

IS
VIRTUAL

the new

REALITY?

A MARKET SNAPSHOT
OF VR PUBLISHING
AND MONETIZATION
SEPTEMBER 2016

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> INTRODUCTION

Everyone has their “first time experience with Virtual Reality” story. These first VR experiences are often profoundly transforming, providing breakthrough glimpses into artificial realities that were previously only present in our imaginations. We see these first experience stories play out again and again with friends and colleagues who pick up and try Google Cardboard at the office, or who attend events with demos of an ultra-high-end VR headset. For those in publishing, marketing, ad tech, and creative communities, VR opens the door to exciting new opportunities for developing immersive content and brand storytelling.

For those who have been watching the Virtual Reality space for a while—or experienced the rise and fall of 3D Video—it’s natural to feel uncertainty about both where things are with VR today, and where they might be heading. As it turns out, though, 2016 has already been a historic year: we are now seeing Virtual Reality finally achieving mass scale. With the consumer launches of Oculus Rift, HTC Vive, and Samsung Gear, VR experiences are expanding beyond the hardcore gaming community and into everyday mobile and desktop browsers via 360 video. Market penetration has deepened with the emergence of VR apps and games viewed through Google Cardboard, as well as other more advanced headsets.

So in this watershed year, it’s been incredibly interesting speaking with the practitioners of Virtual Reality—the professionals who are actively creating the VR hardware, software, content, and advertising—to explore what they’ve learned thus far and where they see things headed. While our conversations with industry experts focused largely on VR, Augmented Reality (AR) was also discussed at some length—especially since the July, 2016 launch of *Pokémon GO*—which points to the continued evolution of enhanced mobile experiences that overlay digital information on top of the physical world.

This report offers an overview of observations and opinions on VR from a distinguished panel of over two dozen industry-leading voices in publishing, advertising, VR software, and developer platforms that IAB conducted from June through August, 2016. The findings offer a market snapshot detailing key takeaways, lessons learned, and future plans in the emerging field of Virtual Reality.

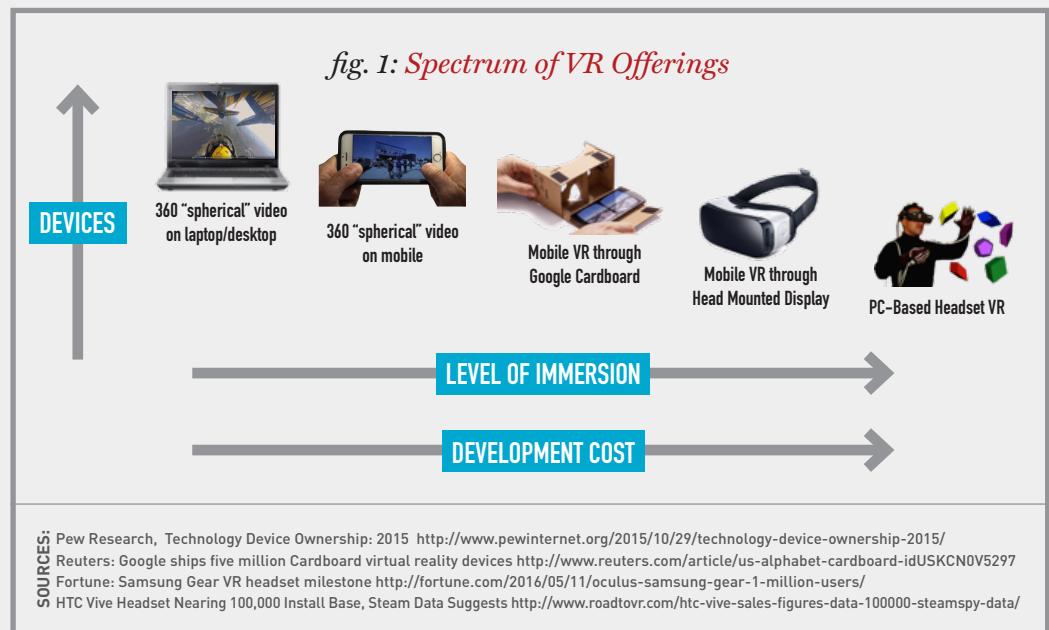
This document is not intended to serve as a technical guide or complete VR primer; more formal documentation on VR terminology, definitions, and emerging ad formats from IAB are forthcoming. This overview offers a current snapshot of what the VR landscape looks like, in the words of those working in the space. We hope that you find this overview of industry expert opinions and observations illuminating and useful, as together we process the unfolding implications of Virtual Reality.

> DEFINING VIRTUAL REALITY—PRACTICE AND PITFALLS

As we discussed VR with publishers and advertisers, we wanted to make sure that we were all speaking the same language. Does everyone think of VR in the same way? Are there standard definitions for what constitutes VR? The short answer for both is “no.”

In its purest form, VR contains stereoscopic video allowing each eye to view a different display or video that—when combined with the view from the other eye—creates a visual, virtual reality. Spatial audio—where sound has direction and volume relative to its source—enhances that virtual experience with 3D sound. The ability to walk around this virtual world can help to maximize the immersion effect. And the self-awareness provided by one’s own hands and feet in a virtual world can further immerse the participant in an alternate reality.

Perceptions on the core elements of tech, content, and user experience required for basic VR remain a moving target. The rapid rate of change in the VR space only complicates attempts at definition. Much like programmatic video, there is a spectrum of VR offerings—with the fully immersive visual, auditory, and physical experience of VR on one end of the spectrum, and 360 video on desktop on the other. Additionally, some believe that dedicated headsets are required for true VR, and that makeshift devices that hold a smartphone close to your face fall short of providing a truly immersive VR experience.



So where does this leave 360 video? 360 video can be consumed on any screen, with navigation through content guided by a controller like a mouse, or the accelerometer of a mobile device. The screen only has to be visible—whether a few feet away, or strapped to one’s face. As Figure 1 illustrates, the quality of user immersion varies across the VR platforms, with simpler 360 video falling short of a true VR threshold.

