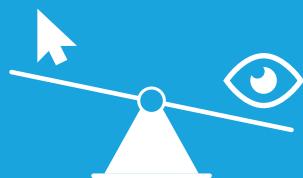
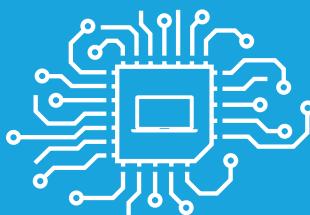
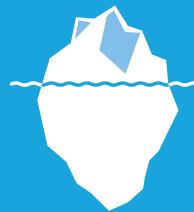


TOP 10 BURNING ISSUES IN DIGITAL



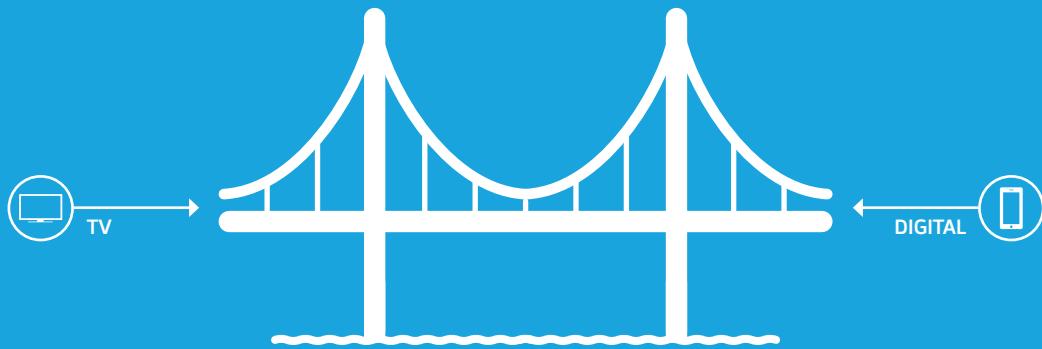
Top 10 Burning Issues in Digital

As media consumption continues its unabated shift to digital, annual growth in the digital ad market of 23%* should come as no surprise. With this growth comes new challenges and opportunities for both media buyers and sellers. As we talk to our publisher, advertiser and agency clients, many are focused on common topics, trends and issues that are impacting their business and changing the way they evaluate digital in the context of the broader media ecosystem.

Here is what we see as the top 10 burning issues in the US today and how comScore is thinking about them.

*Source: IAB Ad Revenue Report, US, 2017

1 Bridging the Divide Between TV & Digital

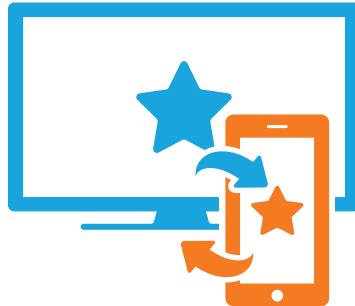


TV and digital must be based on the same opportunity-to-see standard.

Cross-platform convergence is our new reality as the lines continue to blur between traditional and digital media distribution and consumption. Differences in the way each medium has historically been measured demand better alignment to make cross-platform measurement usable in the marketplace.

Cross-platform convergence

Consistency and comparability in reporting metrics – such as reach, frequency, and demographics – are paramount, but TV and digital must also be based on the same opportunity-to-see (OTS) standard.



At the center of the divide sits digital video, which combines the sight-sound-and-motion of TV with the targeting of digital. This inventory can extend the reach and ratings of professionally-produced TV content but also takes on digital native forms, such as user-generated or short-form content that might warrant different treatment. These differences are raising a host of questions as to the best ways to advertise on digital video: how effective is cutting down a 30-second TV spot to 15-seconds? Are digital video viewers more tolerant of 5-6 second spots? Do pre-roll or mid-roll ads work better? How can we have confidence these ads are even viewable?

Differing media make comparable metrics an issue in digital, particularly due to the prevalence of non-viewable impressions and invalid traffic (IVT), both of which prevent an ad from meeting the OTS standard. These are two of the biggest contributors of digital's messy supply chain, an issue that has been increasingly highlighted by large brand marketers who are demanding greater transparency as they invest more in digital.

If digital advertising ever hopes to level the playing field with TV, it's going to need to clean up its supply chain.

