



# The Immersive Audience Journey

An overview of audience insights and perspectives on immersive art, culture, and entertainment



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This report is a result of research conducted by Digital Catapult on behalf of UK Research and Innovation (UKRI), in collaboration with the Audience of the Future Demonstrator programme.

UKRI's Audience of the Future programme is funding industry-led consortia in the creative sector to create new immersive experiences.



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# Foreword from UKRI

## Welcome to the Immersive Audience Journey report

The UK is home to some of the world's leading digital and creative talent, and the experiences produced by projects funded by the Audience of the Future programme certainly exemplify this excellence from large-scale immersive projects through to investment support and R&D into production innovation.

The Immersive Audience Journey report, supported by the Audience of the Future programme, explores if there really is an easily identifiable “immersive audience”, or whether immersive experiences appeal to audiences as part of an already established offering of contemporary art, culture and entertainment.

According to Digital Catapult and Immerse UK 2019 Immersive Economy report,<sup>1</sup> the UK is the largest immersive market in Europe with a rapidly developing ecosystem. Many of the key components to enable creators to achieve more ambitious creative visions at scale are now market-ready. However, there is currently insufficient insight into audiences, causing myriad challenges for the immersive creative content sector.

This report aims to support market growth by identifying sources and methods of obtaining audience insights, and using these to create user awareness and capture the imagination of future prospective audiences. Before the Covid-19 pandemic in 2020, one key finding was that audiences are potentially reluctant to embrace immersive technology in the home, favouring location-based experiences as a way to dip their toe in the waters of this new technology. Whether the pandemic has changed audience behaviour permanently is something that future studies should address.

The impact of COVID-19 coupled with continuing challenges of raising investment and building sustainable businesses means that understanding these audiences is now more critical than ever. By sharing the insights from this report, we hope to raise awareness of best practices within the immersive community to help creators and production studios as they pivot their models.

Immersive technology continues to shift audience behaviour from ‘viewing’ content to ‘experiencing’ and ‘recommending’ it ranging from exciting e-Sports experiences live-streamed in virtual reality (VR) to educational augmented reality (AR) applications designed for the whole family to enjoy.

The higher levels of technology acceptance and utilisation prompted by this unprecedented time may also shine a light on immersive experiences that provide truly memorable moments with longer-term impact. This creates the potential for audiences to prioritise immersive experiences in their future selection of art, culture, and entertainment.



**Professor Andrew Chitty**

UKRI Challenge Director for the Audience of the Future and Creative Industries Clusters Challenge

# Foreword from Digital Catapult

This report creates an important new framework for exploring different audiences in different market segments and how they behave around immersive content.

Four years ago, when Digital Catapult began its immersive content programme, we hoped to see a gradual increase in the adoption of VR and AR in mass markets. We had assumed with a combination of optimism and naivety that the leading hardware manufacturers and platform owners such as Sony and Oculus (with Facebook fully behind them), HTC and Microsoft would push aggressively to consumer uptake and that within five years we could expect to see a thriving global market into which UK immersive content producers could actively sell.

The market has not developed that way yet. Instead we see gradual industrial adoption of AR in areas such as product design and machine maintenance. We see slow but consistent growth in the use of VR in training and skills development. We see a hardcore games community for whom some VR games continue to attract an audience. We see broadcasters, film studios and cultural institutions exploring the use of VR/AR and MR experiences as ancillary to their core products.

Immersive content, it is clear, is not yet part of everyday media consumption. It is still something special, something extra, experimental, unformatted, still novel. So who are the new audiences for these experiences? How might you reach and segment them? How do they respond?

This report has been created in collaboration with UKRI as part of the Audience of the Future programme to make sense of who the emerging audiences consuming this form of entertainment really are, how they experience these new technologies, and what it is to be entertained in this new format.

This report comes out under lockdown, a good time for reflection and it will hopefully remain relevant and indeed grow in relevance as industry starts to open up again.

The pandemic offered a fleeting prospect of accelerating market adoption as global populations retreated to their homes but the lack of available hardware meant that no real growth was possible. The general speed and ease with which people adopted video conferencing technologies for business and social purposes did produce what some have called an accelerated level of disruption. Over a two month period digital adoption occurred at a rate which might have been predicted over two years, an encouraging indicator as to how cultural barriers which can prevent adoption can be overcome unexpectedly fast.

Although prominent corporate players may stumble from time to time, immersive content as a form of entertainment or for delivering public services, as a means of cultural expression and a tool for industrial deployment continues to gain recognition and is being increasingly adopted. This report creates an important new framework for exploring different audiences in different market segments and how they behave around immersive content. It takes the notion of the audience journey as a critical tool for how to think about what is going on in different immersive environments with differing levels of interactivity and different goals. Harnessing audience insights will be key in the successful production of compelling immersive content and applications.

This report is a must read for anyone wanting to produce enthralling immersive work. It will help build a better understanding of current and future audiences, how to attract them, retain them, and, importantly, how to grow them.



**Dr Jeremy Silver**

Chief Executive Officer,  
Digital Catapult

# Executive summary

This report explores the concept of 'audiences' when applied to immersive productions in the fields of art, culture, heritage and entertainment.

The term 'immersive' is used to refer to experiences where audiences are placed into an environment that they feel immersed in, and where that environment responds to their presence. The technologies enabling immersive experiences range from virtual reality (VR) using a headset and augmented reality (AR) applications on smartphones, to location-based entertainment, attractions and events.

The research adopts the customer journey map approach as a structure for defining the different phases that audiences go through. Across the Immersive Audience Journey, key findings include:

- The immersive audience is not a single cohort, and their motivations to engage with an immersive production can differ wildly
- Creators are not currently practising systematic audience segmentation
- Traditional forms of marketing do not communicate the unique nature of immersive experiences, making immersive productions challenging to market
- Expected levels of audience interaction can be difficult to convey, and a number of practitioners recommend diverting first-time users away from heavy interactivity
- Immersive producers should consider how to blend production activities into marketing and adopt holistic thinking around audience engagement

- Technology acceptance - how audiences see the perceived value of an immersive dimension as an addition to their existing leisure and entertainment habits - factors strongly into audience interest
- Systematic user testing is part of any project for larger, more established organisations, whereas for smaller organisations it is something that has a tendency to be deprioritised or takes place too late in the process
- Audience satisfaction contributes to the willingness to re-engage and the willingness to recommend, therefore producers should invest in these aspects of the customer journey beyond the immediate boundaries of the experience itself
- The post-experience offering contributes to the lifetime customer and audience value: facilitating fandom and recall through merchandising and memorabilia, and generating word-of-mouth recommendation

A more focused understanding of the target audience will be key to the success of immersive productions in the future. Success might not be qualified in terms of massive mainstream breakthroughs, but rather as more comprehensive reach and engagement with viable niche audiences intensely interested in the work and large enough to be commercially viable.