Ultimately, “immersiveness” is the watchword in VR for both advertisers and publishers. **Yale Cohen**, SVP, Publicis Media expressed it best when he said, “When I want to view digital video, I can be in my living room watching it on a screen. VR turns that model upside down because you don’t know you’re in your living room. You could be anywhere.” **Noah Heller**, VP, Emerging Technology at Hulu added, “You know it’s VR when someone has a visceral reaction.” Whether that immersiveness requires spatial audio, the ability to see your own hands in the virtual world, and the freedom to walk around unimpeded is up for debate.

For Time Inc.'s **Chris Hercik**, "true VR" is more of an immersive experience that enables the user to interact in some way with the content, and choose a path within an experience. For him, 360 video or photo experiences are not necessarily VR. "I think we need to clearly distinguish the two, because when we're talking to advertisers or partners, we need to clarify which one offers just a point of view and means of looking around, and which one is more immersive." **Mia Tramz**, also from Time Inc., added that in her mind, the future of the medium is fully immersive experiences. "360 VR experiences are great on-ramps to VR and for acquainting consumers with the medium, but the platforms that offer more immersion and interaction—especially in room scale—are undeniably compelling."

As with any video striving to reach the consumer through sight, sound, and motion, let's not forget the importance of the content, regardless of format. **Aaron Luber** of Google points out, "Whether it's mono or stereoscopic video, we're still trying to answer the same questions around how do you tell a story? What did you draw peoples' attention to? And that has nothing to do with whether or not the content was in 3D."

In the quest to understand publisher's and advertiser's definitions of VR, other terms and acronyms surfaced including AR (Augmented Reality), MR (Mixed Reality), and IR (Interactive Reality), which, despite their own challenging definitions, each provide immersion to lesser degrees than VR. You may have even heard of a recent mobile game called *Pokémon GO* that harnesses Augmented Reality and has drawn millions of people across the world to chase down imaginary creatures in the real world, using their mobile phones.

> HOW ARE PUBLISHERS & ADVERTISERS CREATING VR CONTENT?

Perhaps not surprising is that when we define VR as having multiple levels of complexity, the deepest levels of immersion also cost the most to produce, while the simpler and less complex activations—like 360 video—bring the lowest relative creation costs. This cost disparity has also led to a disparity in VR audience scale, with 360/spherical video (available on YouTube and Facebook) at one end having the greatest audience scale, while stereoscopic, 3D audio, head-mounted display experiences still face significant challenges of scale.

When *The New York Times* launched its NYT VR app in November, 2015 with launch sponsors GE and Mini, it became the most successful app launch in *NYT* history. Since then, advertisers have included Cadillac, Ford, Lufthansa, Hilton, and TAG Heuer. According to *The Times*'s VP of Ad Innovation, **Nick Van Amburg**, "We reached one million users at launch, driven in part by distribution of a million Google Cardboard viewers to Sunday home delivery subscribers, and we also sent Cardboard to more than 300,000 of our digital subscribers. The app has had more than 950,000 downloads." Van Amburg says they're now seeing users spend on average over six and a half minutes in the NYT VR app, with 58 percent of users coming back month over month. When you include YouTube and Facebook 360, there's significant distribution building for *The Times*'s 360 video assets as well. "We're now talking about engaging millions of people, which means this is not a flash in the pan—it's something people want more of."

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VR is authenticity and presence. When we think about what to do in VR, we think ‘will it deepen the experience beyond the scope of traditional 2D viewing?’ If the answer is yes, then VR would be serving its purpose.

— Noah Heller, Hulu

Hulu is working with Live Nation to create VR experiences that are more than just a 360 camera on a stick. These videos reveal the artist’s creative process, the dressing room, the onstage experience, audience reactions, and the show’s aftermath.

As VR grows and creators, publishers, and advertisers work to engage consumers in relevant and meaningful ways, timing and recency become factors, just like in any form of video. While a large portion of content for VR is pre-recorded, Fox Sports focuses heavily on live content, working closely with NextVR to create live VR sports experiences. More recently, Fox Sports has added interactivity to take the experience to a level beyond 360 video. In an integration with the Daytona 500, Toyota’s VR activation with Fox Sports became a great complement to the rest of its campaign.

Turner Sports, through its partnership with Facebook’s Oculus VR platform, also has begun live streaming its sports events—including NCAA basketball March Madness games—via an app made available to users of Samsung’s Gear VR headset. “What better way to give people access than to put them in the live game itself,” says Turner Sport’s **Mark Johnson**.

The advertising content found in VR today ranges from rich, custom app-based experiences that immerse the viewer in a piece of branded entertainment—such as an exploration of a travel destination, or a deep dive demonstration of an automobile interior—to simpler 360 video executions that follow existing digital video conventions, including pre, mid, or post-roll videos presented within a larger VR video experience.

There are also examples of deeply immersive event-based VR activations. At the 2016 South by Southwest (SXSW) conference, a number of brands were engaging in VR. Groove Jones, a creative studio focused on Virtual Reality content and apps, created the McDonald’s VR activation, a completely custom experience that gave consumers the opportunity—wearing the HTC Vive VR goggles—to step into and decorate the inside of a virtual Happy Meal box using hand-held controllers.

*fig. 2: McDonald’s V-Artist Experience
 2016 SXSW Festival in Austin, TX*



Source: Groove Jones - <https://www.groovejones.com>



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**Advertisers are always
 looking for new ways to
 connect their brands
 with strong custom
 content, ideally
 something that's never
 been done before.
 VR offers a great
 opportunity, provided
 the storytelling is
 front and center.**

– Jeffrey Weinstock, ABC

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Publishers we spoke with agreed that agencies and advertisers have been very interested and active in pursuing VR and 360 video opportunities, often as components of larger digital campaigns. The challenge for sellers is simultaneously qualifying and educating buyers on what's actually possible—while it's being invented.

VR has created a new way for publishers and advertisers to work together creatively. Instead of delivering traditional video content to the publisher, agency creatives are increasingly asking publishers for ideas and creative executions. This in turn pushes more publisher branded content teams into VR, either partnering with VR production studios, or building dedicated in-house teams. The more complex the idea, the more tailored the solution.

