD	921	1,059	1,352	1,682	
E-commerce per adult internet user USD	722	829	1,059	1,318	
Adult media usage (hours per day in decimals)					
Online (average for all 18+)	4.08	4.23	4.42	4.56	
TV	3.25	3.22	3.16	3.10	
Print	0.26	0.24	0.23	0.21	
Radio	1.38	1.36	1.32	1.28	
Total	8.97	9.05	9.13	9.15	
Adult media usage (percentages)					
Online	45	47	48	50	
TV	36	36	35	34	
Print	3	3	3	2	
Radio	15	15	14	14	
Total	100	100	100	100	

Historic sources: GroupM estimate, eMarketer



Corus, a TV station, is using AI to slot program promotions, with a view to possibly slotting ads.

Data use is much lower than we expected, even in basic applications such as modeling media mix.

MarTech is budgeted as a cost of doing business, top-sliced from the working media budget. It should be budgeted and therefore managed as a separate investment.

Tech costs for programmatic have fallen as access to working media has become cleaner.

Canada was the first country L'Oréal in-housed.

Only 2% of 15-second video views reach 50%+ completion.



	2015	2016	2017e	2018f
Estimated programmatic % of online display investment		7	9	10
Estimated video % of online display investment		11	11	11
E-commerce transaction in CNY trillion	16.4	20.5	24.0	28.1
Online shopping only	3.8	4.7	5.7	6.6
Online shopping via PCs	1.7	1.4	1.5	1.6
Online shopping via mobile devices	2.1	3.3	4.2	5.0
Online shopping only per adult internet user CNY	7,265	8,391	9,577	10,450
Online shopping only per adult internet user USD	1,094	1,264	1,443	1,574
Adult media usage (hours per day in decimals)				
Ages 15-69; 36 cities				
Online (per online user)	3.37	3.38	3.47	3.55
TV (per viewer)	2.61	2.41	2.35	2.30
Print (per reader)	0.56	0.55	0.55	0.52
Radio (per listener)	1.04	1.02	0.99	0.99
Total	7.57	7.36	7.36	7.36
Adult media usage (percentages)				
Online	44	46	47	48
TV	34	33	32	31
Print	7	7	7	7
Radio	14	14	13	13
Total	100	100	100	100

Historic sources: iResearch, CNRS



Alibaba's Uni-Desk works on several different media platforms.

Many clients have in-house media expertise of some kind, but so far, have mostly left digital to agencies. This may change as more clients set up their own DMPs and use more MarTech.

Most of the video disruption is by mobile apps. In 2017, the top 10 accounted for 25% of all viewing hours.

The normal online TV spot is 15 seconds. Pre-roll breaks typically comprise four 15-second spots, but can be longer for popular content.



	2015	2016	2017e	2018f
Estimated video ad investment % of online display investment	30	35	40	45
Estimated programmatic % of online display investment	40	53	62	68
E-commerce in EUR bn (including travel)	65.0	72.0	81.7	91.0
E-commerce per 12+ internet user EUR	1,467	1,586	1,772	1,943
E-commerce per 12+ internet user USD	1,701	1,839	2,055	2,253
Adult media usage (hours per day in decimals)				
Online	2.70	3.02	3.15	3.30
TV	3.80	3.60	3.55	3.50
Print	0.77	0.77	0.76	0.75
Radio	2.20	2.20	2.19	2.18
Total	9.47	9.59	9.65	9.73
Adult media usage (percentages)				
Online	29	31	33	34
TV	40	38	37	36
Print	8	8	8	8
Radio	23	23	23	22
Total	100	100	100	100

Historic sources: SRI-UDECAM, FEVAD, Mediametrie/GroupM

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There is room to improve omnichannel coordination: the offline consequences of online promotion, and vice versa.

Advertisers are seeking and paying for better viewability.

The dominant duopoly has encouraged rivals to focus on brand safety, data collection, audience aggregation and inventory quality.