# Introduction: immersive productions and the question of 'audience'

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# Introduction: immersive productions and the question of ‘audience’

There is an increasing need to understand the audiences who are engaging with immersive experiences within the arts, culture and entertainment.

According to Digital Catapult and Immerse UK 2019 Immersive Economy report, the UK is the largest immersive market in Europe. The UK virtual reality market alone is expected to grow from £118 million to £294 million by 2023, and the UK has over 1,250 companies that generate over 50% of their revenue from consulting, services or products within the immersive domain. Nearly 300 of these companies operate in the media and arts sector, which is the focus of our research.

Among academic researchers, ‘audience’ in the digital age has been defined as follows:

**“The people who, in their capacity as social actors, are attending to, negotiating the meaning of, and sometimes participating in the multimodal processes initiated or carried out by institutional media.”<sup>2</sup>**

The need to study the nature of immersive audiences has emerged as a result of the Audience of the Future Demonstrator programme. For Demonstrators facing the goal set by the programme of reaching an audience of 100,000 for their productions, the lack of audience insight was seen as a challenge, especially where immersive technologies would function as an enabler beyond distribution.<sup>3</sup>

This report explores the concept of ‘audiences’ when applied to immersive productions in the fields of art, culture, heritage and entertainment. The term ‘immersive’ is used to refer to experiences where audiences are placed into an environment that they feel immersed in, and where that environment responds to their presence. Such environments can be either completely fabricated or a digitally enhanced version of physical reality.

Immersive technologies have powerful capabilities for creating interactive environments, and are increasingly being used to produce experiential content. In the context of our research, the technologies enabling such experiences range from virtual reality (VR) using a headset and augmented reality (AR) applications on smartphones, to location-based entertainment, attractions and events. These include interactive theatre and installations that take advantage of immersive technologies, such as the use of projection in museums or galleries, and haptic technologies that leverage the sense of touch. This type of immersive production tends to engage multiple senses and often involves moving around within a defined space or interacting with objects. At the time of our research, Jeff Wayne’s *The War of the Worlds: The Immersive Experience* was running in London, and the Demonstrators in the UKRI Audience of the Future programme were starting work on their large-scale immersive productions, to be exhibited in 2020.

This report is intended to inform immersive practitioners who are invested in bringing a production to audiences in the UK, whether location-based or digitally distributed. It is also a starting point for future dialogues with academics with a background in audience research or other related disciplines, such as design research, who are interested in immersive technologies.

## Introduction: immersive productions and the question of 'audience'

### RESEARCH QUESTIONS AND GOALS

This report seeks to answer key research questions by identifying emerging practices among producers and researchers:

- What do immersive practitioners think about reaching, entertaining, and retaining audiences?
- How can immersive audiences be studied in different stages of the production process?
- Is it useful to map the process of becoming a consumer of immersive productions, events, or applications using service and design thinking tools?
- Can such mapping help to identify areas that are underdeveloped and/or under-studied?

The goal is to raise awareness of best practices within the immersive community, and share these approaches so that they can be adopted on a more widespread basis by those organisations growing the immersive culture and economy.

The report also aims to support immersive growth by identifying sources and methods of obtaining audience insights, and how to use them to create consumer awareness and capture the imagination of future prospective audiences. Consideration needs to be given to the spectrum of user experience: from audience segmentation methods to accessibility and ethical considerations; and from user-centred experience design to using data to analyse user behaviour to improve retention and monetisation.

The Demonstrators in the Audience of the Future programme provided the backdrop for this study. These Demonstrator projects range from mobile applications for mass audiences to highly localised experiences staged by world-renowned institutions - such as the Natural History Museum and the Royal Shakespeare Company - and cities like Bristol and Gateshead. UK-based immersive startups outside the programme are also building location-based experiences and digitally distributed VR and AR applications in the hope of creating similarly recognised global brands. A number of these innovators were contacted as part of the research.

On behalf of UKRI, Digital Catapult has heard from practitioners who have run immersive productions, and learned how they have brought audience considerations into their projects. However, for many practitioners this has not been possible due to the unique nature and relative immaturity of the immersive market.

## Introduction: immersive productions and the question of ‘audience’

### METHODOLOGY

This report is the result of interviews, roundtable discussions and academic research reviews. Interviews were held with more than twenty immersive experts with experience either as a content creator or researcher. These interviews were structured around the customer journey map, focusing on the insights that interviewees had gained from running immersive productions or studying their audiences. For example, creators were asked how they had leveraged audience insights for their production, how they had gathered audience data, and how they had promoted their work. When interviewing creators, the focus was on how they had conceptualised their audience members during the creative process, and whether they had observed audiences engaging with their work. The focus for researcher interviews was on their particular research interests, methodologies, and findings.

Interviewees came from within and outside the Demonstrators; they were identified through Digital Catapult’s network and from UKRI’s other programmes, such as the Creative Clusters. While most interviewees had worked on immersive in the UK, international creators and researchers were also included in order to benchmark what is happening in the UK against what is happening in immersive overseas. To cast the net wide and reach as many interviewees as possible in the UK, Digital Catapult also issued an open call for two roundtables focused on the subject of immersive audiences.

Aside from the interviews and roundtables, the research spanned five months, during which informal conversations were held with practitioners and researchers in events.<sup>4</sup> When close to finalising this report, the Demonstrator Research Leads were convened at a seminar in order to discuss and validate the findings.

Finally, reviews of academic research were undertaken, looking into immersive and audience research approaches in general, and into related studies identified as having the potential to yield applicable premises and insights. These included: studies of visitors to tourist attractions and these studies’ relevance to location-based immersive audiences; technology acceptance models and how they might explain audience attraction or aversion to immersive productions; and design thinking case studies, for example, in museums. The results in the report amalgamate data collected from all these sources.

# Immersive productions and audience research

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# Immersive productions and audience research

Although the initial motivation for studying practices relating to immersive audiences came from the Audience of the Future Demonstrator programme, audience development in general has been high on the agenda of cultural institutions for the last decade. This has been due to changes in the media landscape, such as the emergence of social media and on-demand streaming services, which have played a major part in the increasing fragmentation of audiences.

Audience development within cultural organisations has also been a theme for the European Commission, with the premise that developing audiences leads to growth, diversification and deepening relationships with them.<sup>5</sup> These are all acute needs for the UK immersive ecosystem. For example, museums and heritage institutions are actively seeking new audiences and ways to leverage the potential of immersive technologies for more engaged, spatial, and embodied ways of learning, while making their public profile more visible through innovation.<sup>6</sup> Similarly, Arts Council England has identified that future audiences might become more demanding of traditional forms of arts and culture, as exposure to various other forms of entertainment has generally increased.<sup>7</sup> Immersive capability is expected to contribute to resolving these issues.

The expectation is that immersive content will seldom be experienced at home, due to the cutting edge technology and production setups required. Yet, to generate widespread appeal, immersive experiences need to embody relevant themes, franchises, and topics similar to the art, culture, and entertainment consumed at home. This means that the ways in which people embrace new technologies, and how and why they attend and enjoy events, need to be taken into account when studying immersive media consumption.