> WHAT ARE VR'S STRENGTHS AND OPPORTUNITIES?

IMMERSIVE STORYTELLING

When we spoke to publishers and advertisers about the opportunity and promise of VR, invariably our experts used terms such as “immersion,” “presence,” and “empathy” to highlight the difference in storytelling capabilities that VR brings. For DigitasLBI's **Megan McCurry**, the medium's strength comes from its immersive properties and the opportunity for advertisers to focus the consumer's attention in an entirely new way. “We all know how hard it is to capture someone's attention and do it well with traditional media forms. VR offers a novel way to engage with people on a much more immersive basis.”

Marketers know—perhaps better than anyone—how distracted consumers are as they're looking at multiple devices throughout the day. So how does one cut through the clutter and gain some advantage? One of the most important things VR has going for it is that it really does create focus. Viewers are totally immersed in the experience—whether it's through a mobile device viewed through cardboard or a more advanced headset, people are totally focused on the message. For sports and entertainment firms like Live Nation, Fox Entertainment, and Turner Sports, capturing and streaming live events in VR represents a compelling new way to develop audiences remotely, by offering VR consumers the best seats in the house. With VR, the content publisher can bring the fan closer to an artist than they ever could be in real life.

Time Inc.'s **Chris Hercik** sees VR changing the way they build content across the entire portfolio of Time Inc. titles, from *People* to *LIFE* magazine. “We talk about storytelling and bringing a viewer into an experience. VR is the most powerful way to put a user into the story. Whether it's practicing mindfulness in a bioluminescent forest, experiencing a long-form documentary, floating in outer space, driving a car 200 miles an hour, or experiencing an immersive VR fashion and music video. There is nothing as immersive as this. I think it's going to prove to be a very powerful tool.”

SHOPPING AND PRODUCT DEMOS

In terms of monetization opportunities, many among our expert panel mentioned the impact they expect VR will bring to the worlds of shopping, real estate, and product demos. Citing a recent [Fast Company](#) article and earlier [Journal of Consumer Research](#) study, one expert mentioned that consumers who go into a store and

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VR will change the way people travel and experience new things. You'll be able to get great information before you purchase a new car or a new product. You'll be testing out hotels before you go and testing out products before you purchase.

– Yale Cohen,
 Publicis Media

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touch an item may be willing to pay more for the item than those who didn't touch it, and that this also holds true for those who were asked to simply imagine they'd touched the product. The study's findings are interesting to consider in the context of VR's ability to create brand impressions through immersion. With Virtual Reality, consumers not only imagine, but actually have the experience of touching and checking out merchandise, which may impact their purchase intent and potentially their overall affinity for a brand.

ABILITY TO STIR EMOTIONS

A number of the experts we surveyed spoke about the power of VR to stir emotions and create empathy among viewers in an entirely new way, particularly with VR stories that place the viewer in the center of a situation that they might not otherwise experience. Being at the top of Mount Everest, or experiencing war as it happens, or being transported to the middle of a natural disaster are all experiences that bring deep emotions to the surface, something that publishers and journalists have always sought to arouse in their audiences.

One expert described the emotion-grabbing aspect of VR, as they remembered watching *The New York Times'* award-winning VR documentary “The Displaced,” about a group of children who lost their homes and families to war. “As I was watching, I heard a plane overhead and it became louder, and I saw food drops happening. And you could see, as the food fell to the ground, people came running out to grab it. This was one of the most powerful things because it brings all your senses to life. I think VR is one of the most potent empathy engines. When you're actually feeling like you're there, you gain a whole new level of empathy for a subject.”

While VR today is for the most part a solitary media experience, there are applications for promotional and out-of-home events that gather people together to experience VR content. **Marley Kaplan**, Head of Innovation at Kinetic, explains: “The same way people engage while watching sporting events at bars or dive into adventures through movie screens or theaters, Virtual Reality provides a realm of new experiences that people ultimately bond over together. Essentially, VR has the power to connect the one-to-one experience with the one-to-many. When a VR activation is presented in a space for shared experiences—like amusement parks or industry events like South by Southwest—brands can connect with audiences on an emotional level for a more engaging experience than ever before.”

CONTENT PRODUCTION: THINKING OUTSIDE THE FRAME

VR enables the viewer to control what they see as they move their head or their virtual bodies (avatars) through space, essentially turning the viewer into the storyteller. For many of the experts we spoke with, understanding this fundamental shift in control is crucial for successfully leveraging the platform. This paradigm shift is having a profound impact on the production of VR content and advertising.

When one produces traditional video or a commercial, the process is pretty straightforward. There's a camera, actors, and a director, and that's about it. But in VR, multi-lensed cameras are pointed everywhere. Producers need to think about all the various ways that someone might engage in the experience and try and figure out, in

