

VR Opportunities

Sofia Auffret



Arts Management & Technology Laboratory

Carnegie
Mellon
University



INTRODUCTION

During 2016, contributors of the Arts Management and Technology Lab have explored how virtual technology is transforming the arts. But, technology is constantly evolving. If you type virtual reality in your search engine, you will find dozens of articles about it published last week alone. Virtual reality is clearly a hot trend.

The technology backing Virtual Reality (VR) is improving at a fast rate, but structurally it consists of three components: the headset/viewer, some type of screen (a computer, smartphone or game console) and an input. The combination of these three components are used to achieve one goal: to completely immerse the user in another world.¹ While VR technology is relatively expensive, products are becoming more affordable as companies such as Google or Sony or Facebook are investing in and deploying market-ready technology. It has been projected that “the price of headsets should decline by about 15% each year over the coming years.”²

Businesses are starting to use VR as a promotional tool, and artists are exploiting VR as an alternative medium to produce art. However, non-profit organizations are starting to see other benefits of using VR: generating empathy among potential donors and obtaining more and/or larger donations by inviting the donor to try a VR experience that will show them what the non-profit focuses on. This may give them an idea of how their donations could have a significant impact on the organization.³

Arts managers have started using VR in their institutions, mainly because visitors are using their mobile devices during visits and believe that digital

technology “enhances” the experience.⁴ In the past, AMT Lab contributors gave [different examples of museums using VR](#): the British Museum presented an exhibition about the Bronze Age and the New Museum for Contemporary Art in NYC immersed the user in a rainforest in Brazil.⁵

This paper will explore how arts managers can use videos to show and promote the use of VR. By doing so, they can attract a broader and, more specifically, younger audience (18 to 24 years old).



Figure 1. Arts managers have started using VR in their institutions, mainly because visitors are using their mobile devices during visits and believe that digital technology “enhances” the experience. Source: Atlantis Virtual Reality.

Younger Demographics: How VR Could Increase Audience Engagement

The relationship between visual arts and technology among the younger audience

The rate of attendance of younger audiences to visual arts is lower than other age groups and has decreased since 2002, yet it has the highest percentage of US adults consuming art (including literature, music, theater or dance and visual arts) via mobile/handheld device. As shown in Figure 2, 18-24 year olds’ rate of attendance to visual arts represents 18.3 %, three points under other age groups, while 56.7% are using handheld or mobile devices to access music, only 10.9% are leveraging the technology for visual arts. Why is there such a difference between

1 Charara, Sophie. “Explained: How does VR actually work?” Wearable. October 5th, 2016.

2 Neiger, Chris. “Virtual reality is too expensive for most people- but that’s about to change”. September 8th, 2016.

3 Jones, Awane. “Virtual Reality can Help Donors See the Impact of Charitable Giving”. Huffington Post Canada. May 31st, 2016.

4 The Dali Museum. “Virtual Reality Gains International Acclaim”. The Dali Museum. April 19th, 2016.

5 Foqahaa, Yasmin. “VR in Museums: Case Studies”. Arts Management & Technology Laboratory. September 20th, 2016.



music and visual arts?⁶ Is there not enough visual art content to look at online? These results show that there are indeed opportunities for visual art organizations to use technology to potentially increase audience engagement among the 18-24 age group.

	Art museum or gallery 2002	Art museum or gallery 2012	Craft fairs and arts festivals 2002	Craft fairs and arts festivals 2012	Places visited for design or historic value 2002	Places visited for design or historic value 2012
Gender						
Male	26.5%	21.0%	33.4%	22.4%	31.6%	23.9%
Female	24.6%	18.7%	27.0%	18.2%	30.5%	23.1%
Race/Ethnicity						
Hispanic	28.2%	23.1%	39.2%	26.4%	32.5%	24.6%
White	16.1%	14.3%	20.3%	16.8%	17.2%	13.8%
Black	29.5%	24.1%	38.0%	26.2%	36.0%	28.3%
African American	14.8%	11.9%	19.7%	12.0%	17.9%	13.1%
Other	32.7%	21.2%	25.8%	16.3%	30.4%	21.2%
Age						
18-24	23.7%	18.3%	29.2%	18.3%	28.3%	20.5%
25-34	26.7%	22.0%	33.5%	21.6%	33.3%	25.1%
35-44	27.4%	21.2%	37.2%	22.0%	35.8%	23.3%
45-54	32.9%	22.0%	38.8%	24.6%	38.0%	26.2%
55-64	27.8%	22.5%	35.1%	25.8%	24.2%	26.5%
65-74	23.4%	22.4%	31.1%	26.1%	24.2%	25.5%
75+	13.4%	15.5%	15.7%	15.0%	12.8%	15.0%
Highest level of education						
Grade school	4.5%	3.6%	8.4%	5.9%	6.3%	3.9%
Some high school	7.7%	4.3%	14.0%	8.0%	11.4%	5.9%
High school graduate	14.2%	9.9%	25.7%	16.3%	20.2%	13.3%
Some college	29.0%	19.7%	38.2%	23.6%	36.5%	25.0%
College graduate	46.6%	37.2%	51.9%	32.9%	51.2%	38.4%
Graduate school	58.8%	49.3%	51.9%	36.9%	56.8%	48.8%
Family income						
Less than \$20K		10.2%		12.3%		12.1%
\$20K to \$50K		14.0%		17.9%		16.2%
\$50K to \$75K		22.1%		24.5%		25.7%
\$75K to \$100K		26.5%		28.9%		30.1%
\$100K to \$150K		33.8%		30.5%		38.8%
\$150K and over		43.2%		36.4%		46.6%