## Immersive productions and audience research

### IMMERSIVE CONTENT IS NOT PART OF EVERYDAY MEDIA CONTENT

It is tempting to seek points of convergence between what is happening in the field of digital media audience research and what is happening for immersive content. However, immersive content does not form part of mainstream consumption. VR headset sales are still mostly to early adopters, and AR games that have reached the mainstream (such as Pokemon Go) are more about mobility and geolocation than AR and its immersive qualities. Location-based immersive entertainment seems to appeal to a novelty-seeking audience, or a subsection of arts audiences.

To accommodate this difference, some of the existing research that this study references originates from fields such as event management, tourism studies, and experience design. There are cases in which researchers have tackled the topic of future audiences using forward-looking scenarios. However, the cases encountered in this research have focused on technologies such as the internet of things (IoT), where researchers have seen developments in IoT as a future extension and amplification of current media platforms.<sup>8</sup>

While envisaging IoT playing a major role in future audiences' media consumption may be valid, these studies indicate that immersive technologies have not yet been a consideration in the ways audience research is understood within media and communication studies. Similarly, there has been little room for the idea that immersive technologies will change the ways in which audiences consume media.

However, this is a development that many of the immersive practitioners interviewed are investing creative energy into:

**“We still firmly believe that the next computing platform beyond the smartphone will be some kind of headset - and we are trying to build for that future.”**

VR Startup Founder

Application and use of immersive technologies is also the future that influential tech companies believe in, as evidenced by Facebook CEO Mark Zuckerberg's annual outlook post for 2020:

**“While I expect phones to still be our primary devices through most of this decade, at some point in the 2020s, we will get breakthrough AR glasses that will redefine our relationship with technology.”<sup>9</sup>**

Consequently, audience insights relating to immersive technologies have the potential to give producers an advantage when and if future media technology platforms and devices are built to deliver mainstream immersive content.

## Immersive productions and audience research

### OPPORTUNITIES AND CHALLENGES FOR AUDIENCE DEVELOPMENT

In general, creators are inspired by the capability of immersive technologies to transform or augment reality: creating a digital layer of content to add to a physical location or creating an embodied experience of something that cannot be experienced in the everyday - not just in the arts and entertainment, but also in heritage or educational settings, such as museums. Immersive has great potential for making abstract scientific concepts tangible, communicating scale, or creating re-enactments of historical events. There is evidence that immersive interaction with environments and objects can make them more memorable, reinforcing learning and overall impact. Heritage sites and museums exhibiting immersive productions can also encourage social and intergenerational visits, while presenting themselves as innovative, up-to-date institutions.

However, existing immersive opportunities can be challenging to realise, thanks to issues such as technology acceptance and effectively communicating their nature. The challenges for immersive in the consumer space are currently greater than those relating to specific use cases in enterprise and business-to-business. Using immersive technologies does not necessarily create new revenue streams for enterprise: the value is often found in improvements to productivity, safety and efficiency. Within arts, culture and entertainment, immersive productions are expected to bring in additional or new profit, making the need to understand and engage audiences crucial.

### CONTEXT DEFINES IMMERSIVE AUDIENCES

**“Audiences don’t have any idea of what to expect from an immersive experience... which could be anything from a very light-touch promenade, where you just move seats half-way through, to being shut in a storage container and having buckets of water thrown at you.”**

AR Startup Founder

Is there an identifiable immersive audience or do audiences engaging with immersive events and products consist of people who are drawn to them because of their general interest in contemporary art, culture, and entertainment? This is an important segmentation question, differentiating between those who are interested in immersive for its own sake, and those who are simply interested in the content, and happen to engage with the new medium as a result.

This research indicates that it is likely that most players of the most successful VR games, such as Beat Saber, do not constitute the same audience that would visit an immersive installation at, for example, the Saatchi Gallery in London. While these audiences might have mutual interests and some overlap, they engage with the content in distinctly different locations and ways: home versus gallery; popular culture versus high culture; gamified exercise versus art appreciation; recreation at home versus leisure travel or social occasion.

## Immersive productions and audience research

Audience overlaps are not always obvious, as Limina Immersive found out in 2019 while operating a VR theatre with curated content for a first-time, female-focused audience in Bristol. Their audience regarded the experience as more akin to a museum or amusement fair visit than to an arthouse cinema, which was what they initially assumed.<sup>10</sup> Dotdotdot's Jeff Wayne's *The War of the Worlds: The Immersive Experience*, has been running in central London since May 2019, and its audiences appear to have more overlap with audiences for secret cinema<sup>11</sup> than with the early-adopter VR gamers who use headsets at home.

These observations point to the importance of context for immersive experiences, and how location and social dynamics are key factors in shaping audiences and the types of immersive experience that they will engage with. The immersive audience is not a single cohort, and their motivations to engage with an immersive production can differ wildly. How to conceptualise and study these motivations is addressed in the section of this report covering the 'consideration' phase of the audience journey.

# The immersive audience journey

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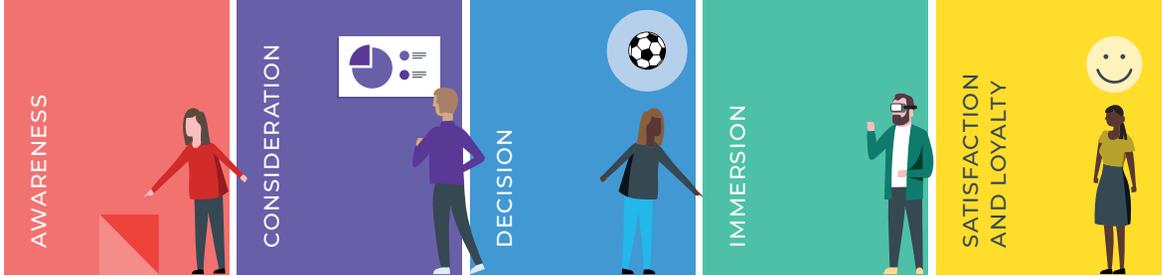
# The immersive audience journey

When clarifying how immersive experiences relate to customer journeys, the main challenge is how to capture the whole spectrum of immersive productions.

Applying a customer journey perspective to immersive productions is based on two questions:

- At which points along the journey, and how, are producers employing immersive technologies to enable the experience?
- At which points along the journey, and how, are producers conducting other audience engagement activities to communicate what the experience is and how it can be accessed?

The immersive audience journey is divided into five phases: awareness, consideration, decision, immersion and loyalty.