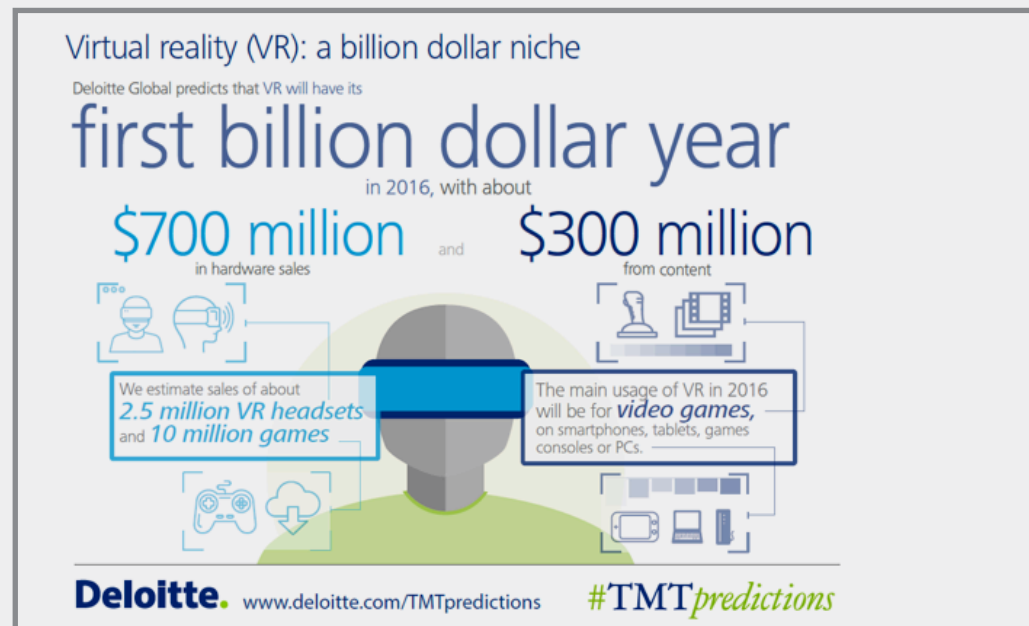
advance, potential storylines from multiple end-user perspectives. VR directors need to consider all the different people on a set, the actors, and the production staff who now—because the camera sees everything—may also be in the shot. Future VR directors may need to think less about how to control the viewer's experience, and more about how to highlight viewing options with multiple camera angles and on-screen cues that help guide viewers through their own self-directed storyline.

VR may also put greater demands on video editors and game developers, whose jobs will require an understanding of what audiences need in terms of visual or auditory cues, and giving it to them before they have to search for it. The ability to edit VR video in a way that anticipates and subtly leads users through their self-directed experience—while also providing a coherent narrative—will require new models for thinking about audience perspective and engagement with content.

> VR WEAKNESSES AND THREATS

As of this writing, VR is still a niche offering, though a growing one with tremendous potential. While VR technology is improving and hardware is becoming cheaper and easier to access, our experts expressed genuine concerns, especially with the current rate of adoption, and the challenges that a lack of audience scale brings to monetization. As DigitasLBi's **Megan McCurry** explains: "Once you get someone to engage, that's great, but it takes quite a lot at this point to get them to take time to watch the video and engage with these experiences."

fig. 3: *Virtual Reality (VR): A Billion Dollar Niche*



CONSUMER ADOPTION AND SCALE

Opinions varied in terms of speed of adoption and barriers to growth. Some wondered if VR can catch up to the numbers that industry analysts have anticipated for VR. Deloitte Global, for instance, has predicted that 2016 will be the first billion dollar year for VR,

with \$700 million in hardware sales and the remainder coming from content. In terms of headsets, Deloitte Global estimates that 2.5 million VR headsets and 10 million copies of VR games will be sold in 2016.

The key issues at this point are making sure that the technology is broadly distributed—beyond the gaming community—and that the pipeline for content is fast-flowing.

For National Geographic’s **Jim Kelleher**, a concern is the pace of adoption of higher-end systems to move the market beyond lower-end 360 video experiences, otherwise “the immersive experience could remain a niche, heavy gamer experience in the near term.”

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We need to make sure the technology gets into people’s hands. We’ve gotten past the period of, oh, this is the next 3DTV, when you had to have a special subscription and no one would watch it. The key now is that quality content has to keep coming. If content slows down, then people using the devices will slow down.

— Andrew Klein,
MediaVest | Spark

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HIGH COST

The high cost of VR represents another threat to growth. Currently, the target market for PC-based high-end systems—like Oculus Rift and HTC Vive—is the hardcore gamer that’s willing to spend over a thousand dollars to experience fully-immersive VR. The question many of our experts raised around costs is whether smartphone-based VR can evolve to become more competitive with PC-based experiences that require much more powerful hardware, software, and a faster internet connection. For Immersv CEO **Mihir Shah**, there is an opportunity through lower-cost smartphone-based experiences to grow the audience for VR far beyond the gamer community. “We expect the VR experience on smartphones to become a core function, not just... ‘OK, it works with the headsets’.”

FIRST IMPRESSIONS ARE CRITICAL

Given the extraordinary level of hype surrounding VR, consumers understandably come to VR expecting to be “wowed.” And while it’s possible they will be dazzled by the experience, there’s an equal chance for them to have an underwhelming, or worse, nauseating experience. Negative first impressions could confirm any existing skepticism. Consumers who have negative experiences now—at this early stage of the medium—may walk away from VR, potentially for years.

The nausea problem is itself an indication of how early-stage we are in in terms of the maturity of VR hardware and software. What causes nausea for some users of VR? If your visual sense perceives that you are in motion, but your ears and other sensory systems perceive that you are stationary, this creates a conflict, a cognitive disconnect that can result in a feeling of motion sickness. This problem appears to be less of an issue with higher performance systems that can render VR video at a higher frame rate. According to one expert, “When you have good hardware and software, that helps, but it also depends on the storytelling. Content developers also need to be mindful of what to avoid experience-wise, to reduce the chance of nausea.”

When considering the current technical issues and challenges surrounding VR, one would have to include things like resolution quality, clarity of images, and depending on the hardware, issues like latency, frame rates, and how quickly one’s movements track to the real-time progression of what’s being experienced in the headset. If that doesn’t track closely, motion sickness can enter in.

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We’re in investment mode. Monetization needs to be there, but first we need to understand the technology, the right way to tell a story, and how to engage the audience. We’ll then be able to figure out with our partners how to monetize and get a significant ROI.

– Jim Kelleher,
 National Geographic

THE SOCIAL STIGMA OF A CLOSED EXPERIENCE

Another obvious challenge for Virtual Reality is that—as immersive as the experience may be—in terms of today’s technology, the user is largely cut off from everyone else in the world. The social aspect of VR is sorely lacking at this point. As one expert described it, “I think VR has the potential to connect people, but today, the fact is, in most instances you’re sitting alone, by yourself.” Ideally, social apps in VR should enable you to feel that you’re in the same space with someone else, regardless of where you are. Some of our experts wondered whether users will be willing to wear VR headsets in public settings, and how long it will take before co-viewing becomes more mainstream. Curiosity is high industry-wide about when and how Facebook’s Social VR experiences will begin to play out on their platform.