	2015	2016	2017e	2018f
E-commerce in EUR bn (excluding travel)	41.7	44.0	48.7	53.6
E-commerce per 10+ internet user EUR	743	759	780	818
E-commerce per 10+ internet user USD	862	880	905	948
Adult media usage (hours per day in decimals)				
Online (desktop to 2015; plus mobile from 2016;				
whole population)	1.78	2.13	2.48	2.85
TV	3.47	3.72	3.68	3.68
Print	0.50	0.58	1.12	1.12
Radio	2.89	2.97	3.02	3.02
Total	8.64	9.40	10.30	10.67
Adult media usage (percentages)				
Online	21	23	24	27
TV	40	40	36	34
Print	6	6	11	10
Radio	33	32	29	28
Total	100	100	100	100

Historic sources: US Census Bureau, ARD-ZDF, Statista, Internetworld.de, Handelsdaten.de



Data exploitation is growing widely, but smaller advertisers are afraid of the associated costs.

There is early commercial interest in using blockchain for ad verification and identity management.

The duopoly is taking share from other digital vendors, but is also a 'locomotive' growing the whole sector.

A few large advertisers have in-housed. Others prefer to delegate some or all of the process to agencies because of the expense.

Amazon Search launched Q3 2017 and 30% growth is possible in 2018.



	2015	2016	2017e	2018f
Estimated video ad investment % of online display investment Estimated programmatic % of online display investment		32	37 10	42 12
E-commerce USD bn (including travel)	42.0	46.4	54.0	63.2
E-commerce per 12+ internet user USD	120	109	112	126
Adult media usage (hours per day in decimals)				
Online (average of 12+ users)	3.90	3.27	2.93	3.00
Online (average for all 12+)	1.41	1.41	1.41	1.47
TV	2.66	3.15	3.63	3.63
Print (top 10 titles)	0.28	0.28	0.29	0.27
Radio	0.47	0.47	0.47	0.47
Total	4.82	5.31	5.80	5.84
Adult media usage (percentages)				
Online	29	27	24	25
TV	55	59	63	62
Print	6	5	5	5
Radio	10	9	8	8
Total	100	100	100	100

Historic sources: BCG, Google, GroupM, comScore, BARC, IRS, GroupM estimate

The shift to activating 1PD is gradual, led by e-commerce, consumer durables and cab (taxi) aggregators.

We estimate one-fifth of digital advertising investment is data-led.

Experienced digital advertisers see MarTech as an investment in better outcomes. Newer advertisers will either test it, or not use it at all.

Generally, performance in-houses, and brand does not. So far, only a few e-commerce and digital-first firms have in-housed.

Advertisers often wish to use uncut TV spots on Facebook, but we suggest consideration of animated GIFs or 5 to 6-second 'Cinemagraphs,' which seem to work well.



	2015	2016	2017e	2018f
Estimated video ad investment % of online display investment Estimated programmatic % of online display investment		32 27	37 31	43 34
E-commerce in EUR bn (excluding travel)	8.1	12.3	15.3	18.9
E-commerce per adult internet user EUR	283	429	488	559
E-commerce per adult internet user USD	328	497	566	649
Adult media usage (hours per day in decimals)	0.00	0.00	4.00	
Online (average for all adults)	0.90	0.98	1.20	1.45
TV	4.32	4.03	4.02	3.97
Print	0.23	0.22	0.22	0.19
Radio	2.20	2.28	2.33	2.40
Total	7.65	7.52	7.77	8.01
Adult media usage (percentages)				
Online	12	13	15	18
TV	56	54	52	50
Print	3	3	3	2
Radio	29	30	30	30
Total	100	100	100	100

Historic sources: Politecnico di Milano, Audiweb, Auditel, Sinottica TSSP/EMM, RadioMonitor

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Only multinationals have developed their own DMPs to connect owned data with CRM, and few of these have deployed an attribution model to scrutinize the media mix.

Mediaset Italia is part of an international TV collaboration announced in July 2017 to investigate marketing insights from blockchain.

Amazon's DSP launched here in mid-2017. It has very solid customer profiles so will compete strongly against Google.

Auditel is working on a new process to measure multiple TV modes (live, catch-up, in-stream, etc.) on multiple devices.



