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// VR JOURNALISM TIPSHEET

A collection of tips, links and resources to help you better navigate through the emerging world of virtual reality and journalism.

// VR APPS

Here are a few apps to convert your smartphone into a Head-mounted Display (HMD).

LIFE VR	NYT VR	Within	The Guardian's 6x9
JOVRNALISM	YouTube	ARTE360	RYOT

NOTE: There are numerous apps that could be listed. We also recommend you check out Jaunt VR, Emblematic Group, Empathetic Media, Felix & Paul and others. (Beyond apps: There is also development in open-Web, browser based VR.)

// HEAD-MOUNTED DISPLAYS (HMD)

There is more than one way to consume VR experiences, which range from high-end devices to cardboard. Here are a few you should know.

Oculus Rift $599	HTC Vive $799	PlayStation VR Price: $399	Samsung Gear VR II $129.99
Google Daydream $79	Google Cardboard Free-$39.99	Microsoft Hololens (MR) $3,000	Others

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// CREATING 360 VIDEOS

Here's a range of different gear you can get to produce 360, immersive videos. They range in price and quality. Also, factor in the host of a high-end computer to help render and process these files. (* means they self stitch)

Insta360 Nano / Air
$130-$200

Samsung Gear 360 (2017)
$230

Ricoh Theta S
$250-$350

Nikon KeyMission
$500

Kodak SP360 4K
$900

Mounts
(Freedom 360 or 360Rize)
$400-$1,800

Z Cam S1
$2,500

GoPro Omni
$1,500-$5,000

Insta360 Pro
$3,500

Nokia Ozo
$45,000 $60,000

Jaunt
$$$

Many others
(Google Jump)

NOTE: Most of these require additional stitching software (Kolor Autopano, 360 Stitch, etc.), can be enhanced with Adobe After Effects or Mettle Skybox and edited through Adobe Premiere, AVID, etc. to output an MP4. These videos can be published to Facebook and YouTube (after injecting some VR meta data) or other startup video platforms.

// CREATING INTERACTIVE VR

Wile 360-degree videos are immersive and a great way to start, many do not consider them "true" VR, which means you can't interact or move around within them. "True" VR is often produced by 3D/CGI graphics input into a gaming engine. Here's some applications you know show.

Autodesk Maya
3D modeling

CINEMA 4D
3D modeling

Unity
Game engine

UNREAL ENGINE
Game engine

NOTE: More and more applications are being developed to simplify the creation of these fully VR experiences.

// RESOURCES AND LINKS
With more and more journalists testing and exploring this emerging platform, there is a growing list of places to turn to for advice. Here is just a small collection.

360 experiences on YouTube phone app (Note: Make sure you search within the app)
"Clouds Over Sidra" is the Syrian refugee piece perhaps most known. Made by **Within**, formerly VRSE.
"Michelle Obama 360 The Verge" used graphics and new techniques to do immersive edits **The Verge**
"Inside North Korea ABC News #360Video" to get a glimpse inside the country, produced by **ABC News**.
"The Fight for Falluja" to experience **The New York Times'** piece capturing conflicts Iraqi forces face
"Emblematic Group Kiya" to see a 3d/CGI piece about domestic abuse, produced by **Emblematic Group**
"360° meet the largest dinosaur BBC One" to walk alongside a dinosaur, produced by **BBC**

Journalism360: Google News Lab + Knight Foundation + ONA
A collaboration for the development and advancement of immersive journalism. It will offer training, grants and more. Details here: https://medium.com/journalism360/introducing-journalism-360-d58b9e72e2e#.lu2zmykn0

VR Journalism Google Group and Slack
If you are a journalist who is **actively** producing VR experiences, apply to join this currated group:
http://www.vrjournalism.io/2015/07/22/google-group-vr-journalism/