VR AS A STANDALONE MEDIUM

Advertisers we spoke with highlighted the creative challenge that comes from the fact that today VR is a completely separate realm of media. There is no simple option, for instance, to repurpose existing video assets and turn them into 360 or VR-ready video. This means that advertisers and publishers must completely rethink how they develop VR content and creative. As Opera Mediaworks’ **Andrew Scharckss** and **Andrew Dubatowka** explained: “VR requires advertisers to have their use cases and applications in mind before they begin even developing a 360 ad, or any other related assets. VR has to be put front and center and made a priority, and that’s a big shift.”

> HOW IS SUCCESS MEASURED IN VR ACTIVATIONS?

We asked publishers and advertisers to share how success is being measured within their own—and their client’s—VR publishing efforts.

PUBLISHER KPIS

For some publishers, given the early stage of development in the medium, the current focus is on learning over success through monetization. In terms of key publisher metrics, 3D software development firm Unity offers its VR content creators an analytics solution that enables them to check the retention of users, how many people engaged with the content, and how many installs they’ve driven for other publishers. According to Unity’s **Agatha Bochenek**, they’re also integrating flexible event tracking into an ad metrics dashboard that will allow publishers to create custom events and segments in order to optimize content—and in the future, ads—within the system.

VR analytics firm Retinad—which offers heat map-based analytics—sees the majority of their publisher clients requesting insights into “where people are looking in 360 videos and content, the main points of interest, how long people stay there.” They’re also looking to better understand the in-app user experience, and what gives people motion sickness in a particular experience or video sequence. “At this point it’s more about understanding the user,” said Retinad CEO **Sam Poirier**.

ADVERTISER KPIS

In terms of VR ad metrics, AOL’s **Quinn Borsuk** highlighted the still-nascent state of VR creative and campaign measurement: “This is something we need to develop. There are no standards yet. Will we be looking at completion rates? Or getting to a place where we are talking about attention and understanding where folks are spending their time looking? We need to understand what immersion metrics will look like.”

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We’re starting to build out some rudimentary analytics, including how many users, how many uniques, how much time is spent, where they looked, how much time a brand logo was on screen, etc. Everyone is trying to figure out the ROI and whether we’re really getting our money out of it. Eventually, we’ll have to have standards and analytics for how that’s going to be recorded and delivered to the brand.”

– Dan Ferguson,
Groove Jones

VR ad tech provider Immersv calculates effective CPM and effective CPA (cost per action or download) for their client campaigns. For them, a cost-per-view standard seems reasonable. As Immersv CEO **Mihir Shah** said, “We’re able to track a wide range of events that enable clients to do their own engagement calculations. At the end of the day, it’s all based on a video view. We’re seeing an 81% gaze-through rate (GTR) on our campaigns, which means the user gazed all the way through the video. And network-wide we’re seeing a 35 percent conversion rate, which is orders of magnitude higher than web and mobile, and speaks to the engagement power of VR. Of course these are very early adopters.” A future issue raised by Immersv and others is—since VR view-throughs can be tracked at the quartile level—how granular engagement metrics should become, and whether standardized heat map gaze tracking will come into play.

StartApp’s Director of VR, **Ariel Shimoni** describes the process of developing a heat map that illustrates user engagement within an ad: “We take the 360 scene, and slice it into six parts, front, back, right, left, top, and bottom. We measure the user’s gaze in each in of these sectors so that when we speak to the brand, we can tell them if their message is being seen and for how long. These new metrics are shedding light on user behavior and brand engagement for our advertisers. With the progression of the technology, these insights will mature and bring unmatched value and measuring capabilities.”

VR STANDARDS: TOO SOON? OR NOT SOON ENOUGH?

A number of those we interviewed mentioned the current lack of industry guidelines for measurement, and the desire for IAB to get involved. “There’s a big learning curve in VR, so it would be great if there were help for advertisers to be more informed, with guidelines, and then eventually technology to be able to traffic ads, which we can’t do, it’s just a very manual process now” said **Kelly Alfieri**, Executive Director, Special Editorial Projects at *The New York Times*.

While some felt that guidelines would help bring some commonality to the VR and 360 asset creation process, others expressed concerns that it may still be too early for standards. “Our clients are just trying to wrap their heads around how VR works. Everyone’s still playing around in the sandbox and experimenting,” said **Andrew Scharck** of Opera Mediaworks.

IAB has heard from its members active in VR that this new immersive format cannot be ignored, and the IAB Tech Lab has initiated work to develop guidelines for VR and AR. The Tech Lab is in the process of drawing up initial guidelines for 360 video and photo formats—as well as more immersive VR and AR ads—with the goal of helping publishers and advertisers understand the VR formats that are beginning to see traction. While IAB recognizes things are changing quickly in the VR space, the hope is that these preliminary guidelines will help buyers and sellers currently grappling with formats, creative assets, and specs. IAB will soon make our emerging ad formats portfolio available for public comment. Readers wishing to review and comment on the initial guidelines (www.iab.com/newadportfolio) should send an email to: newadportfolio@iab.com.

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**We need help
 connecting the dots
 so that buying feels
 easier. Eventually,
 we'd rather not have
 to work with four
 different entities to
 make a VR campaign
 happen.**

– **Megan McCurry,**
DigitasLBi

”

Hulu's **Noah Heller** believes that VR would benefit from guidelines that address VR camera movement and storytelling best practices, so as to minimize the likelihood of viewer discomfort or nausea. The benefit of such guidelines could be realized by both advertisers and content creators building VR video, especially where the user has less control of the navigation and spatial orientation. These, too, are guidelines that IAB may be able to work with members to develop.

ADVERTISER AND PUBLISHER LEARNINGS

With regards to verticals finding the most traction in VR, respondents highlighted games, entertainment (especially movie promotions), automotive, tech, and fashion in particular. MediaVest's **Andrew Klein** added that they haven't found a vertical that doesn't make sense for VR to tell a brand story. "We've had conversations for instance with our pharma accounts. You would think with all the disclosure requirements, that there might be an issue. But you can tell a very emotional story in VR and put people in the shoes of those who have symptoms and get people to understand."