2 Advanced Audience Data



Big data has been transforming the media industry for some time, but perhaps in no more significant way than in the growing application of advanced audience data.



In digital, advanced audiences have been a part of the buying and selling of inventory for quite some time. Using comScore Plan Metrix, auto brands looking for in-market consumers plan digital buys based on where these audiences spend time online. Travel service providers reach consumers considering specific vacation packages. Consumer packaged goods companies reach organic food buyers.

Now, with access to big data and technology, we are seeing a shift toward this same type of audience-based buying in TV and cross platform. TV networks, for example, are now making their inventory available for audience-based buys. OpenAP, a collaboration between Fox, Turner and Viacom, is a major industry initiative that promises to accelerate the use of advanced audience data for TV buys and has advertisers excited. comScore is an active measurement partner in this OpenAP initiative.

Advanced audience planning paves the way for advanced audiences to be used as a basis of transacting across all screens.

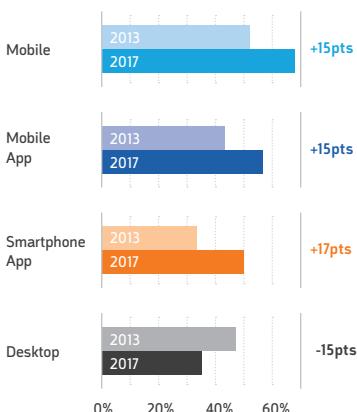
This creates a significant opportunity to unlock value for all members of the ecosystem, and yet another need for consistency and convergence of measurement in our increasingly cross-platform world.

3 Monetizing Mobile



Mobile media now accounts for ½ of digital media time spent.

Share of digital media time spent by platform



Mobile media has taken over for desktop as the primary digital engagement platform – now accounting for two thirds of digital media time spent* – but publishers have found the medium much harder to monetize. Dollars appear to be flowing disproportionately to the largest platforms while the mid- and long-tail of publishers are left competing in what some argue amounts to a zero-sum market.

Underlying many of the monetization issues are media fragmentation and measurement challenges unique to mobile.

Mobile apps, for example, require SDK adoption for many measurement needs, and publishers understandably have SDK fatigue. Greater standardization around measurement implementation can help solve the fragmentation problems, a cause which the IAB has recently stepped in to try to address.

Aligning mobile with desktop through unduplicated measurement of campaign audiences also helps digital better demonstrate audience scale and provides planners with improved data for more efficient campaign planning.

This gives digital a bigger seat at the table, which can help facilitate the flow of ad dollars, particularly to individual publishers.

Source: comScore Media Metrix Multi-Platform & Mobile Metrix, US, Total Audience, June 2013 - June 2017

*Source: Media Metrix Multi-Platform, US, 2017

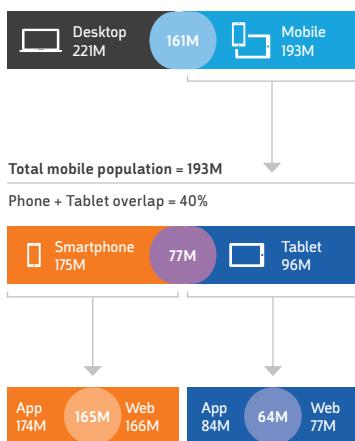
4 Measuring Unduplicated Reach Across Platforms



Understanding overlaps across platforms

Total digital population = 254M

Desktop + Mobile overlap = 63%



Source: comScore Media Metrix Multi-Platform, US, June 2017

The historical challenge in digital media measurement has been the deduplication of audiences across multiple media platforms. comScore's introduction of Media Metrix Multi-Platform in 2012 solved this important challenge, ensuring that digital media companies could have their entire audiences represented to advertisers.

But digital media has continued to evolve across even more platforms as audiences diversify beyond their owned-and-operated content channels to distributed publishing platforms.

Many publishers now have partnerships in place to optimally deliver their content to audiences where they spend most of their time. As apps become the front door through which most digital consumers experience the internet, publishers who want to stay front and center in the minds of their readers must fish where the fish are – and often that's on the biggest social media, video and news platforms.

comScore is committed to working closely with these platforms to credit publishers with this distributed traffic. Measurement integrations with AMP, Apple News, Facebook Instant Articles, Flipboard and Google Play Newsstand have already been established, with more on the way.