	2015	2016	2017e	2018f
E-commerce in USD bn (all B2C)	12.4	16.5	21.4	28.9
Estimated % household penetration of smart speakers		6.0	6.1	7.3
Adult media usage (hours per day in decimals)				
Online	2.50	2.75	3.19	3.50
TV	2.45	2.33	2.35	2.58
Print	0.50	0.40	0.35	0.38
Radio	1.10	1.14	1.20	1.32
Total	6.55	6.62	7.09	7.78

Historic sources: IAB, CONAPO, eMarketer, TGI, MSS TV, MSS Radio

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MarTech stimulates sophisticated advertisers, but depletes investment from the more basic.

We hope by early 2019 to be talking about Total Audience with Nielsen's DAR to evaluate online videos' contribution to broadcast TV.

Almost no advertisers risk sharing valuable data, as the rule of law is too weak.



	2015	2016	2017e	2018f
Estimated video ad investment % of online display investment Estimated programmatic % of online display investment		21 18	23 25	24 33
E-commerce in EUR bn (excluding travel) E-commerce per 16+ internet user EUR	12.6 436	16.3 539	22.0 695	23.0 727
Adult media usage (hours per day in decimals) Online (average per online user)	1.69	1.77	1.95	2.13
Online (average for whole 16+ population) TV Print Radio	1.21 3.98 0.92 1.77	1.32 3.74 0.80 1.74	1.51 3.60 0.75 1.73	1.63 3.46 0.71 1.72
Total Adult media usage (percentages)	7.88	7.60	7.59	7.51
Online TV	15 51	17 49 11	20 47	22 46
Print Radio Total	12 22 100	23 100	10 23 100	9 23 100

Historic sources: Infoadex, CNMC, Kantar

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Many publishers have attempted a 4%-5% increase in reserve inventory rates, but failed to make it stick.

MarTech affords more budget control to experienced digital advertisers.

A few have in-housed. Some are pushed towards Global Full Stack by global HQs.

Our Amazon investment more than doubled in 2017, led by display formats (video and static).



United Kingdom

	2015	2016	2017e	2018f
Estimated smart speaker household penetration % Estimated video % of online display investment Estimated programmatic % of online display investment	23 63	29 72	10 35 86	20 39 88
E-commerce in GBP bn (including travel) E-commerce per 16+ internet user GBP E-commerce per 16+ internet user USD	115.0 2,589 3,410	133.0 2,945 3,879	149.1 3,212 4,231	162.7 3,413 4,495
Adult media usage (hours per day in decimals; definitions for 2017 only) Online (social, messaging, work, shopping, browsing, banking, services) TV (any screen, live catch-up or on demand, free or paid-for) Print (physical or digital) Radio/audio (any device)	3.32 3.61 0.33 1.67	3.58 3.86 0.38 1.59	7.17 4.46 1.22 2.94	7.00 4.50 1.15 3.00
Total Adult media usage (percentages) Online TV Print Radio Total	8.94 37 40 4 19	38 41 4 17 100	45 28 8 19 100	45 29 7 19

Historic sources: GroupM estimate, IAB/PwC, IMRG Capgemini, IPA TouchPoints



Most advertisers are willing to activate first party data as long as it will be kept safe; the proposed use is ethical; and they trust the counterparties. In practice, these criteria comprise a high bar, and GDPR is a brake.

Much of what passes for Al is actually just variations of pattern matching and questionable neuro linguistic programming.

Alexa, Siri, Cortana and OK Google are not actually Al. They are personal assistants that from a marketing perspective could be viewed as modern versions of "Ask Jeeves."

One large branding client aims to multiply its Amazon investment 10x by 2020.

Very few consumers watch to completion if they have a choice.

Only 17% of video is watched beyond 5 seconds, 10% beyond 10 seconds and 3% to completion.





	2015	2016	2017e	2018f
Estimated smart speaker household penetration %			12	21
Retail e-commerce in USD bn	341.5	393.9	450.7	518.8
Retail e-commerce per 15+ PC with internet USD	1,735	1,915	2,145	2,430
Adult media usage (hours per day in decimals)				
Online	2.73	3.97	4.20	4.40
TV	4.98	4.93	4.76	4.59
Print	0.92	0.87	0.83	0.82
Radio	1.85	1.87	1.83	1.83
Total	10.48	11.63	11.63	11.64
Adult media usage (percentages)				
Online	26	34	36	38
TV	48	42	41	39
Print	9	7	7	7
Radio	18	16	16	16
Total	100	100	100	100

Historic sources: US Census Bureau, Nielsen NPOWER, Forrester, US Dept. of Commerce, Nielsen Total Audience Report, eMarketer



Technology should always be informed by human subject matter expertise.