While there have been too few cross-category campaigns run at this point to call out specific best practices for VR, we did ask our experts to share key learnings, particularly about ad and content user experiences. Everyone generally agreed that we need to be careful as an industry to not interrupt the VR consumer with jarring ad experiences that break focus. Some felt that non-skippable pre-roll ads might be a pretty horrible experience in VR, creating a feeling of entrapment. Others felt that post-roll formats might make more sense for VR, if there's the right brand alignment and integration with content.

Immersv CEO **Mihir Shah** added that data from the campaigns they've run thus far demonstrate that when the VR user experience is interrupted, engagement numbers drop. "If we put an advertiser in a queue, with a 'Check this out' call to action—within the user's current VR experience, people simply hit the skip button, or they leave. You can't just put things into a scene. A lot more work needs to be done to get the integration points right. It can be extremely jarring when you're immersed in another world."

At this point, much of the responsibility for proper ad placement lies with the app publishers who determine ad locations and formats. Given how little we know and how many tech hurdles there are in the medium, it's almost a blessing that audiences are still small. However, with more distribution platforms coming online this fall, the pressure will be on to figure things out and get organized around guidelines.

> WHAT DO VR EXPERTS PREDICT FOR THE NEXT 24 MONTHS?

Twenty-four months is an eternity in technological innovation. Despite the lean-in approach that we're seeing towards VR, the future is still very much unknown, even across the next two years. Existing hurdles may fall, but new ones may arise. VR could scale faster than ever, or fade into flash-in-the-pan obscurity. That said, the predictions of those involved in VR today trend positively.

1 VR IS NOT GOING TO BE LIKE 3DTV

"I in no way think that VR is going to be like 3DTV. It's already too far along and you see so much investment from all of the major players," says **Kelly Alfieri**, from *The New York Times*' VR Team.

Echoing the trend towards investment in VR, a recent eMarketer report points to over \$2.5 billion in funding, acquisitions, and mergers for companies in the VR/AR and immersive media space since early 2014. The first half of 2016 alone saw \$1.3 billion invested, including *The Huffington Post*'s acquisition of VR video production firm RYOT. With the entire ecosystem making investments in VR, the likelihood of failure seems much smaller.

fig. 4: *Investment in Virtual/Augmented Reality Companies*

Number of Deals and Amount Invested in Virtual/Augmented Reality Companies Worldwide, Q1 2015-Q1 2016

	Amount invested (millions)	Number of deals
Q1 2015	\$144	31
Q2 2015	\$127	17
Q3 2015	\$165	33
Q4 2015	\$238	44
Q1 2016	\$1,077	42

Note: read as \$1,077 million was invested in 42 virtual/augmented reality companies during Q1 2016

Source: CB Insights as cited in company blog; eMarketer calculations, June 4, 2016

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www.eMarketer.com

July 13, 2016

<https://www.emarketer.com/Chart/Number-of-Deals-Amount-Invested-VirtualAugmented-Reality-Companies-Worldwide-Q1-2015-Q1-2016/194089>

Other opinions were similar when discussing the high-level viability and potential success of VR. Immersv echoed the point that the VR constituency is so much broader than 3DTV. With the entire ecosystem making investments in VR, the likelihood of failure seems much smaller.

One expert was particularly bullish, saying, "Virtual Reality will change the world for all of us as individuals, and also for other industries and businesses. It will radically improve the way we access information, open up new experiences, and make things that we are doing today much more efficient."

Taken collectively, these high-level views of VR point to continued investment, development, and testing over the next two years. But what happens if we already assumed that? What do the players who have already resigned themselves to the inevitable success of VR think about the next 24 months? Most of their predictions seem to focus on the refinement of VR. It's expected that 24 months from now, we'll have a much better understanding of the four or five key use cases around how and why consumers will use VR, versus what they do on their phones, iPads, TVs, and everything else.

I feel confident looking at the evolution of technology for mobile to understand where we're trying to go right now, and there are so many parallel lines for what people want to do and see and experience. There's an opportunity for people to be together in VR in the future, and it's the same thing as being able to talk to you on FaceTime today.

— Aaron Luber, Google

“Brands don’t really know yet what it is or how to categorize it or even who is going to own VR in the company. Is it the marketing team? The mobile team? The activation team? It’s going to take companies three-to-four years to figure this out.”

— Dan Ferguson, Groove Jones

Turner Sport’s **Mark Johnson** added, “It feels like every month we’re seeing something new, a different angle on it, a different company with a different technology. If the headset technology improves and makes it a better experience, then this medium may get there more quickly.”

2 CONSOLIDATION OF VR COMPANIES IS LIKELY

Another factor that seems inevitable as VR scales is consolidation. “In 24 months you’ll see people taking a leadership role in terms of what the best practices are. I think there will be a short list of candidates,” says National Geographic’s **Jim Kelleher**.

Kevin Chernett of Live Nation agrees that consolidation is likely to take place, especially among the many boutique players creating content that ranges in quality. He further believes that this consolidation will inherently improve quality and help the ad ecosystem in VR mature.

3 DEVICE MATURATION WILL REDUCE COSTS AND FACILITATE SCALE

From a VR format perspective, publishers, agencies, and creators seem to agree that the growth trajectory will align with the cost drivers and scale, with 360 video expected to continue being the advertiser’s go-to VR medium and entry point. As cost barriers come down and robust, proven use-cases emerge, the more technologically intricate VR formats will likely see a bigger uptick in growth. Device maturation will likely be a big driver in cost reduction and the attractiveness of more complex platforms. Some of the experts believe that while initial interest in VR may subside, over the next 24 months updated devices will be released to drive renewed interest. With new devices and expanded capabilities comes the possibility of additional VR peripherals and accessories that further enhance the VR experience. These updates could increase scale and adoption rates on both the consumer and advertiser sides.