The immersive audience journey

## The immersive audience journey

### IMMERSIVE ENGAGEMENTS AS CUSTOMER JOURNEYS

To account for the combinations of technologies and physical and virtual spaces used in immersive productions, C. Flavian et al created a model in 2019 that captures the diversity of technology-enhanced customer experiences.<sup>12</sup>

This model aims to help researchers and practitioners think about how to add value to the user experience using practical applications of one or more immersive technologies. It looks at how technologies can directly or indirectly support customers' core or baseline experiences, "where technology is absent or plays a limited or secondary role". For example, an augmented reality component could assist the customer's "core experience by directly acting on the real world". Indirect support might be given by VR content, providing an alternative reality of its own.

Essentially, models such as Flavian's are interpretations of similar design thinking tools, such as customer journey maps, that are used for product and service design purposes.

### CUSTOMER JOURNEY MAPPING

**"As a human-centered tool, journey maps not only include steps where a customer is interacting with a company, but reveal all the key steps of the experience. Journey maps help us to find gaps in customer experiences and explore potential solutions. They can be used to visualise existing services as well as potential future experiences."**<sup>13</sup>

Stickdorn et al.

A customer journey map provides a structure for defining the different phases that audiences go through: becoming aware of an immersive production, considering attending it, paying for it, experiencing it, and possibly recommending or re-engaging with it. This shifts the perspective from looking at immersive as a technology - or set of experiences that the technology enables - to looking at how audiences experience immersive productions as art, cultural or entertainment services.

The end-to-end journey requires resources beyond the production itself to be able to gain traction beyond the initial premiere, exhibition, or application launch. The map should therefore capture all the steps, touchpoints and 'moments of truth'<sup>14</sup> that audiences encounter when engaging with immersive productions, including marketing channels and interactions with other customers or partners. Such maps are intended to be used as team communication tools when planning and designing immersive productions: they provide a structure to organise collective thinking and to create a shared understanding of what the team is working to build.

## The immersive audience journey

This journey maps what is required from different departments or functions to engage the customer: their responsibilities for enabling multiple touchpoints to the event and services related to it.

A template version of this journey is included at the end of this report.

# The immersive audience journey



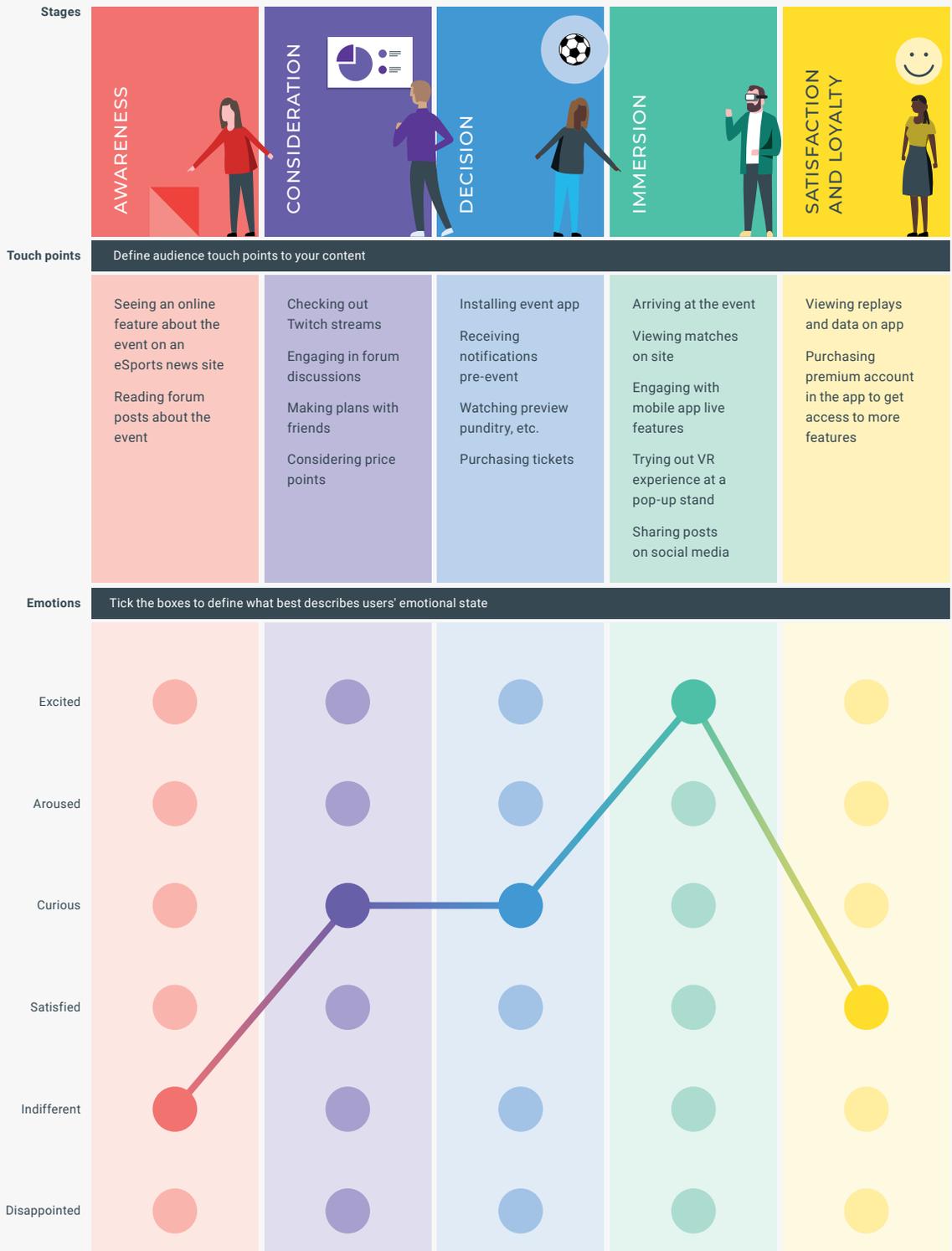
## The immersive audience journey

The next illustration shows how user emotions change at each stage, from indifference through curiosity and anticipation to satisfaction in the event of a positive outcome.

This is important, not only in terms of validating the quality of the experience, but also because satisfaction feeds into their willingness to recommend and revisit, a more detailed exploration of which will follow later.

A template for visualising the emotional arc has been included at the end of this report.

# The immersive audience journey



Attending an e-Sports event: Emotional arc

## The immersive audience journey

### CHALLENGES IN STUDYING AUDIENCE JOURNEYS

A body of research exists on how to evaluate immersive experiences, but what happens from an audience point of view before and after the experience is delivered remains under-studied. There are two main reasons for this lack of insight around designing the experience:

- Methodologies for capturing audience journeys, such as longitudinal studies, are complex undertakings - and can be even more so when the focus is on emerging technologies and their patterns of use<sup>15</sup>
- The practical challenge of how to reach audiences when they are not directly engaging with the content

To document guidance on how to begin insight initiatives, this report focuses on the broader context of audience engagement with an immersive event or product. This means mapping the decision points and variables that factor into the sequence of events that relate to all aspects of the journey, including raising awareness and persuading audiences to attend and/or making a purchase.