While some clients do or could embrace data more than others, we believe that there is much more that can be done to drive topline brand growth.

We see effective CPMs rise across programmatic display and video ecosystem as sites improve viewability rates.

We confine investment to the most efficient and fair DSPs and exchanges to maximize the funds available for working media.

Buying digital in-house, especially programmatic, is difficult in terms of finding and keeping the right talent, and knowing how to evaluate DSPs and how to make sure inventory is bought in a well-lit environment.

As Amazon continues to diversify its business and its media offerings, it is important to grow this relationship for both endemic and non-endemic advertisers.

Facebook (and all social video) creative should focus on impactfully conveying the brand's message within the first second or so of the creative.



E-commerce Per User USD

	2015	2016	2017e	2018f
NORTH AMERICA		l	I	
Canada	722	829	1,059	1,318
USA	1,735	1,915	2,145	2,430
	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	,,,,,,,	_,	_,
LATIN AMERICA				
Argentina	88	129	159	180
Brazil	28	28	26	25
Mexico	243	300	375	481
WESTERN				
EUROPE				
Austria	217	250	292	342
Belgium		1,158	1,477	1,847
Denmark	3,248	3,589	4,035	4,403
Finland	1,872	1,695	1,805	1,856
France	1,701	1,839	2,055	2,253
Germany	931	918	1,007	1,071
Greece				
Italy	328	497	566	649
Netherlands	783	1,035	1,242	1,523
Norway	1,291	1,496	1,694	1,893
Portugal		753	807	870
Spain	506	625	806	843
Sweden	635	717	832	874
UK	2,698	3,033	3,264	3,675
CENTRAL &				
EASTERN EUROPE				
Czech Republic	349	415	444	588
Hungary	260	283	315	330
Latvia				
Lithuania				
Poland	410	394	397	471
Russia	540	604	722	803
Slovak Republic	235	249	237	266
Turkey	295	359	423	431
Ukraine	44	68	89	116
ASIA-PACIFIC (all)	750	0.44	0.40	1.005
Australia	753	841	949	1,025
India	27	22	20	19
Japan	636	719	795	834
Sri Lanka		3	3	4

	2015	2016	2017e	2018f
NORTH ASIA				
China	1,094	1,264	1,443	1,574
Hong Kong				
South Korea	1,370	1,447	1,554	1,703
Taiwan	2,463	3,212	3,693	4,326
ASEAN				
Indonesia	36	60	73	89
Malaysia				
Philippines				
Singapore	432	492	542	655
MIDDLE EAST				
& AFRICA				
South Africa	25	32	88	88
Mean	729	806	891	982
Median	523	625	795	834

Total E-commerce in USD (Billions)

