

How quickly can you adapt to
the

FUTURE



IAB Canada AR/VR Committee

Executive Summary

- According to [IAB Canada Barometer: The State of AR & VR Advertising in Canada, 2018](#), both Augmented Reality (AR) and Virtual Reality (VR) are considered leading edge technologies that can help deliver exciting new experiences to hyper-targeted audiences.

While adoption has been slow, there are clear indications of significant growth in this sector as capabilities become mainstreamed. Big players like Amazon, Google, Facebook, Snapchat and Apple continue to announce their AR and VR developments, driving opportunities for brands to play confidently in this space. As we reach critical mass through broad access, the costs of implementation are declining.

There are two driving forces behind adopting AR/VR as enhanced campaign components:

1. Augmented Reality and Mixed Reality is easily integrated into a mobile campaign
2. Virtual Reality acts as a valuable extension to an experiential campaign

The IAB Canada AR/VR Committee has authored this quick guide to help advertisers better understand when and why to invest.

Special thanks to **Nigel Newton**, IAB Canada's AR/VR Committee **Founder and Chair**, for driving the Committee's output as well as **Wenhao Wang**, for his contribution in design.

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Defining AR/VR

AR stands for **Augmented Reality**, and is content or an experience overlaid upon a real-world view.

VR stands for **Virtual Reality**, and is content or an experience that reproduces the real world or creates a new world.

Why include AR/VR in your brand strategy?

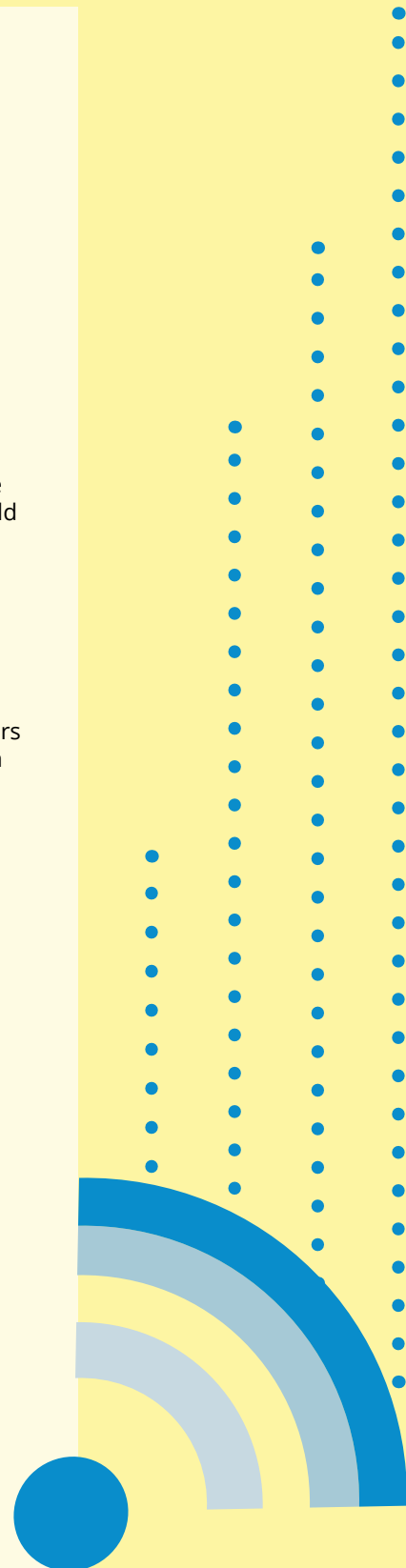
- AR/VR offers exciting new opportunities to connect more deeply with targeted consumer audiences. These technologies allow brands to create scaled one-to-one user experiences.

When should I include an AR/VR experience?

- AR/VR should be considered when the brand is in a position to provide an experience. Any advertiser looking to bring information to life should consider the use of these platforms.
- Augmented Reality can easily be implemented as mobile component to a channel strategy. All mobile campaigns could act as potential AR experiences.
- Virtual Reality provides an exceptional platform to create and share immersive experiences with consumers. Whether you are bringing users into a condo development or into the scenes of a TV show, VR can be a powerful engagement tool with rich data feedback capabilities.