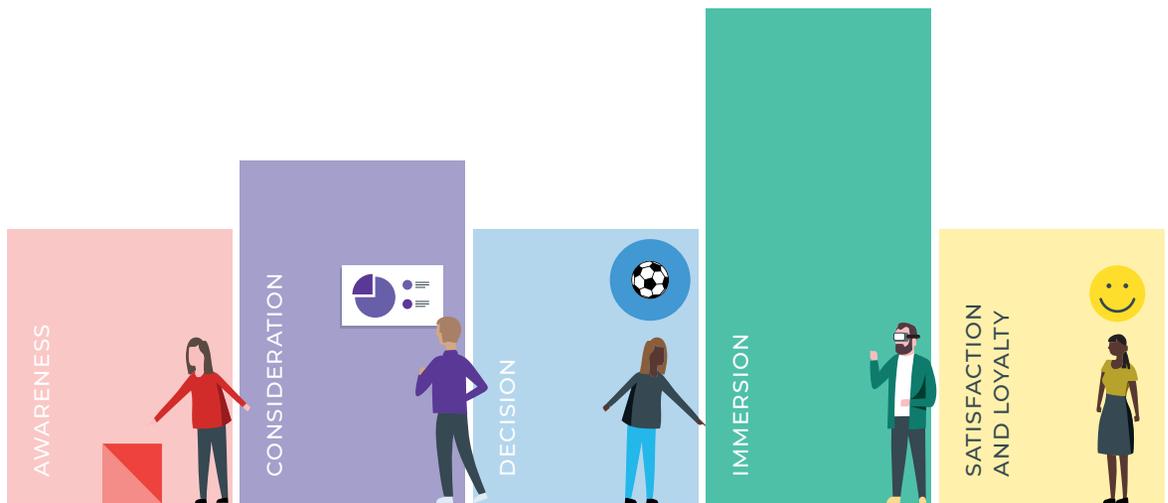
### OPPORTUNITIES FOR AUDIENCE DATA INPUTS AND OUTPUTS

The interviews revealed that producers in the immersive space are often so focused on creating the experience that audience considerations are introduced quite late in the process, put in place ad-hoc without proper consideration of methodology, or remain an afterthought. Approaches to audiences in industry publications tend to be shallow and reinforce existing stereotypes of immersive audiences as male and video gamer-oriented.<sup>16</sup>

Lack of depth in audience research is largely a consequence of the current state of the market, which means that content creators tend to be small companies with limited resources, both in terms of time and know-how in factoring audience research into their work. During interviews, no-one denied the value that audience insights would yield, but it was the established institutions, such as museums, that had a culture of audience insights and a structured process for embedding them into projects, rather than the startups with fewer people and a limited runway.

**A more focused understanding of the target audience will be key to the success of immersive productions in the future. Success might not be qualified in terms of massive mainstream breakthroughs, but rather as more comprehensive reach and engagement with viable niche audiences intensely interested in the work and large enough to be commercially viable.**

## The immersive audience journey



### The immersive audience journey

Another finding from the interviews and roundtables was the need for discussion of the audience journey. During roundtable events, a mapping exercise was conducted, asking participants to share their observations for each customer journey phase. Most of the input was about the immersive experiences themselves, and insights relating to creating awareness and loyalty, for example, were sparse. This finding was reinforced by similar discussions during interviews.

This illustration above shows a visual approximation of the relative numbers of insights per phase.

Therefore, this study provides a map of how audiences can be considered before, during, and after the production, even if resources are scarce. Increased understanding of audiences will enable immersive producers to reach audiences more effectively, create experiences that speak to audiences better, engage them more powerfully and frequently, and consequently grow their business and the market.

# The immersive audience journey

## IMMERSIVE AUDIENCE JOURNEY: TWO PERSPECTIVES

Labels for the phases along customer journeys vary in literature and practice, but the ones used in this report are fairly standard, although the typical label of 'experience' or 'service' has been changed to 'immersion'.

The following table covers the terminology used and summarises each phase from an audience and producer point of view.

## The immersive audience journey

Customer journey phase	Audience point of view	Producer point of view
<p><b>Awareness</b></p> <p>When a potential audience member becomes aware that an immersive production exists.</p>	<ul style="list-style-type: none"> <li>Made aware that an immersive production or product exists (physical or digital), via social media, word-of-mouth, advertising, visiting a venue, and other marketing channels</li> </ul>	<ul style="list-style-type: none"> <li>Uses multichannel marketing strategies and promotional activities based on segmentation or personas</li> <li>Determines which channels will deliver the best reach and return on investment</li> <li>Engagement approaches used in arts and popular culture are most relevant</li> <li>Imagery and messages should speak to the target audience, their interests and socio-economic context</li> </ul>
<p><b>Consideration</b></p> <p>The audience member starts weighing up their level of interest in the production, based on a variety of factors.</p>	<ul style="list-style-type: none"> <li>Considers how attractive the immersive production is in terms of price, location or platform, genre, accessibility or other factors</li> <li>Considers the type of interaction required from them and level of comfort with it (for example, needing to wear headsets)</li> <li>Uses cognitive tactics (technology acceptance model), imagined affordances and means-ends chain theory to test the production's perceived value based on available information, such as marketing materials, pop-up demos or digitally distributed free trials</li> </ul>	<ul style="list-style-type: none"> <li>Can blend production and promotional activities to engage potential audiences more fully pre-launch or event (where the arc of engagement should begin)</li> <li>Leverages understanding of the customer journey and considerations that factor into audience decisions (for example, technological selling points may attract some, but may be a turn-off for others)</li> <li>Can reconcile potential variances in acceptance by making the technology almost invisible when promoting the production - with emphasis placed on the experiential and social aspects and subject matter as its value proposition and differentiation factor</li> </ul>
<p><b>Decision</b></p> <p>When an audience member decides to attend /participate in the immersive production.</p>	<ul style="list-style-type: none"> <li>Often seeks social proof from others who have experienced the production, or shares considerations with friends or family</li> <li>Decides whether or not to purchase/attend/participate</li> <li>May engage with a larger (online) community about the production if one exists</li> </ul>	<ul style="list-style-type: none"> <li>Seeks ways to engage with audiences via pre-event updates, online events and related activities</li> <li>Uses registration to obtain demographic information (subject to GDPR etc)</li> <li>Can use community activities such as online forums and social media to build anticipation and keep audiences engaged through production lifecycle</li> </ul>
<p><b>Immersion (Experience)</b></p> <p>When audiences experience the immersive production.</p>	<ul style="list-style-type: none"> <li>Experiencing a variety of emotions and processing sensory information</li> <li>Consciously or unconsciously evaluating how the production is meeting their expectations, and how it makes them feel</li> <li>Simultaneously processing the real world and XR (virtual, mixed or augmented reality) - conceptual blending that makes it difficult to reflect on the experience</li> </ul>	<ul style="list-style-type: none"> <li>Has a duty of care for the audience, determined by the production's nature, technology or location</li> <li>May collect behavioural data from technology used (movement, eye-tracking etc) to understand how audiences interact with experience and each other</li> <li>May also collect user data to tailor the experience to the individual</li> <li>Uses exit surveys, post-event user feedback and social media reviews to learn how well goals have been met, and how the experience could be improved</li> </ul>
<p><b>Satisfaction and loyalty/advocacy</b></p> <p>Audiences reflect on their experience and decide whether to re-engage and/or recommend it.</p>	<ul style="list-style-type: none"> <li>May re-engage or recommend to peers if expectations were met</li> <li>May purchase related products, register for updates, or continue engagement with the community around the production or producer (many place a value on being 'insiders')</li> </ul>	<ul style="list-style-type: none"> <li>Creates opportunities for audiences to share their experience and purchase merchandise memorabilia</li> <li>Uses data collected throughout the user journey to inform current and future productions, and build a deeper understanding of their audience</li> <li>Communities can also be used for research, and to recruit future test audiences</li> </ul>