NORTH AMERICA Canada 18		2015	2016	2017e	2018f
Canada 18 21 27 34 USA 342 394 451 519 LATIN AMERICA Argentina 3 4 5 6 Brazil 3 3 3 3 3 Mexico 12 16 21 29 WESTERN EUROPE Austria 1.3 1.6 1.9 2.3 Belgium 8 11 13 16 18 20 Finland 7 6 6 7 7 6 6 7 7 6 6 7 7 6 6 7 7 6 6 7 7 6 6 7 7 6 6 7 7 6 6 7 7 6 6 7 7 9 10 1 1 1 1 1 1 1 1 1 1 1 1 1	NORTH AMERICA	1	ı	ı	
LATIN AMERICA Argentina 3		18	21	27	34
Argentina Brazil	USA	342	394	451	519
Argentina Brazil					
Brazil 3 4 29 4 4 1 </td <td>LATIN AMERICA</td> <td></td> <td></td> <td></td> <td></td>	LATIN AMERICA				
Mexico 12 16 21 29 WESTERN EUROPE Austria 1.3 1.6 1.9 2.3 Belgium 8 11 13 Denmark 14 16 18 20 Finland 7 6 6 7 France 75 83 95 106 Germany 48 51 56 62 Greece Italy 9 14 18 22 Netherlands 10 14 17 21 Norway 5 6 6 7 Portugal 4 5 5 Spain 15 19 26 27 Sweden 4 5 6 6 UK 120 137 151 175 Cent Republic 2 3 3 4 Hungary 1 2 2 2 Latvia 24 <td>Argentina</td> <td>3</td> <td>4</td> <td>5</td> <td>6</td>	Argentina	3	4	5	6
WESTERN EUROPE Austria 1.3 1.6 1.9 2.3 Belgium 8 11 13 Denmark 14 16 18 20 Finland 7 6 6 7 France 75 83 95 106 Germany 48 51 56 62 Greece 1taly 9 14 18 22 Italy 9 14 18 22 Netherlands 10 14 17 21 Norway 5 6 6 7 Portugal 4 5 5 5 Spain 15 19 26 27 Sweden 4 5 6 6 6 UK 120 137 151 175 CENTRAL & EASTERN EUROPE Czech Republic 2 3 3 4 Hungary 1 2 2 2 Latvia 1 2 <td< td=""><td>Brazil</td><td>3</td><td>3</td><td>3</td><td>3</td></td<>	Brazil	3	3	3	3
EUROPE Austria 1.3 1.6 1.9 2.3 Belgium 8 11 13 Denmark 14 16 18 20 Finland 7 6 6 7 France 75 83 95 106 Germany 48 51 56 62 Greece 1taly 9 14 18 22 Netherlands 10 14 17 21 Norway 5 6 6 7 Portugal 4 5 5 Spain 15 19 26 27 Sweden 4 5 6 6 UK 120 137 151 175 CENTRAL & EASTERN EUROPE Czech Republic 2 3 3 4 Hungary 1 2 2 2 Latvia 1 1 1 1 Evaluation 24 28 31 36 Slovak Republic<	Mexico	12	16	21	29
EUROPE Austria 1.3 1.6 1.9 2.3 Belgium 8 11 13 Denmark 14 16 18 20 Finland 7 6 6 7 France 75 83 95 106 Germany 48 51 56 62 Greece 1taly 9 14 18 22 Netherlands 10 14 17 21 Norway 5 6 6 7 Portugal 4 5 5 Spain 15 19 26 27 Sweden 4 5 6 6 UK 120 137 151 175 CENTRAL & EASTERN EUROPE Czech Republic 2 3 3 4 Hungary 1 2 2 2 Latvia 1 1 1 1 Evaluation 24 28 31 36 Slovak Republic<	WESTERN				
Austria Belgium Denmark 14 16 18 20 Finland 7 6 6 7 France 75 83 95 106 Germany 48 51 56 62 Greece Italy Netherlands 10 14 17 21 Norway 5 6 6 6 7 Portugal Spain 15 19 26 27 Sweden 4 5 6 6 UK 120 137 151 175 CENTRAL & EASTERN EUROPE Czech Republic 1 2 3 3 4 Hungary 1 2 2 2 Latvia Lithuania Poland Poland 9 10 11 14 Russia 24 28 31 36 Slovak Republic 0.8 0.9 0.9 1.0 Turkey 10 12 14 14 Ukraine 1 1 2 2 ASIA-PACIFIC (all) Australia 15 17 19 22 India 10 10 10 10 Japan 66 75 84 88					
Belgium 8 11 13 Denmark 14 16 18 20 Finland 7 6 6 7 France 75 83 95 106 Germany 48 51 56 62 Germany 48 51 56 62 Germany 9 14 18 22 Netherlands 10 14 17 21 Norway 5 6 6 7 Portugal 4 5 5 5 Spain 15 19 26 27 Sweden 4 5 6 6 UK 120 137 151 175 CENTRAL & EASTERN EUROPE Czech Republic 2 3 3 4 Hungary 1 2 2 2 Latvia 1 1 1 1 Lithuania 24 28 31 36 Slovak Republic 0.8		1.3	1.6	1.9	2.3