How do I plan for an AR/VR experience?

1. **Context** – determine whether an immersive experience is an appropriate direction for your media strategy. Develop the scope of the experience.
2. **State the mission** – detail the objectives and clearly state KPIs for the campaign. Confirm that AR or VR can deliver.
3. **Platform choice** – for example, where mobile plays an important role in the communication strategy, explore opportunities to integrate AR.
4. **Assign an in-house lead** to champion experience architecture and development
5. **Plan for Content** - most AR and VR components can be integrated with the production work flows for existing campaign builds. Some AR and VR content presentation and experiences will require additional outputs from earlier creative production stages, such as 3D models (which might require further development) and ensure that [storytelling](#) elements are included and aligned to the campaign narrative.
6. **Don't go it alone** - make sure that you are working alongside your trusted partners



KPIs to measure AR/VR success

Based on your campaign objectives, AR/VR offer rich measurement opportunities. All of the digital metrics we have come to know across user sessions are available with many enhancements that are closely related to traditional rich media units online.

AR/VR has unique measurement capabilities as one is able to track user session data. In the context of a super-responsive media, this can be incredibly powerful.

Here are some standard metrics available through AR/VR programs:

Traditional Metrics:

- number of views
- number of users
- unique users
- time spent / length of engagement
- average time spent
- time of day
- location

Interactive Metrics:

- interactions tracked
- heat mapping of views within a 360 environment
- biometric measurements to assess sentiment particularly in VR
- user path analysis (where users have choice and determine outcomes)

“How much should I budget for AR/VR?”

- Augmented and Virtual Reality experiences can be built to accommodate most campaign budgets. Carve out a portion of your existing campaign budget to support some testing.
- Given that the medium is still under development, there is risk associated with spend that is coupled with huge rewards. That said, it is suggested that roughly 10% of your brand spend be allocated to this type of execution.
- With Apple and Google both behind AR, anticipate spend allocation to increase to roughly 20% (up from 10%)



Have questions or need support with finding best in class examples, or production resources in your sector or category?

IAB Support

Contact Laura Ferron at
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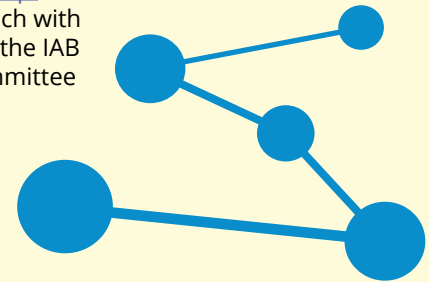
Where to look to for support and resources?

Agency: most agencies with a creative team or production resource in-house, will be able to start with entry level experiences, particularly if they use plug and play third party platforms such as: Snap Lens Studio, Facebook AR Studio, or Blippar for augmented reality

Experiences: although VR is less accessible, recent platforms like: BrioVR and Halo Labs, are providing support and development of VR content and experiences. Unity or Unreal Engine, offer custom app development in both VR and AR. Additionally, ARKit and ARCore provide AR mobile app development for iOS and Android devices. Depending on the scope experiences, a boutique agency or a large scale development house can help

IAB: need best in-class examples? Production resources in a particular category of interest? Access to global IAB studies and/or [working group outputs](#)? Get in touch with IAB Canada or join the IAB Canada AR/VR Committee

AR/ VR Specialists are emerging like that of: Cognitive3D out of Vancouver and Toronto



Devices



Samsung Gear VR (2015)



Google Daydream Viewer (2016)



Oculus Go (2018)



Lenovo Mirage (2018)



Oculus Rift (2016)

HTC Vive (2016)

PlayStation VR (2016)



Magic Leap One (2018)

Platforms

Mobile VR

Leading the **lower priced headsets** that use late model Android smartphones are Samsung Gear VR and Google Daydream Viewer.

Integrated mobile VR

New for 2018 these un-tethered head mounted displays Oculus Go (Facebook) and Lenovo Mirage (Google Daydream) have integrated hardware to **deliver content without requiring a smartphone**.