# The immersive audience journey

## SECTION SUMMARIES

The following five sections of this report cover each phase of the customer journey, beginning with the preparatory step of audience segmentation.

### **Journey phase 0: segmenting immersive audiences**

This section discusses how immersive audiences can be segmented, drawing from existing segmentation practices in other media while acknowledging the ways in which immersive content requires rethinking the traditional approach.

### **Journey phase 1: reaching audience awareness**

This section discusses how audiences become aware of immersive productions, for example, using various marketing and engagement activities. This phase of the journey ties into the power of brands and locations that have helped immersive producers to leverage a specific audience for their work.

### **Journey phase 2: audience considerations**

To understand barriers to market growth in this space requires an understanding of what may stop audiences from engaging with immersive productions. This section discusses what factors into audience consideration, such as expected levels of interaction, price points, technology acceptance and social dynamics.

### **Journey phase 3: evaluating audience experience**

The impact of immersive content is difficult to evaluate, because it occurs 'in the moment', while audience members are experiencing it. Nevertheless, studies addressing this issue, and the resulting methods and toolkits, provide useful points of departure for immersive producers who want to integrate user evaluation into their content creation processes.

### **Journey phase 4: audience satisfaction and loyalty**

This section looks at studies that show how satisfaction feeds into future willingness to pay for other similar productions, and also immediate willingness to revisit and/or recommend to others.

# Journey phase 0: segmenting immersive audiences

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# Journey phase 0: segmenting immersive audiences

“We segment users based on what actions (i.e. features) they’ve used, how long have they used the app and how ‘deep’ they have gone with its feature set - these patterns help to identify power users as opposed to less committed ones.”

AR Producer

## HIGHLIGHTS

- Immersive audiences are a subsection of existing audiences of the arts, culture and entertainment sectors
- Determining accurate audience segments will support marketing activities, pricing considerations and finding new revenue channels. Segmentation can also inform creative purposes, such as personalising content for individual audience members and cohorts
- Creators are not currently practising systematic segmentation, partly because they are either attempting to attract as broad an audience as possible, or because they are deliberately targeting early adopters or first-time users
- Segmenting immersive audiences can draw from existing work within arts and culture, live events, museums, and gaming. Location-based experiences can also draw from visitor profiles and tourism and events management studies
- While tools such as Audience Finder are available for arts institutions, immersive startups are missing this kind of support
- In arts audience research, there are studies that recommend using long-term customer relationship building approaches

## Journey phase 0: segmenting immersive audiences

### FUNCTIONS OF AUDIENCE SEGMENTATION

Segmentation is the use of identifiable characteristics - such as age, economic status, interests, amount of leisure time or genre preferences - to divide audiences into target groups.

There is a need to identify how segmentation practices can help immersive creators in attracting larger audiences and generating revenue: effective segmentation can improve the return on investment in marketing campaigns by targeting only the people most likely to respond, or by dividing a campaign into different approaches for different segments. For example, an immersive producer might decide to target people for whom immersive means something and who find it genuinely interesting, and so would market using the media and content most appealing to that segment's profile.

In this section there are references to both segments and cohorts.

- **Segments** are the groups created by segmentation (usually demographic), often created to correspond with an audience persona (an idealised profile of 'model' consumer) for marketing purposes
- **Cohorts** are groups of people who have shared a specific event or experience - it's often a time-bound definition

An immersive producer could target a segment (people aged 50+), or a cohort within that segment (everyone aged 50+ who experienced the production in September 2019).

The validity of any segmentation is proven through its practical value: how well segmented marketing activity performs in reaching audiences to raise awareness and convert interest into revenue through sales of tickets, hardware or software. Insights from segmentation performance data can then be fed back to validate and optimise future segmentation approaches.

Segmentation can also be used in design thinking practices, especially in the so-called discovery phase. Creators can apply audience segmentation methods to achieve a more nuanced understanding of their target audiences, such as uncovering audience motivations and preferences, and then develop personas for use during the design process to keep their target audiences front of mind. Creators can also segment audiences based on how they engage with the experience: their level of activity, where they direct their attention, their interaction or playing style, and so on. This builds a feedback loop to support further development and shape future content, according to the preferences being observed.

# Journey phase 0: segmenting immersive audiences

## APPROACHES TO SEGMENTATION

To summarise, the following table maps various approaches that can be taken during the immersive audience journey to systematically use segmentations and audience insights. Categorising these approaches by customer journey phase illustrates the various motivations producers might have for obtaining audience insights, from finding optimal marketing ROI to profiling users for content personalisation, as well as identifying the most loyal customers.

## Journey phase 0: segmenting immersive audiences

Goals and criteria for audience segmentations across immersive customer journeys					
	AWARENESS	CONSIDERATION	DECISION	IMMERSION	SATISFACTION AND LOYALTY
<b>Goals</b>	<p>Understanding who to market to, and who to create for</p> <p>Understanding the various factors that can be used to segment audiences</p>	<p>Understanding who has been reached and how - who has become aware of the production, and through which marketing channel</p> <p>Identifying best performing marketing channels (cost per acquisition) and content per target audience segment</p>	<p>Understanding who, out of those reached, converted into a paying customer</p> <p>Understanding who will be attending or has installed the software (such as an AR or VR app), and who is engaging with the community</p>	<p>Understanding how audience members experience the production (their interaction styles)</p> <p>Obtaining data for personalising experience (if applicable)</p> <p>Validating learning outcomes (when applicable, such as for museum exhibits)</p>	<p>Understanding target audience segments satisfaction, in particular how well the immersive production has met or exceeded the audience member's expectations</p> <p>Analysing the most valuable cohorts in terms of revenue (ROI)</p> <p>Creating a sustainable community</p>
<b>Criteria/metrics</b>	<p>Technology acceptance: early adopters, first-timers, and segments in between</p> <p>Economic context: willingness to pay, amount of leisure time available</p> <p>Experiential preferences: thrill-seeking, social belonging, personal growth, interaction or play styles.</p>	<p>Segment by source to online presence or venue</p> <p>Demographic data to validate and optimise marketing choices</p>	<p>Conversion % per source</p> <p>'Golden segment' - the one that converts best</p> <p>Sign-ups to online community or similar</p>	<p>Behavioural data in relation to experience goals, to the extent that technology permits (for example, heatmaps, passive object indicators, onboarding funnels)</p>	<p>User sentiment and willingness to recommend via scoring systems (such as in apps) or exit surveys</p> <p>Retention metrics: frequency of use, session/visit length, progression in experience (when relevant)</p> <p>Viral factor ('K-factor'): how much audiences share experiences on social media or by word-of-mouth</p>