Denmark 14 16 18 20 Finland 7 6 6 7 France 75 83 95 106 Germany 48 51 56 62 Greece Italy 9 14 18 22 Italy 9 14 18 22 Netherlands 10 14 17 21 Norway 5 6 6 7 Portugal 4 5 5 5 Spain 15 19 26 27 Sweden 4 5 6 6 UK 120 137 151 175 CENTRAL & EASTERN EUROPE Czech Republic 2 3 3 4 Hungary 1 2 2 2 Latvia 1 1 1 1 Russia 24 28 31 36					
France	-	14	16	18	20
Germany 48 51 56 62 Greece Italy 9 14 18 22 Netherlands 10 14 17 21 Norway 5 6 6 7 Portugal 4 5 5 Spain 15 19 26 27 Sweden 4 5 6 6 UK 120 137 151 175 CENTRAL & EASTERN EUROPE Czech Republic 2 3 3 4 Hungary 1 2 2 2 Latvia Lithuania Poland 9 10 11 14 Russia 24 28 31 36 Slovak Republic 0.8 0.9 0.9 1.0 Turkey 10 12 14 14 Ukraine 1 1 2 2 ASIA-PACIFIC (all) Australia 15 17 19 22 India 10 10 10 10 Japan 66 75 84 88	Finland	7	6	6	7
Greece Italy 9 14 18 22 Netherlands 10 14 17 21 Norway 5 6 6 7 Portugal 4 5 5 Spain 15 19 26 27 Sweden 4 5 6 6 UK 120 137 151 175 CENTRAL & EASTERN EUROPE Czech Republic 2 3 3 4 Hungary 1 2 2 2 Latvia Lithuania Poland 9 10 11 14 Russia 24 28 31 36 Slovak Republic 0.8 0.9 0.9 1.0 Turkey 10 12 14 14 Ukraine 1 1 2 2 ASIA-PACIFIC (all) Australia 15 17 19 22 India 10 10 10 10 Japan	France	75	83	95	106
Italy 9 14 18 22 Netherlands 10 14 17 21 Norway 5 6 6 7 Portugal 4 5 5 Spain 15 19 26 27 Sweden 4 5 6 6 UK 120 137 151 175 CENTRAL & EASTERN EUROPE Czech Republic 2 3 3 4 Hungary 1 2 2 2 Latvia Lithuania Poland 9 10 11 14 Russia 24 28 31 36 Slovak Republic 0.8 0.9 0.9 1.0 Turkey 1 1 2 2 ASIA-PACIFIC (all) Australia 15 17 19 22 India 10 10 10 10 Jap	Germany	48	51	56	62
Netherlands 10 14 17 21 Norway 5 6 6 7 Portugal 4 5 5 Spain 15 19 26 27 Sweden 4 5 6 6 UK 120 137 151 175 CENTRAL & EASTERN EUROPE Czech Republic 2 3 3 4 Hungary 1 2 2 2 Latvia Lithuania Poland 9 10 11 14 Russia 24 28 31 36 Slovak Republic 0.8 0.9 0.9 1.0 Turkey 10 12 14 14 Ukraine 1 1 2 2 ASIA-PACIFIC (all) Australia 15 17 19 22 India 10 10 10 10 10 10 10 10 10 1	Greece				
Norway 5 6 6 7 Portugal 4 5 5 Spain 15 19 26 27 Sweden 4 5 6 6 UK 120 137 151 175 CENTRAL & EASTERN EUROPE Czech Republic 2 3 3 4 Hungary 1 2 2 2 Latvia Lithuania Poland 9 10 11 14 Russia 24 28 31 36 Slovak Republic 0.8 0.9 0.9 1.0 Turkey 10 12 14 14 Ukraine 1 1 2 2 ASIA-PACIFIC (all) Australia 15 17 19 22 India 10 10 10 10 10 10 10 Japan 66 75 84 88	Italy	9	14	18	22
Portugal Spain Spain Spain Spain Spain Sweden Spain Sweden Spain Sweden Spain Sweden Spain Sweden Sw	Netherlands	10	14	17	21
Spain 15 19 26 27 Sweden 4 5 6 6 UK 120 137 151 175 CENTRAL & EASTERN EUROPE Czech Republic 2 3 3 4 Hungary 1 2 2 2 Latvia 2 2 2 2 Latvia 2 3 3 4 Russia 24 28 31 36 Slovak Republic 0.8 0.9 0.9 1.0 Turkey 10 12 14 14 Ukraine 1 1 2 2 ASIA-PACIFIC (all) 3 15 17 19 22 India 10 10 10 10 Japan 66 75 84 88	Norway	5	6	6	7