Certain publishers are seeing that, in aggregate, traffic from these platforms can add an incremental 25-30% to their unique audience in a given month.

Getting credit for these audiences is critical for publishers being able to demonstrate their full scale and articulate their value to advertisers.

5 Cross-Device Marketing



Device graph



For years, it has been digital's promise to help marketers reach the right consumer on the right platform at the right time – with the right message. Never has this been more important than now, with so many different devices and ways to access content, and never has this promise been so close to becoming a reality, largely thanks to the emergence of the 'device graph'.

In its simplest definition, a device graph uses common identifiers to create associations between different digital devices, allowing for a holistic view of a person's media and advertising consumption. This capability helps marketers plan, activate and evaluate audiences and advertising in a unified way.

But not all device graphs are created equal, because there's significant variation in their underlying data sources and cross-device unification methods.

Critical questions must be asked to understand the quality of the device graph models: Does first-party data form the foundation of the device graph? How big are the data sets? What inputs inform the model? Are techniques probabilistic or deterministic? What data is used to validate these models? What intra-device capabilities exist to understand consumption across platforms and apps?

Getting answers to these important questions upfront will set marketers up for success as they build strategies to incorporate this type of person-level data into their businesses.

6 Programmatic Pressure on CPMs



Brand lifts* for premium and non-premium sites**

■ Premium Publishers
■ Non-Premium Publishers



The early promise of programmatic advertising may now be catching up with reality. Marketers, once enamored with reaching highly-targeted audiences at bargain-basement rates, are encountering unanticipated problems.

In some cases, they are over-targeting consumers at the expense of the broader reach needed to grow their brands. In other cases, they find that low-priced inventory tends to come with more quality-control issues, like running on low quality sites or against invalid traffic (IVT). Publishers, meanwhile, are realizing that chasing extra dollars by offloading inventory at too low a rate is contributing to overall pricing pressure on the valuable premium inventory that drives the lion's share of their ad revenue.

The winds are beginning to blow back in the direction of media quality, as marketers show a willingness to put a premium back on being seen in a well-lit, quality environment.

After all, they should place a premium there given the evidence showing that these environments deliver a halo effect for brands that drive higher advertising effectiveness. comScore conducted research in 2016 showing that premium publishers drive an average of 67% higher branding effectiveness. More significantly, campaigns seen on premium sites moved the needle on mid-funnel branding effectiveness metrics such as brand favorability.

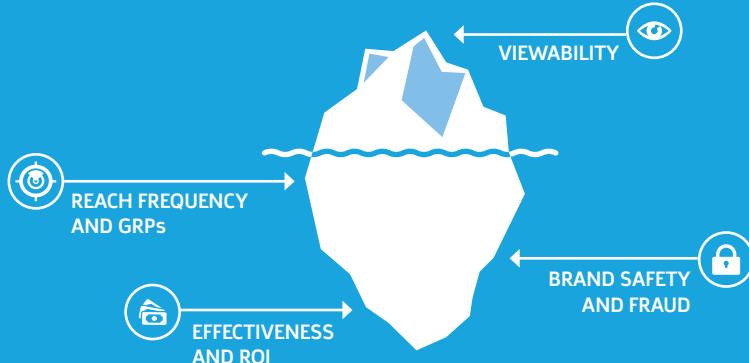
This is a clear reminder how important it is not to lose sight of ways in which brands persuade audiences to think and feel differently. That's not to say that programmatic buying and selling of ads still doesn't have an important place in the efficiency sector of the digital ecosystem, but there must be disciplined use of pre-bid quality checks and post-bid verification, like comScore validated Campaign Essentials, to ensure that advertisers and publishers are getting full value for their money.

*Average brand lift; impression weighted

**Premium publishers are Digital Content Next members. Non-premium are non-members.

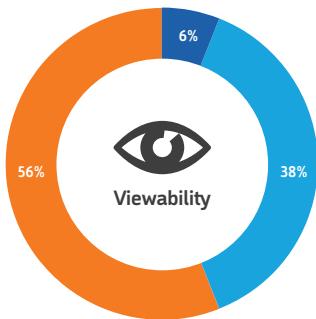
Digital Content Next is a trade body that represents high-quality digital content companies.

7 Moving Beyond Viewability



Viewability allows us to know if an ad can have an impact and should be seen as table-stakes for any campaign measurement.