## Journey phase 0: segmenting immersive audiences

### IMMERSIVE AUDIENCES FOR MUSEUMS, GALLERIES, AND LIVE EVENTS

Recent location-based immersive productions, such as *We Live in an Ocean of Air* by Marshmallow Laser Feast, and *Fly by Picture This* Productions and British Airways, have largely been exhibited in gallery and museum locations, making it relevant to consider how immersive can benefit from arts and museum audience segmentations.

Audience Spectrum, developed by The Audience Agency on behalf of the Arts Council England, segments the population into ten groups based on cultural values.<sup>17</sup> The Audience Finder tool has also been created to specifically serve the cultural sector for discovering and analysing audiences, but commercial companies - including immersive startups - do not have access to it. It is evident from interviews that those aiming at installing immersive projects at galleries and art institutions would benefit from such a resource. Startups tend to invest all their resources into creating the production itself, and therefore do not have a structured process or culture of leveraging audience insights. The arts, culture and heritage sector represents a significant opportunity for immersive producers to grow and diversify their audiences, as well as those of their host venue, whether theatre, museum or gallery.

### ARTS AUDIENCES

Researchers Ashton and Gowland-Pryde<sup>18</sup> see “the increasing importance placed on addressing the subtleties and nuances of arts audiences” as countering the view that “arts audiences are too complex to understand through attendance numbers or demographics”. They note how “generation and use of data for audience profiling and segmentation continues to gather pace”, in line with the general increase in the use of big data<sup>19</sup>. They go on to say that “audience segmentation both describes and constructs audiences, and that there are significant implications for this regarding who is excluded from prevailing approaches to identifying and engaging with audiences”. This is especially pertinent to an emerging market, such as immersive productions.

While segmenting arts audiences has been seen as “a systematic method connecting art forms with people’s characteristics and preferences”, it is commonly believed that the age of segmenting through demographic criteria alone is now over, and that organisations have moved into developing “more personalised and granular accounts” to communicate with audiences.

According to Ashton and Gowland-Pryde, there are also political implications for segmenting arts audiences, and the researchers argue for what they call a biographical research approach - allowing that while such quantitative methods are resource-intensive, combining methods will enable organisations to develop a more rounded picture of audiences. The idea is that quantitative segmentation addresses the big picture and qualitative segmentation enables more detailed targeting. Nevertheless, even recent segmentation efforts are not successful in acknowledging audience members’ movements between segments, and so provide only snapshots of audience cohorts rather than deeper insights.<sup>20</sup>

## Journey phase 0: segmenting immersive audiences

Other audience research indicates that previous exposure to and experience in the arts can be greater determinants of arts participation than the conventional socio-demographic factors typically used in segmentation approaches.<sup>21</sup> Infrequent arts audiences, who might present the most potential for growth, are also difficult to capture, and research shows that 'fringe' or 'disinclined' segments within this group are motivated by different qualities in arts offerings.<sup>22</sup>

When and if trying to reach arts audiences, immersive producers need to be aware of these complexities and not view segmentation as the answer to all their targeting needs. For the research community, this opens up an opportunity to study how visitors to immersive productions in galleries compare with existing arts audiences, and what would be the most accurate methods for gathering robust insights about them.

### MUSEUM AUDIENCES

Established institutions have processes for identifying audiences using their own segmentation models, and analysing how well an exhibition project's vision aligns with the target audience's motivations, preferences, and demographics. Using a design model, general learning outcomes and key audience insights are defined in the project discovery phase, and those findings are advocated through subject matter experts within the organisation. Audience needs are addressed through a systematic process of prototype evaluations, advocating audience insights and conducting exit surveys with visitors. Within the Audience of the Future Visitor Experience Demonstrator, the Natural History Museum and the Science Museum Group are refreshing their segmentations to accommodate future forms of content, including immersive.

The major challenge cited in interviews with museum researchers was identification of the immersive audience, whether this is a new audience and, if so, why it would be regarded as such. This represents an opportunity to enhance a museum's public image through immersive projects, although there are a number of unknowns in the process, relating to both technology and audiences.

UK museums are not alone in their quest to keep audience insights up to date. Museums Victoria in Melbourne, Australia, has conducted a study that divided their audience into six segments, based on motivations to visit museums. Their model addresses motivations ranging from personal growth to belonging, and from absorbing information to being stimulated. It serves as an example of how visitor motivations can be synthesised into a model for marketing and design purposes.<sup>23</sup> Similar work is ongoing within the Audience of the Future Demonstrators.

## Journey phase 0: segmenting immersive audiences

### IMMERSIVE LIVE EVENTS

Live immersive experiences are run as directed experiences for a limited number of participants at a time. They are increasingly becoming a part of digitally distributed productions, too, especially social and/or performance VR applications for consumer headsets.

For example, WaveVR is a popular music social network and event platform that has staged a number of live virtual concerts. In November, 2019, immersive US-based studio Tender Claws released a VR experience for the Quest headset - *The Under Presents* - at the Oculus app store. This was a collaboration with Pie Hole, an immersive theatre ensemble that performed live in a cabaret-style multi-user environment. The closest to a similar operating model within the Audience of the Future Demonstrators is the Sports Demonstrator, Weavr, which leverages live eSports.

These examples demonstrate how immersive productions are seeing live elements as key in attracting audience interest and engaging consumers over time. This 'live' characteristic can be leveraged by immersive productions, regardless of platform and venue. They share many characteristics with traditional live events: local and fixed delivery in time or space, spontaneity and unknown or uncertain outcomes, the ability of performers to react to the audience, and the ability of the audience to respond.<sup>24</sup>

In their study on segmenting entertainment quality variables and the satisfaction of live event attendees, Kim and Tucker aimed to achieve a better understanding of how to effectively market to consumers who attend live entertainment performances. The research was conducted in the context of convention and event tourism, but some of the findings are relevant for immersive attractions, and in particular those that are location-based. They face similar challenges in capturing audience attention, especially when there are so many other competitive events and platforms where potential audiences could spend their time and money.