Figure 2. Visual arts rates of attendance (based on adults participating at least once in past 12 months), by demographic group: 2002 and 2012. The rate of attendance of younger audiences to visual arts is lower than other age groups and has decreased since 2002, yet it has the highest percentage of US adults consuming art via mobile/handheld device. Source: "A Decade of Arts Engagement" from www.arts.gov.

The Relationship between Virtual Reality and the younger audience

In fact, younger audiences appear to be more interested in VR technology than other age groups. According to a study by globalwebindex, 46% of individuals aged from 16-24 are interested in VR.⁷ This audience is more receptive to new technologies because it grew up surrounded with rapidly evolving electronics. Young adults (18 to 24 years old) are more likely than adults to "use electronic media to view, listen to, create, share, or edit art (80% percent

6 National Endowment for the Arts. "A Decade of Arts Engagement: Findings from the Survey of Public Participation in the Arts, 2002-2012". January 2015.

7 Young, Katie. "Are Consumers ready for Virtual Reality?". Global Web Index. August 16th, 2016.

versus 71 percent).⁸ VR could be used to draw the younger audience to attend visual art institutions.

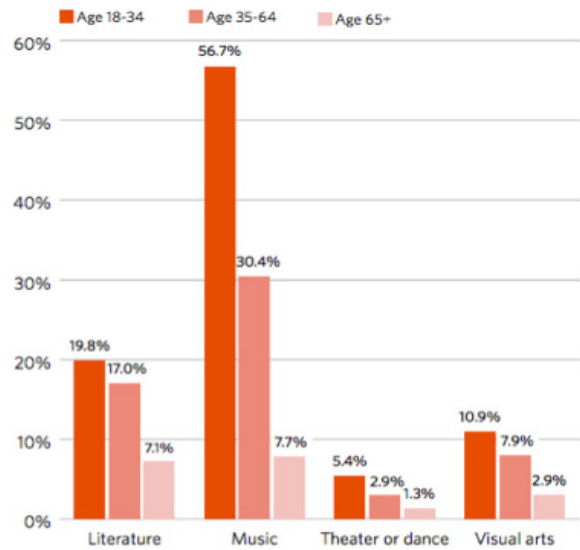


Figure 3. Percentage of U.S. adults who consumed art via mobile/handheld device, by art form and age group: 2012. At its highest in age group 18-34 for music. Source: "A Decade of Arts Engagement" from www.arts.gov.

The case of the British Museum using VR for a two-day family event held in August 2015 shows how VR was very successful with the younger audience. The report states that "Samsung Gear VR headsets were a particular draw for teenagers and adults." Following this successful event, the Samsung Digital Discovery Centre (SDDC) organized a "Teens 3D scanning skills workshop" for fifteen to nineteen-year-olds. The reviews from the workshops were very positive and included specific references to the use of VR.^{9 10}

Overall, attendance of art events has declined since 2002 based on the NEA Research Report: A Decade of Arts Engagement: Findings from the Survey of

8 <https://www.arts.gov/sites/default/files/2012-sppa-feb2015.pdf>

9 Rae, Juno and Lizzie Edwards. "Virtual reality at the British Museum: What is the value of virtual reality environments for learning by children and young people, schools, and families?" MW2016: Museums and the Web 2016. Published January 28, 2016. Consulted December 15, 2016.