Percent viewable desktop ad impressions in the US



Digital ad viewability first emerged as an important issue in 2011, and years later many in the industry are still grappling with its implications. While there has been greater standardization around transacting on viewable impressions, there remains too strong a focus on the single metric of viewability, often incorrectly using it as an effectiveness metric rather than as a diagnostic for managing inventory quality.

Viewability allows us to know if an ad can have an impact and should be seen as table-stakes for any campaign measurement. It is the beginning, not the end, of the conversation. As consumers, we don't buy a new TV because it has a low defect rate on the production line; we buy it because of the quality of the experience it delivers at the price we're willing to pay. With digital ads, less focus should be placed on whether the ad is viewable and more focus should be placed on the quality of the ad unit, the ad creative, the audience it reaches, and the context in which it is seen.

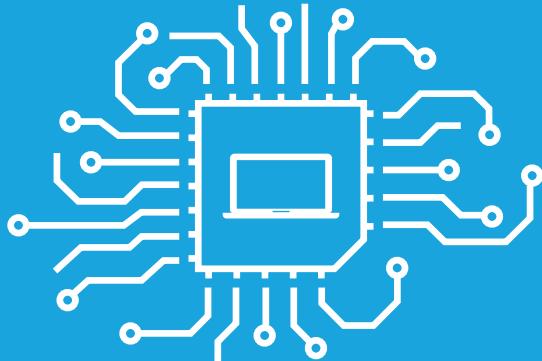
The fundamentals of advertising delivery – reach, frequency, GRPs and demographics – remain as relevant today as ever.

Ultimately, understanding whether or not an ad actually achieved its campaign objective is paramount. Metrics of campaign effectiveness, such as attitudinal, behavioral and sales lift, can tell you if the advertising worked. Clean, viewability impressions are an important input, but it is time we move beyond viewability and retrain our sights on the metrics that matter.

- Viewable
- Non-Viewable
- Invalid Traffic (IVT)

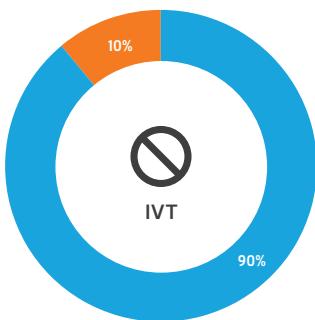
Source: comScore vCE Benchmarks, US, Q2 2017

8 Filtering Big Botnets



Invalid traffic (IVT) by type*

○ General IVT* ○ Sophisticated IVT**



*General IVT - Traffic identified through routine means of filtration that must be removed from monetized counts and metrics.

General IVT techniques rely extensively on list-based common filtration procedures, but not solely on these techniques.

**Sophisticated IVT - More difficult-to-detect invalid traffic that requires advanced analytics, multi-point corroboration, or significant human intervention for identification.

Source: comScore vCE (Custom),
May-July 2017 (US Desktop)

Continued accounts of large botnets – like Methbot which drew headlines in late 2016 – have caused ongoing concern amongst advertisers and publishers alike. As they threaten to proliferate and escape accountability from some verification providers, they erode trust in the entire digital advertising ecosystem.

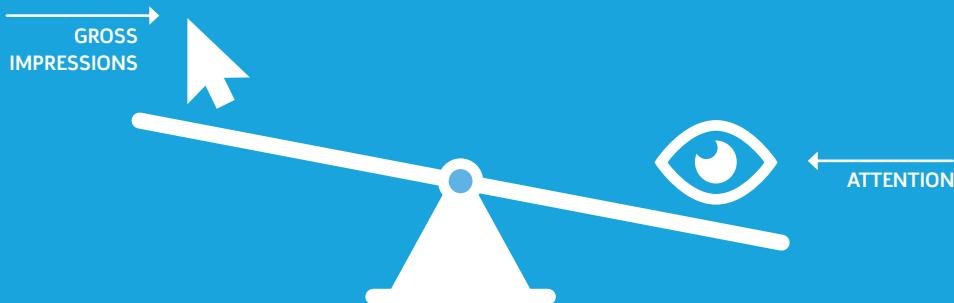
Advertisers waste their budgets while publishers look worse for failing to deliver legitimate advertising.