VR Headset

The **predominant tethered head mounted displays** are the PC related Oculus Rift (owned by Facebook) and HTC Vive (with the primarily gaming content hub "Viveport") and the PlayStation VR headset for the PlayStation 4 gaming console.

AR + glasses

While **AR will see continued growth in mobile thanks to** Apple ARKit and Google ARCore; with Google Glass in the distant past, 2018 will see the debut of Magic Leap One and with Intel's Vaunt prototype, the promise of AR wearables that look distinctively part of your wardrobe.

The A to Z of AR/VR

3 Degrees of Freedom

Relates to VR experiences that allow you to move your head: 1-up, 2-down and 3-side to side.

6 Degrees of Freedom

Relates to VR experiences, where in addition to moving your head, allow you to move your body through an experience.

Artificial Intelligence (AI)

Computational code that simulates human thinking by creating output.

Augmented Reality (AR)

Content or experience overlaid upon a real world view.

ARCore

Google software platform that builds augmented reality apps on Android. ARCore uses three key technologies to integrate virtual content with the real world as seen through your phone's camera:

- motion tracking that allows the phone to understand and track its position relative to the world
- environmental understanding that allows the phone to detect the size and location of flat horizontal surfaces like the ground or a coffee table
- light estimation which allows the phone to estimate the environment's current lighting conditions

Requires Android device with 7.0 (Nougat) or later, and is supported by Google Pixel, LG, Asus and Samsung devices.

ARKit

Apple software platform that combines device motion tracking, camera scene capture, advanced scene processing, and display conveniences, to simplify the task of building an AR experience. Requires iOS device with A9, or later processor with iOS 11.0 and up.

Avatars

CGI character representing an individual from the real world in an augmented or virtual scene.

Computer Graphics Imagery (CGI)

Content or experience created by a computer. Think: video game characters and environments, special visual effects in film, graphics and 3D models in AR Avatars and 3D environments in VR.

Design Tools and Platforms:

AR: Blippbuilder, Layar Creator, ZappWorks, CEE Platform, Aurasma, Vuforia, Catchoom
VR: BrioVR, HaloLabs, InstaVR, Gravity Sketch, Yulio
AR/VR: Unity, Unreal Engine, Sumerian, Maya

Foveated Rendering

Technology related to head tracking that only render the image in full quality directly in front of the users eyes when it is being viewed.

glTF

File format for 3D scenes and models using the JSON standard. It is described by its creators as the JPEG of 3D

Mixed Reality (MR)

Content or experience that integrates with the real world by mapping virtual content to physical references.

Polygon

Elements of computer graphics images (CGI) where the number or concentration determine the resolution or fidelity of the image.

Storytelling

There are two approaches to storytelling:

1. User remains passive and is immersed in the content or experience as a viewer. Maintains a linear or cinematic approach to storytelling.
2. User is actively engaged with the content or experience and is prompted to interact. Gives the narrative to the user, much in the way that role playing video games do, where the user selects the path and makes choices that determine the outcomes.

Virtual Humans

Consumer response to: Google Home, Amazon Alexa and other voice activated devices opens a path to those conversational voice interactions being further personalized by a virtual character. It is anticipated this will be the next stage of chatbot technology, and that AI will be personalized by using virtual humans as the interface for interaction.

Voxel

Is comparable to a pixel, but is three-dimensional

Virtual Reality (VR)

Content or experiences that reproduce the real world, or creates a new world.

WebVR & WebAR

VR and AR content and experiences have primarily been app based experiences on mobile devices. In the age of app fatigue and a high perception of value required to initiate an app download, the alternative is to consider web-based experiences that rely on mobile browsers to access content.

While they overcome the barrier of app download, they are restricted by fluctuations in wireless connectivity, access to wifi, and the wide range of devices and processors that determine the speed at which content hosted on the cloud can be accessed and viewed.

Extended Reality (XR)

Content or experience that reproduces the real world, or creates a new world, with additional sensory inputs. Haptic for touch and physical feelings, olfactory for smells, and auditory for hearing.

*IAB Canada will continue to update and expand this glossary of terms in collaboration with IAB global offices.