10 Arts Participation Leadership Initiative. "Goal 1 Attract Younger Audiences". Arts Participation Leadership Initiative.

Public Participation in the Art¹¹ but VR could be leveraged to bring in younger visitors. The Arts Participation Leadership Initiative offers four strategies to increase participation from the younger crowd. One of these four strategies consists of creating interactive experiences for the audience.¹² The use of VR can enhance the visitor's experience and make it a more personal and immersive experience.¹³ But, how can an art institution communicate to the audience that they are using VR? One option includes promotional videos.

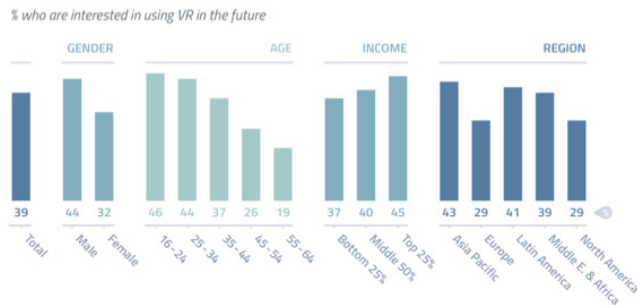


Figure 4. Interest in Virtual Reality Headsets. As shown, 46% of individuals aged from 16-24 are interested in VR. Source: “Are Consumers ready for Virtual Reality?”. Global Web Index.

How to Successfully Promote VR Through Video

To attract a younger audience and emphasize the “trendy” technology VR used in their institutions, arts managers should create promotional videos. A video is a powerful way to convey a message, “80% of consumers say a video showing how a product or service works is important when learning about the company.”¹⁴ Some websites publish an article or display text on their website about how they are using virtual reality, but is it powerful enough to excite users if users don’t know what VR consists of? In a recent study done by Forrester Research,

11 National Endowment for the Arts. “A Decade of Arts Engagement: Findings from the Survey of Public Participation in the Arts, 2002-2012”. January 2015.

12 Arts Participation Leadership Initiative. “Goal 1 Attract Younger Audiences”. Arts Participation Leadership Initiative.

13 Foqahaa, Yasmin. “Virtual Reality And Audience Engagement in Museums”. Arts Management & Technology Laboratory. March 29th, 2016.

14 Taber, Kelsey. “13 Stats that Prove the Power of Video Marketing”. Boast. October 20th, 2015.

they found that a “video is worth 1.8 million words.”¹⁵ The Dali Museum offers a video entitled “Dreams of Dali,” which offers a preview of the multi-media exhibition through a 360-video angle. The video alternates shots of an individual sitting down on a stool, in an empty room (except a single screen), wearing VR lenses and shots of the world he is immersed in. The video gives viewers a taste of VR. Furthermore, the museum made the video easily accessible and visible on its website, which accumulated more 2.2 million views. When an individual views the museum’s website, he or she can scroll a bit down and easily find the video.¹⁶ The use of promotional video could have contributed to the exhibition’s success, which received multiple industry awards, as well as visitor acclaim and online praise.¹⁷

While making a promotional video, an arts manager must think about its target demographics. As mentioned before, younger audiences appear to be more interested in VR than other age groups. Hence, including tweens, teens or millennials in a promotional video showing VR could be beneficial, as they are the most interested in the technology.¹⁸ In the report “The Art of Attraction: How to Grow Your Millennial Arts Audience,” millennials are more aware of arts events through social media, blogs and ads; whereas, boomers hear more about them through print, radio ads, and television.¹⁹ Promotional videos are thus more likely to be seen by teens and millennials than boomers.

Choosing an appropriate balance of the content in the promotional video is another factor to keep in mind. An art institution can give a preview of the immersive virtual world, but this should not replace the experience itself. VR is evolving rapidly but not everyone knows about it or what it represents.

15 Taber, Kelsey. “13 Stats that Prove the Power of Video Marketing”. Boast. October 20th, 2015.

16 The Dali Museum Website.

17 The Dali Museum. “Virtual Reality Gains International Acclaim”. The Dali Museum. April 19th, 2016.

18 Dominguez, Sophia. “How to Market Virtual Reality”. The Huffington Post. August 14th, 2016.

19 Plautz, Jessica. “How the next generation discovers art events around the world”. April 16th, 2015. Mashable.

According to a recent survey, two-thirds of the population were unaware of the technology.²⁰ For example, while HTC Vive's ad shows you what you could possibly see through the lens, it doesn't translate how VR works.²¹ On the other hand of the spectrum, Samsung galaxy's S7 edge Gear VR commercial shows instant reactions of the users during the immersive experience.²² But it doesn't show you what you could expect to see during the experience. In both cases, the videos do not seem to explain fully what VR represents. A recent [video by Coca-Cola](#) is an example of a promotional video that combined both shots of young visitors using VR and shots of the VR immersive experience. It also showed individuals from different ages enjoying themselves.²³ Here, the content of the video combined the process of using VR and a preview of the immersive experience giving viewers a global understanding of it and is perhaps a model that arts organizations should adapt for future VR advertising efforts.