Facebook Groups
360 Video Professionals: https://www.facebook.com/groups/360.video.professionals/
Women in VR: https://www.facebook.com/groups/womeninvr/
Spatial Audio in VR: https://www.facebook.com/groups/positional.audio.in.vr/
Facebook 360: https://www.facebook.com/groups/facebook360community/

360 video tips
How NOT to shoot in 360 by YouTube Creator Academy: https://youtu.be/RWYKrePZwkM

The UX of VR:
Mike Alger's talk on VR Interface Design: https://vimeo.com/141330081
A huge collection of articles, videos, slides and more http://www.uxofvr.com/

VR Industry News
Voices of VR (Podcast): Interviews with the most influential people in VR http://voicesofvr.com/
Upload VR: http://uploadvr.com/
Road to VR: http://www.roadtovr.com/
VRScout: http://vrscout.com/
VRLA Newsletter: https://vrlanews.ongoodbits.com/
Immersive Shooter: http://www.immersiveshooter.com/
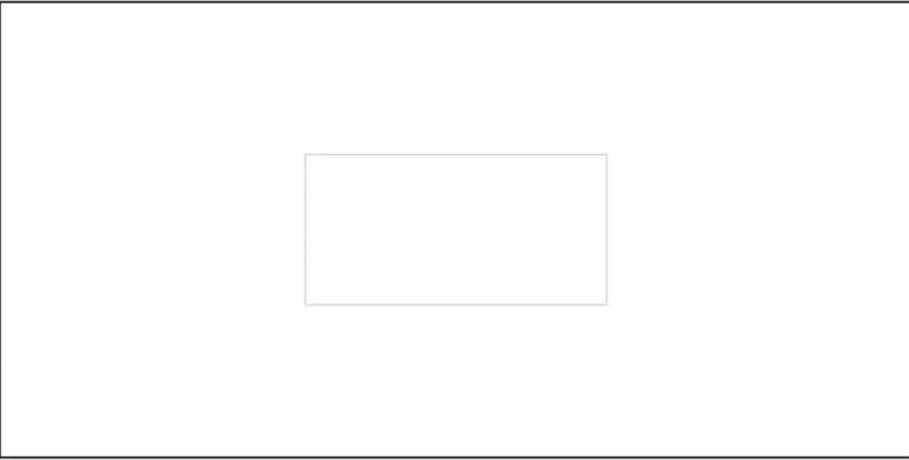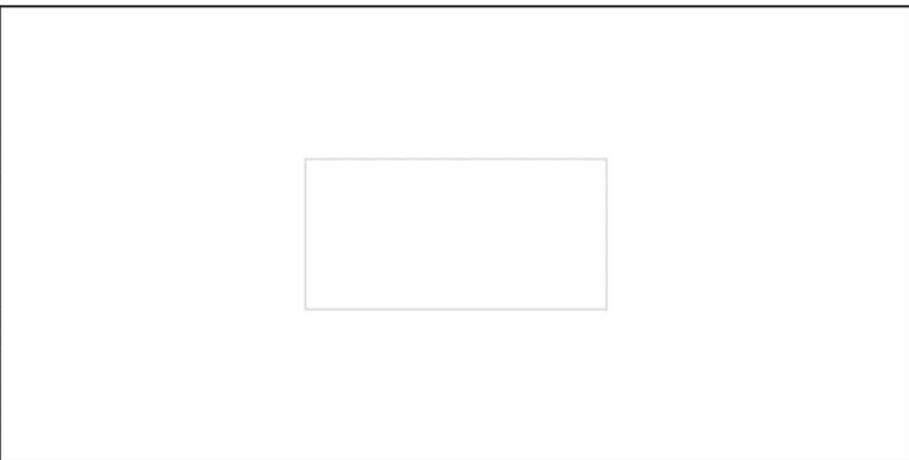
BBC News Labs (storyboard template)
360VR Media (storyboard template - below)

PROJECT: _____ PAGE: _____

DIRECTOR: _____ ARTIST: _____ DATE: _____

SCENE:

DURATION:

SCENE:

DURATION:

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