4 VR VARIANTS WILL CO-EVOLVE ALONG MULTIPLE CONTEXTUAL PATHS

Other experts point to a more context-driven growth trend in VR. Simpler personal devices like smartphones may suffice for more widely-consumed experiences like live sporting events or entertainment, while the most advanced tethered VR platforms may be best for intense and fully-immersive gaming and narrative-driven experiences. AOL’s **“Shingy” Shing** points to the emotional, contextual, and personalized experiences in VR as being the keys to success. Rather than video games, it could be that a trip to Africa, or attending a famous speech like that of MLK, Jr. might be what really drives adoption.

“Right now,” Shing points out, “the storytelling is linear, but what I experience should be based on who I am.” He adds that content could change based on the viewer’s emotional response, and that what may matter more than the device or technology is the story and the ability, ultimately, to “choose your own adventure.”

5 WE ARE JUST SCRATCHING THE SURFACE OF ADVERTISING OPPORTUNITIES

With VR being such a new platform in relative terms, potential advertising capabilities are just now being explored. Over the course of the next 24 months, respondents believe we’ll see more brands engaging in 360 video. Other forms of advertising can also appear

in VR like 2D digital billboards, 2D video, and even TV spots. However, **Agatha Bochenek** at Unity hopes that VR creates the opportunity for a new standardized ad platform that doesn't replicate advertising the way that mobile did with the repurposed 30-second TV spot.

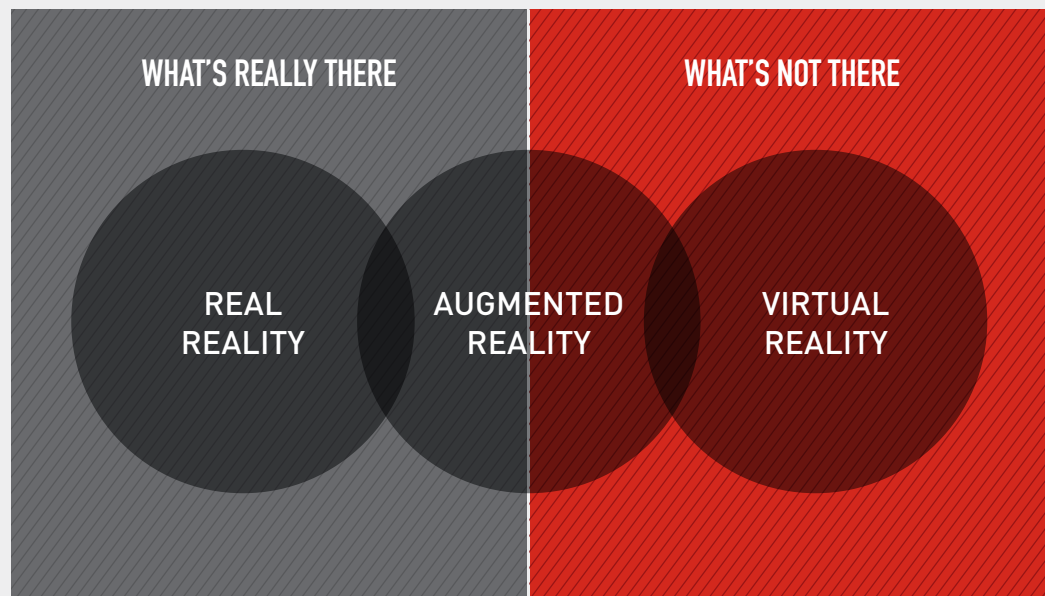
Regardless of how consumers and content developers approach VR over the next couple of years, the brand and advertising approach may not follow the same path. VR may force organizational change in unforeseen ways, just like mobile has.

6 AUGMENTED REALITY DESERVES CONTINUED ATTENTION

It's nearly impossible to talk about Virtual Reality (VR) without also talking about Augmented Reality (AR). Some of the experts that we spoke with tend to view these terms as synonymous, others as derivations of each other, while still others view them as completely separate. In the most simplistic terms, in Virtual Reality you're immersed in a world that does not exist, whereas with Augmented Reality, the viewer sees actual reality, but with virtual components superimposed. *Pokémon GO* is a great example of Augmented Reality because when you're playing the game, you're able to see the Pokémon on your screen in the natural setting of what's in front of you.

When discussing the future of VR, a number of respondents mentioned the potential for VR's increased convergence with AR, which may prove to have more utility for everyday life. Given *Pokémon GO*'s tremendous success as a game and pop culture phenomenon, it's safe to say that while the line between AR and VR may be blurry, AR certainly deserves its own future study.

fig 5: What the Viewer Sees



APPENDIX 1: CASE STUDIES

What do VR campaigns look like today? Of course, a 2D report like this can never do justice to the visuals of a 3D ad, but we've gathered a handful of examples and invite our readers to follow the links below, preferably on a mobile device and with a VR headset, to get a sense what VR / 360 video ads look like.

Case Study #1: Dunkin Donuts "What the Fast" #WTFast, 360 video campaign (DigitasLBi)

ddperks.com/wtfast



To promote the world's fastest "Dunkin Run," a 360 video of female stunt jumper Ellen Brennan (shown above in a wingsuit) was created to immerse viewers in a mid-air pickup of Dunkin Donuts coffee. DigitasLBi's SVP and Group Media Director **Megan McCurry**, whose agency worked with Dunkin on the campaign, described the strength of this and other 360 and VR ads in terms of immersion, and how she sees measurement and metrics evolving in the future. "We all know how hard it is to capture someone's attention. This is a novel way to engage with people on a more immersive basis. The bulk of what we've done to date has been in the 360 video realm versus completely interactive concepts with headsets, and that's really because of the scale issues. Metrics-wise, we measure downloads and engagement today, but it will move towards more eye-tracking and brand lift studies in the future. We'll be looking to understand the variance of VR versus 360 video versus regular video, so that we can start to get a sense of not only how many people reached and the experience time, but also how impactful it was relative to other tactics."