Figure 5. Younger audiences appear to be more interested in VR than other age groups. Hence, including tweens, teens or millennials in a promotional video showing VR could be beneficial, as they are the most interested in the technology. Source: www.MillennialCEO.com

360 Angle Video Cameras: An Affordable Tool to Make VR Promotional Videos

There are relatively inexpensive ways to promote an event or exhibition while keeping up with the technology. One alternative consists of 360 angle videos. While not officially VR, these videos draw attention and accumulate more views than regular videos.²⁴ YouTube supports 360-degree videos, making it easy for anyone to access the content.

The user can tilt their mobile device and see different angles based on the movement of the mobile device. There are several 360-degree cameras that are affordable such as the LG 360 CAM (approximately \$200) or the Samsung Gear 360 (approximately \$350). Both these cameras allow the user to take wide angle shots and upload them to Youtube360 or Google Street view. The videos from the Samsung Gear 360 can also be previewed with the Gear VR headset.



Figure 6. There are several 360-degree cameras that are affordable such as the LG 360 CAM (approximately \$200) or the Samsung Gear 360 (approximately \$350 and pictured). Both these cameras allow the user to take wide angle shots and upload them to Youtube360 or Google Street view. Source: Wikimedia Commons.

20 Riley, Duncan. "Survey finds two-thirds of consumers don't know virtual reality headsets exist". siliconAngle. March 4th, 2016.

21 HTC. "HTC Vive". Youtube. November 13th, 2015.

22 "Samsung Galaxy's edge Gear VR". Youtube.

23 Lemon&Orange. "Coca Cola Virtual Reality Christmas Ride". Youtube. December 23rd, 2015.

Retrieved at <https://www.youtube.com/watch?v=fFL2Dk2HYro>

Visual art institutions have already begun using 360-degree angle videos to show virtual content, but they can also be used as a promotional tool as well to attract a younger audience. Through the Google Art & Culture App, some museums are offering the option of experiencing specific exhibitions at

24 Titova, Elana. "5 Ways to Incorporate Virtual Reality Into Your Marketing Plan". Entrepreneur. July 22nd, 2016.



a 360-degree angle or through virtual tours. The app allows viewers to explore via virtual immersive experiences and offers access to thousands of photos and videos. Although virtual access to a seemingly never-ending collection of art can be overwhelming at times, arts managers will see an overwhelming benefit to using this technology to entice a user to come to an exhibition through short 360-angle videos while giving the users access to all the art online.

CONCLUSION

Visual art attendance is the lowest among the young audience compared to other age groups. Visual art institutions are leveraging Virtual Reality technology more and more every year, and as explained, the young audience is the age group that is the most interested in VR. It appears that these three findings are correlated, as visual arts institutions could increase the “young” audience engagement by offering more VR features and promoting them through video. As fellow AMT Lab contributor Jess Bergson discovered during the Digital Marketing Boot Camp for the Arts, “If there’s one thing all Boot Camp attendees now know as a truth: digital marketing pays off”. Arts managers should make the investment up front and ensure that VR efforts are well marketed and targeted appropriately to the most likely interested consumers: young adults.



BIBLIOGRAPHY

Arts Participation Leadership Initiative. n.d. www.arts.wa.gov.

http://www.arts.wa.gov/apli/goals.php?page_id=51.

Atlantis VR. 2017. Homepage. Accessed May 4, 2017.

<http://www.atlantisvr.com/en/noticia/?id=16>.

Auffret, Sophie. 2016. "The Arts Manager's Guide to Google's Art and Culture App." Arts Management and Technology Lab. October 21. <http://amt-lab.org/blog/2016/10/product-review-google-art-culture-app?rq=sophie%20auffret>.

Awane, Jones. 2016. "Virtual Reality Can Help Donors See the Impact of Charitable Giving."

Huffington Post. May 31. Accessed November 2, 2016. http://www.huffingtonpost.ca/awane-jones/virtual-reality-charity_b_10205418.html.