Sweden 4 5 6 6 UK 120 137 151 175 CENTRAL & EASTERN EUROPE Czech Republic 2 3 3 4 Hungary 1 2 2 2 Latvia 2 2 2 Lithuania 2 28 31 36 Slovak Republic 0.8 0.9 0.9 1.0 Turkey 10 12 14 14 Ukraine 1 1 2 2 ASIA-PACIFIC (all) Australia 15 17 19 22 India 10 10 10 10 Japan 66 75 84 88	Portugal		4	5	5
CENTRAL & EASTERN EUROPE Czech Republic 2 3 3 4 Hungary 1 2 2 2 Latvia 2 2 2 2 Lithuania 9 10 11 14 Russia 24 28 31 36 Slovak Republic 0.8 0.9 0.9 1.0 Turkey 10 12 14 14 Ukraine 1 1 2 2 ASIA-PACIFIC (all) 3 15 17 19 22 India 10 10 10 10 10 Japan 66 75 84 88	Spain	15	19	26	27
CENTRAL & EASTERN EUROPE Czech Republic 2 3 3 4 Hungary 1 2 2 2 Latvia Lithuania Poland 9 10 11 14 Russia 24 28 31 36 Slovak Republic 0.8 0.9 0.9 1.0 Turkey 10 12 14 14 Ukraine 1 1 2 2 ASIA-PACIFIC (all) Australia 15 17 19 22 India 10 10 10 10 Japan 66 75 84 88	Sweden	4	5	6	6
EASTERN EUROPE Czech Republic Hungary 1 2 2 2 Latvia Lithuania Poland Poland Poland 9 10 11 14 Russia 24 28 31 36 Slovak Republic 0.8 0.9 0.9 1.0 Turkey 10 12 14 14 Ukraine 1 1 2 2 ASIA-PACIFIC (all) Australia 15 17 19 22 India 10 10 10 10 Japan 66 75 84 88	UK	120	137	151	175
Czech Republic 2 3 3 4 Hungary 1 2 2 2 Latvia 2 2 2 Lithuania 0 10 11 14 Russia 24 28 31 36 Slovak Republic 0.8 0.9 0.9 1.0 Turkey 10 12 14 14 Ukraine 1 1 2 2 ASIA-PACIFIC (all) Australia 15 17 19 22 India 10 10 10 10 Japan 66 75 84 88	CENTRAL &				
Hungary Latvia Lithuania Poland Polan	EASTERN EUROPE				
Latvia Lithuania Poland 9 10 11 14 Russia 24 28 31 36 Slovak Republic 0.8 0.9 0.9 1.0 Turkey 10 12 14 14 Ukraine 1 1 2 2 ASIA-PACIFIC (all) Australia 15 17 19 22 India 10 10 10 10 Japan 66 75 84 88	Czech Republic	2	3	3	4
Lithuania Poland 9 10 11 14 Russia 24 28 31 36 Slovak Republic 0.8 0.9 0.9 1.0 Turkey 10 12 14 14 Ukraine 1 1 2 2 ASIA-PACIFIC (all) Australia 15 17 19 22 India 10 10 10 10 Japan 66 75 84 88	Hungary	1	2	2	2
Poland 9 10 11 14 Russia 24 28 31 36 Slovak Republic 0.8 0.9 0.9 1.0 Turkey 10 12 14 14 Ukraine 1 1 2 2 ASIA-PACIFIC (all) Australia 15 17 19 22 India 10 10 10 10 Japan 66 75 84 88	Latvia				
Russia 24 28 31 36 Slovak Republic 0.8 0.9 0.9 1.0 Turkey 10 12 14 14 Ukraine 1 1 2 2 ASIA-PACIFIC (all) Australia 15 17 19 22 India 10 10 10 10 Japan 66 75 84 88	Lithuania				
Slovak Republic 0.8 0.9 0.9 1.0 Turkey 10 12 14 14 Ukraine 1 1 2 2 ASIA-PACIFIC (all) Australia 15 17 19 22 India 10 10 10 10 Japan 66 75 84 88	Poland	9	10	11	14
Turkey 10 12 14 14 14 Ukraine 1 1 1 2 2 ASIA-PACIFIC (all) Australia 15 17 19 22 India 10 10 10 10 Japan 66 75 84 88	Russia	24	28	31	36
Ukraine 1 1 2 2 ASIA-PACIFIC (all)	Slovak Republic	0.8	0.9	0.9	1.0
ASIA-PACIFIC (all) Australia 15 17 19 22 India 10 10 10 10 Japan 66 75 84 88	Turkey	10		14	14
Australia 15 17 19 22 India 10 10 10 10 Japan 66 75 84 88	Ukraine	1	1	2	2
Australia 15 17 19 22 India 10 10 10 10 Japan 66 75 84 88	ASIA-PACIFIC (all)				
Japan 66 75 84 88	Australia	15	17	19	22
	India	10	10	10	10
Sri Lanka 0.00 0.02 0.02 0.03	Japan	66	75	84	88
	Sri Lanka	0.00	0.02	0.02	0.03