This issue is a significant one that is only becoming even more pervasive. While Methbot garnered a lot of media attention last year, it was not unique, unfortunately, in terms of its scale and impact. comScore's MRC-accredited sophisticated invalid traffic (SIVT) detection discovered and filtered out Methbot months before its presence was broadly cited by the media, but there were also several other similar botnets discovered around that time and throughout 2016 of similar size. In fact, Methbot drove just 0.86% of global IVT filtered by comScore the day before it was unmasked.

From May to July 2017, SIVT of this nature accounted for 90% of US IVT.

Undoubtedly, IVT is a problem across all of digital, but it gets worse for high-value inventory because fraudsters tend to chase high CPMs. Video inventory has become a magnet for IVT with rates running nearly twice as high as display inventory and growing at a much faster rate. Such high levels of video IVT not only diminish trust in digital but they also undermine the ability to compare against TV. As TV ratings evolve to include digital video inventory, failure to detect and remove IVT from this inventory can lead to significant ratings miscalculations. This underscores the need for advanced forensic methods for detection and removal of this activity.

9 The Value of Attention



Return to quality environments



Of late, premium publishers want to not only place more value on “attention” or time spent with the content but also begin transacting on that basis.

There is some rationale in this argument because CPMs should ideally reflect advertising effectiveness, and more time in-view increases the opportunity for ads to have an impact.

Use of attention metrics also advances the discussion beyond viewability toward metrics that may correlate better with actual effectiveness.

But changing the basis for transactions is easier said than done and requires a lot of cross-industry coordination. The media industry has been predicated on impression-based currency since its early days, and even the transition from one impression-based currency (gross served impressions) to the more relevant impression-based currency (viewable impressions) has taken more than five years and is still not fully aligned. Attention metrics can and should become a consideration in the valuation of inventory.

Marketers who only seek out impressions or clicks at the lowest CPM open themselves up to poor-quality impressions, low engagement sites, and potentially non-brand safe environments.

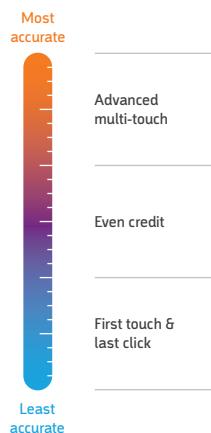
There must be a return to quality media environments and that conversation starts with placing more value on attention metrics.

10 Advertising Attribution



Many still rely on simplistic approaches, such as first-click or last-click attribution, even though more sophisticated methods are now available.

Accuracy depends on the attribution methodology



Being able to accurately identify the value of the various elements in a marketing plan is an increasingly important component of campaign effectiveness measurement. Great progress has been made in recent years.

However, many still rely on simplistic approaches, such as first-click or last-click attribution, even though more sophisticated methods are now available.

Impression-level advertising measurement across media platforms combined with descriptive data that's tied to outcome metrics provides rich information for analysis.

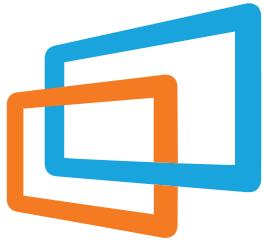
Cross-platform campaign measurement can help determine which channels are most effective. Descriptive impression-level data such as placement type, ad format, creative, media placement and demographic reached provides more avenues for analysis to figure out which variables are working. Diagnostic metrics like viewability and invalid traffic help filter out the effects of ads that can't drive any impact. And finally, the ability to link impressions to outcomes – whether that's a lift in attitudinal metrics, behavior, in-store sales or other dependent variables – quantifies the magnitude of the advertising effects.

Taken together, this data can illuminate what's working so that marketers can allocate their budgets more efficiently. Rather than relying on marketing mix models to assess the effectiveness of a campaign post-flight, marketers can now use in-flight predictive attribution tools to assess impact and course correct, as needed. They can optimize media buys to increase effectiveness, get detailed feedback on campaign performance and adjust strategies to drive greater ROI. Sophisticated, multi-touch advertising attribution is possible today and marketers are only now beginning to understand its power.

These digital issues continue to burn hot across the industry. The good news is that progress is being made on all fronts, but we must continue to build on this progress.

Richer data, advanced measurement methods, improved technology to filter waste, and better alignment between the buy and sell sides promise to deliver a healthier digital media and advertising landscape going forward.

Digital can be a bit messy at times, but the future remains bright!



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