Bergson, Jess. 2016. "10 Truths from Boot Camp to Spark Your Digital Revolution." Arts Management and Technology Lab. November 2. <http://amt-lab.org/blog/2016/11/10-truths-from-2016s-digital-marketing-boot-camp-for-the-arts-to-spark-your-digital-revolution?rq=bergson>.

Charara, Sophie. October. "Explained: How does VR actually work?" Wearable. 5 2016. <https://www.wearable.com/vr/how-does-vr-work-explained>.

Dali Museum. 2016. The Dali Museum Website. Accessed November 1, 2016. <http://thedali.org/>.

Dominquez, Sophia. 2016. "How to Market Virtual Reality." The Huffington Post. August 14. http://www.huffingtonpost.com/sophia-dominguez/how-to-market-virtual-reality_b_7983480.html.

Duncan, Riley. 2016. "Survey finds two-thirds of consumers don't know virtual reality headsets exist." siliconAngle. March 4. Accessed November 30, 2016. <http://siliconangle.com/blog/2016/03/04/survey-finds-two-thirds-of-consumers-dont-know-that-virtual-reality-headsets-exist>.

Foqahaa, Yasmin. 2016. "Virtual Reality and Audience Engagement." Arts Management and Technology Lab. March 29. Accessed November 2, 2016. <http://amt-lab.org/blog/2016/3/virtual-reality-and-audience-engagement-in-museums?rq=audience%20muse>.

—. 2016. "VR in Museums: Case Studies." Arts Management and Technology Lab. September 20. Accessed November 2, 2016. <http://amt-lab.org/blog/2016/8/vr-in-museums-field-leaders?rq=virtual%20reality>.

HTC. 2015. "HTC Vive." November 13. Accessed October 4, 2016.

<https://www.youtube.com/watch?v=C84TXtEQao>.

Initiative, Arts Participation Leadership. n.d. "Goal 1 Attract Younger Audiences."

Lemon & Orange. 2015. "Coca Cola Virtual Reality Christmas ride." YouTube. December 23. Accessed November 15, 2016. <https://www.youtube.com/watch?v=fFL2Dk2HYro>.

Murphy, Samantha. 2016. "YouTube's 360-degree video could mean big things for BR." Mashable. March 16. Accessed November 6, 2016. <http://mashable.com/2015/03/16/youtube-adds-360-video-support/#d.oLtOhtxZqY>.

National Endowment for the Arts. 2015. "A Decade of Arts Engagement: Findings from the Survey of Public Participation in the Arts 2002-2012." NEA.gov. January. Accessed October 5, 2016. <https://www.arts.gov/sites/default/files/2012-sppa-feb2015.pdf>.

Neiger, Chris. 2016. "Virtual reality is too expensive for most people - but that's about to change." Business Insider. September 8. Accessed November 15, 2016. <http://www.businessinsider.com/why-is-virtual-reality-so-expensive-2016-9>.

Newman, Daniel. 2016. Mobility in the Age of AR and VR—Welcome to the Future! March 8. Accessed May 4,



-
-
2017. <http://millennialceo.com/mobility-in-the-age-of-ar-and-vr-welcome-to-the-future/>.
- Plautz, Jessica. 2015. "How the next generation discovers art events around the world." Mashable. April 16. Accessed October 6, 2016. <http://mashable.com/2015/04/16/next-generation-arts/#sXym5mT0Skq8>.
- Prasuethsut, Michael Sawh and Lily. 2016. "Best 360 degree cameras out now and on the way." Warable. November 29. Accessed December 10, 2016. <http://www.wearable.com/cameras/best-360-degree-cameras>.
- Taber, Kelsey. 2015. "13 Stats that Prove the Power of Video Marketing." Boast. October 20. Accessed November 15, 2016. <http://boast.io/13-stats-that-prove-the-power-of-video-marketing/>.
- The Dali Museum. 2016. Virtual Reality Gains International Acclaim. Accessed November 30, 2016. <http://thedali.org/press-room/virtual-reality-experience-skyrockets-to-international-acclaim/>.
- Titova, Elana. 2016. "5 Ways to Incorporate Virtual Reality into Your Marketing Plan." Entrepreneur. July 22. Accessed November 30, 2016. <https://www.youtube.com/watch?v=fFL2Dk2HYro>.
- Young, Katie. 2016. "Are Consumers Ready for Virtual Reality?" Global Web Index. August 16. Accessed November 2, 2016. <https://www.globalwebindex.net/blog/are-consumers-ready-for-virtual-reality>.