	2015	2016	2017e	2018f
NORTH ASIA				
China	572	708	859	994
Hong Kong				
South Korea	61	67	74	82
Taiwan	35	50	60	73
ASEAN				
Indonesia	3	6	8	11
Malaysia				
Philippines				
Singapore	2	2	2	3
MIDDLE EAST				
& AFRICA				
South Africa	0.4	0.6	2.0	2.1
WORLD USD bn	1,498	1,794	2,105	2,422
	1.23	1.20	1.17	1.15
WITHOUT CHINA	926	1,086	1,246	1,427

Adult Internet Users (Thousands)

	2015	2016	2017e	2018f
NORTH AMERICA	I	l	1	
Canada	24,309	24,747	25,140	25,501
USA	196,800	205,637	210,128	213,509
LATIN AMERICA				
Argentina	29,000	29,800	30,600	31,200
Brazil	113,700	116,000	122,480	129,321
Mexico	51,000	55,000	57,228	60,245
WESTERN				
EUROPE				
Austria	6,032	6,273	6,441	6,600
Belgium	8,871	7,108	7,300	7,301
Denmark	4,213	4,428	4,518	4,600
Finland	3,550	3,591	3,520	3,550
France	44,318	45,397	46,103	46,841
Germany	51,923	55,600	56,100	58,000
Greece	5,033	6,457	6,850	7,050
Italy	28,668	28,695	31,326	33,798
Netherlands	12,900	13,363	13,630	13,631
Norway	3,690	3,685	3,796	3,909
Portugal	5,604	5,742	5,889	6,000
Spain	28,901	30,256	31,642	31,643
Sweden	6,950	7,134	7,174	7,214
UK	44,419	45,158	46,412	47,665
CENTRAL &				
EASTERN EUROPE				
Czech Republic	6,974	6,994	7,312	7,500
Hungary	5,094	5,620	5,710	6,100
Latvia	1,251	1,255	1,275	1,276
Lithuania	1,570	1,622	1,651	1,680
Poland	22,000	25,000	27,500	29,000
Russia (urban)	44,691	46,032	43,600	45,039
Slovak Republic	3,547	3,729	3,920	3,921
Turkey	32,533	32,533	32,533	32,533
Ukraine	21,400	21,600	21,000	21,000
ASIA-PACIFIC (all)				
Australia	19,417	19,695	20,164	21,172
India	350,000	426,000	481,000	500,000
Japan	103,600	104,500	105,000	105,400
Sri Lanka		6,000	8,000	9,000

	2015	2016	2017e	2018f
NORTH ASIA				
China	523,078	560,138	595,197	631,590
Hong Kong	4,297	4,547	4,375	4,288
South Korea	44,216	46,078	47,400	48,000
Taiwan	14,381	15,473	16,147	16,850
ASEAN				
Indonesia	93,400	102,800	112,600	123,000
Malaysia	24,209	24,704	25,255	27,704
Philippines	47,100	54,400	60,300	64,600
Singapore	4,240	4,323	4,470	4,590
MIDDLE EAST				
& AFRICA				
South Africa	16,928	17,560	22,549	24,127
WORLD (million)	2,054	2,225	2,363	2,466