**Case Study #2: Fruity Pebbles “Yabba Dabba Doo” 30-second 360 pre-roll
(MediaVest | Spark, StartApp, VirtualSKY)**

https://youtu.be/cuCGu_UMN5g



Post Cereals’ “Yabba Dabba Doo” campaign starts with a 360 view of kids at the breakfast table, and takes the viewer on a 30-second journey to jam with a garage band, throwing balloons and splashing paint on a mural. MediaVest | Spark’s **Andrew Klein** worked with VR app marketing firms StartApp and VirtualSKY to promote the in-app ad to audiences of selected mobile apps that have their ad SDKs installed. When the user opens the app, they’re instructed to put on a VR headset before they view the ad.

Klein described the process of qualifying a client’s goals for a VR campaign: “We’ve been finding that for clients that want real immersion, in-app VR distribution is the way to go. It’s similar to display pre-roll, except we’re looking to have people already in the headset, fully immersed and ready to accept a 360 experience.” The ads are viewer-friendly. There is the option to tab out and skip the ad if they wish and go right to content. “VR is a very new space, but it’s a very special place, too. We don’t want to be throwing banner units and pop-ups into immersive VR experiences. It’s not what we—or, I think, any of us—want to do.”

StartApps’ Director of VR, **Ariel Shimoni**, added, “We worked with a few handpicked publishers to integrate the Pebbles ad in a way that doesn’t interfere with the VR content, but enhances it. Those publishers were thrilled to work with a national brand like Post Cereals, and to start exploring the possibilities of real, sustainable monetization in VR.”

Case Study #3: Hilton Worldwide “Destination: Inspiration”
(Opera Mediaworks, OMD)
<https://vimeo.com/162983050>



Hilton Hotels and Resorts partnered with Opera Mediaworks on a 360 mobile video campaign that takes viewers on a tour of Hilton destination beach resorts, snorkeling through sea caves, walking through jungles, and looking out across pristine beaches from the balcony of a guest room. Users can tilt their mobile device to see the entire environment. The assets are designed to entice users to take action, book a reservation, or learn more details.

Opera Mediaworks VP of Marketing, **Molly Moriarty**, shared some of their team’s learnings in terms of in-app VR ad user experiences. “Ideally, you want to launch the 360 experience within a full-screen unit. The user could feel lost if you just jump right into a 360 video ad experience, so we’ve found that a short lead-in can be helpful. Having a user-initiated opt-in path creates less friction towards full immersion. There are so many different format options; for video experiences to work well, you really need to have the right user-centric approach. If we can get advertisers to start utilizing 360 assets more often, I think that will help to segue into more immersive VR in the future.”

Case Study #4: Turner Sports NCAA® March Madness® Live™ VR App Sponsored by Capital One



Managed by Turner Sports and produced in collaboration with live-event virtual reality (VR) platform VOKE through a partnership with CBS, NCAA Corporate Champion Capital One, and Oculus, the March Madness VR app provides live game coverage of the NCAA Final Four Semifinals and National Championship. The live stream—available via a Virtual Reality version of the NCAA March Madness Live app in the Oculus Store—allows fans to follow the live game while using the Samsung Gear VR-powered headset.

Describing the Capital One partnership and in-app branding, Turner's **Mark Johnson** said: "We put Capital One's branding on the app loading screen as well as the main menu, which gave fans access to live games, on-demand content, and the Final Four bracket. In the live game streams, we included a virtual scoreboard with Capital One branding on that as well. The scoreboard was a great example of sponsor integration, and shows off one of the unique opportunities in the VR product world."

APPENDIX 2: CREDITS

Interview Subjects

IAB would like to extend our sincere thanks and profound gratitude to all of the industry experts listed below who graciously gave of their valuable time to share their thoughts on the current state of Virtual Reality.

ABC, **Jeffrey Weinstock**, VP, Creative Director, Integrated Marketing
 Accenture, **Adam Nagus**, Global Visual Analytics Lead
 AOL, **Quinn Borsuk**, Director, Video Sales & Strategy
 Associated Press, **Nathan Griffiths**, Interactive Editor
 Comcast Ventures, **Gavin Teo**, Former Principal
 DigitasLBi, **Megan McCurry**, SVP, Group Media Director
 Facebook, **Matthew Corbin**, Global Product Marketing
 Fox Sports, **Michael Davies**, SVP, Field and Technical Operations
 Fusion, **Adrian Saravia**, Creative Director
 Google VR, **Aaron Luber**, Head of Content Partnerships
 Groove Jones, **Dan Ferguson**, EVP, Interactive and Strategy
 Hulu, **Noah Heller**, VP, Partnerships, Emerging Tech
 Immersv, **Mihir Shah**, Co-Founder and CEO
 Kinetic Worldwide, **Marley Kaplan**, Head of Innovation
 Live Nation, **Kevin Chernett**, EVP, Global Partnerships and Content
 MediaVest | Spark, **Andrew Klein**, Associate Director, Social Experience & Custom Product
 MediaVest | Spark, **Justin Low**, Global Director, Communications and Brand Marketing
 National Geographic, **Jim Kelleher**, VP, Video Product Management
 Opera Mediaworks, **Andrew Dubatowka**, Senior Director, Product Strategy
 Opera Mediaworks, **Andrew Scharckss**, Creative Operations Specialist
 Opera Mediaworks and AdColony, **Molly Moriarty**, VP, Marketing
 Publicis Media, **Yale Cohen**, SVP
 Retinad, **Sam Poirier**, Co-Founder, CEO
 StartApp, **Ariel Shimoni**, Director of Virtual Reality
 The Foundry | Time Inc., **Chris Hercik**, SVP, Creative + Content Creative Director, Sports Illustrated Group
The New York Times, **Kelly Alfieri**, Executive Director, Special Editorial Projects
The New York Times, **Sebastian Tomich**, SVP, Advertising and Innovation
The New York Times, **Nick Van Amburg**, VP, Advertising and Innovation
The New York Times, **Andy Wright**, SVP, Advertising
 TIME, **Mia Tramz**, Managing Editor of LIFE VR, Senior Multimedia Editor
 Turner Sports, **Mark Johnson**, VP, Business Operations
 Unity Technologies, **Agatha Bochenek**, Head of Biz Ops & Strategy