Immersive audience segmentations can draw from the way that live events have been viewed through the lens of segmentation. While Kim and Tucker's segments do not directly fit immersive purposes, their study is relevant, because they looked at the end-to-end experience: the customer journey. They found, for example, that the employees of the venue or production play a part in overall audience satisfaction. Satisfaction has also been found to correlate with revisit and repurchase intentions.<sup>25</sup>

In their conclusion, Kim and Tucker observe that most research that employs similar methodologies to theirs has been focusing on tourism, and that live entertainment is an under-studied area. Immersive productions are in a similar position, but the work being conducted within the Audience of the Future Demonstrators is creating new insights.

These findings also support the observation that immersive creators should adopt a comprehensive service design approach to their productions. In this context, Limina Immersive's pop-up VR theatre, with which they targeted first-time female audiences, presents an interesting case study. Their median audience age was 32, and they identified further segments within the audience attending: 'creative women aged 25+', 'couples aged 30+' and 'groups of friends'. Noteworthy aspects of this project were the attention paid to the duty of care, and the way they framed the immersive film content within a spa-like setting to address any aversion to the technology. The project is also an example of how applying a comprehensive design thinking approach, drawing from customer journey mapping, can be used to address consumer reservations and reach new audiences with immersive content.

## Journey phase 0: segmenting immersive audiences

### MEDIA AND ENTERTAINMENT AUDIENCES

In the Audience of the Future programme, the Performance Demonstrator consortium, led by the Royal Shakespeare Company, has vast experience of user studies and segmentation across various media, and that body of research is being used to produce segmentation for the project. The premise is to look at different applications across media, with a goal of arriving at a general model that explains immersive preferences.

People have a tendency to retain existing habits: for example, while accessing AR applications on their smartphones, users often pinch and zoom on the touchscreen, even when they can move closer to the virtual objects in the physical space. Similarly, research in the Demonstrator has shown how older demographics might stand still with a VR headset on, waiting for something to happen, based on familiarity with TV and cinema. This is why onboarding is important for making audiences comfortable with what they are going to experience, and explaining the agency they are going to explore it with.

Immersive audiences can vary significantly, for example, where one part of the Demonstrator is an immersive theatre piece and another one is a rave. Therefore any segmentation using a general approach needs to create a synthesis of previous work in gaming, popular music, classical music, live performance, experimental performance and so on. This requires deconstructing what that audience experience is, in terms of what is engaging and motivating.

### AUDIENCES IN THE CREATIVE PROCESS

According to our interviews, creators do not tend to see population-wide segmentation tools such as Audience Finder helpful for informing the creative process. Instead, they are seen as tools for guiding marketing, pricing, and distribution. This suggests a limited view of the production, from an experience-only perspective.

When creative practitioners were asked about audience segmentation, answers fell broadly into two related approaches: the audience's prescribed role in relation to the content, and audience engagement or 'play' styles during the experience.

## Journey phase 0: segmenting immersive audiences

### AUDIENCE ROLE IN RELATION TO CONTENT

During immersive productions, the audience member's role is typically more active than that of a traditional viewer or visitor. "We would never make a show where the audience would just be a guest at a hotel", one creator said, positioning audience members as active participants, at least to a certain degree. Creators generally felt that audiences need to be given flexibility, enabling them to choose how fully they want to engage with that active role, or even fall back to a more traditional audience position. In most cases, this flexibility was justified by trying to create broad-ranging audience appeal.

A new development in segmentation is the use of advanced digital technologies to collect real-time audience data. This opens opportunities for what one practitioner called "data-augmented improv", referring to an immersive theatre approach where actors are provided with information collected on the audience to use for improvisation during their scenes. With permission and the correct data management systems in place, audience information could be obtained from targeted questionnaires, pre-show engagements, registration information and various other means. This type of creative aspiration is aimed at creating more memorable experiences by personalising them to individuals and groups. Receiving and processing this information while staying in character then becomes the practical challenge for the actors interacting with audiences.

### AUDIENCES' INTERACTION STYLES

A potential starting point for identifying immersive audience segmentation methods can be found in video game studies. Research into online multiplayer games has studied player motivations, such as socialisation, competition or exploring the game world.<sup>26</sup> Recent models, such as 'The Gamer Motivation Model'<sup>27</sup> and Newzoo's 'Gamer Segmentation Model',<sup>28</sup> point to how approaches that marry motivations with preferred interaction styles and emotional outcomes could serve as a starting point for immersive audience segmentation. Such segmentation would probably need to distinguish between a number of subcategories, such as location-based versus digitally distributed content, VR versus AR, and so on.

While none of the interviewees mentioned adopting models like these, some content creators have chosen creative directions with an appeal that extends beyond immersive's novelty value. Darkfield, for example, plays with a thrill factor in its productions ('Seance', 'Flight' and 'Coma') which explore fear and "crack open some of the vulnerabilities of the audience".

## Journey phase 0: segmenting immersive audiences

### BEHAVIOURAL DATA

Some segmentation can take place only after audiences have engaged with the production, as it requires direct observation, or automated means of collecting data.

For example, producers have identified different interaction styles from how audiences navigate through branching narrative paths and arrive at different endings. Post-event segmentation based on behavioural data can be used for re-engagement and relationship building in the loyalty phase of the customer journey, as well as informing future productions.

Behavioural data is collected from audience members based on how they engage with an application or a service. Developers and publishers of online and mobile applications collect such data to identify and track key performance indicators for their product or service. When user numbers reach an appropriate scale, this can be used to inform about their offerings.

With the tracking that can be built to VR or AR applications, there are almost no limits to how granular behavioural data can be, especially when expanded to areas such as eye tracking. However, the more data that is collected, the more work it takes to identify relevant patterns and prioritise findings.

Collecting behavioural data opens up possibilities to segment users based on the actions they have taken, such as how long they have used an app for and how deeply they have gone into its feature set or content. Patterns such as these help to identify power users and potential 'choke points' in the implementation or broader audience journey - the points at which audiences might become stuck or disinterested. Production teams can rarely act on every single conclusion from these findings, and interviewees had established their own priorities for when and where to take action.

When immersive experiences take place in a physical venue, behavioural tracking can be achieved by installing sensors within the space. So-called passive objective indicators can be designed into the evaluation of an immersive experience to collect data, such as how audiences travel within the space and, if seated, how they physically react to a specific moment or sequence of the production. Currently, the use of indicators is experimental, with media research companies such as i2media in the Performance Demonstrator leading the way in establishing proven methodology for gathering and applying such data.

Privacy considerations and consent for data collection are requirements for carrying out such activities. However, even if a vast quantity of data becomes available, it is not useful unless there is a clear understanding of what to look for. Regardless of how data is collected, immersive producers recognise that finding patterns and discounting anecdotal evidence (such as vocal minorities using online forums) are among the most important practices in data evaluation.

## Journey phase 0: segmenting immersive audiences

### FROM SEGMENTATION TACTICS TO LONG-TERM RELATIONSHIPS

“In order to develop meaningful relationships with audiences, arts and cultural organisations should prioritize the long-term relational approaches offered by audience engagement over short-term tactical activities such as segmentation and promotion.”<sup>29</sup>

Ben Walmsley

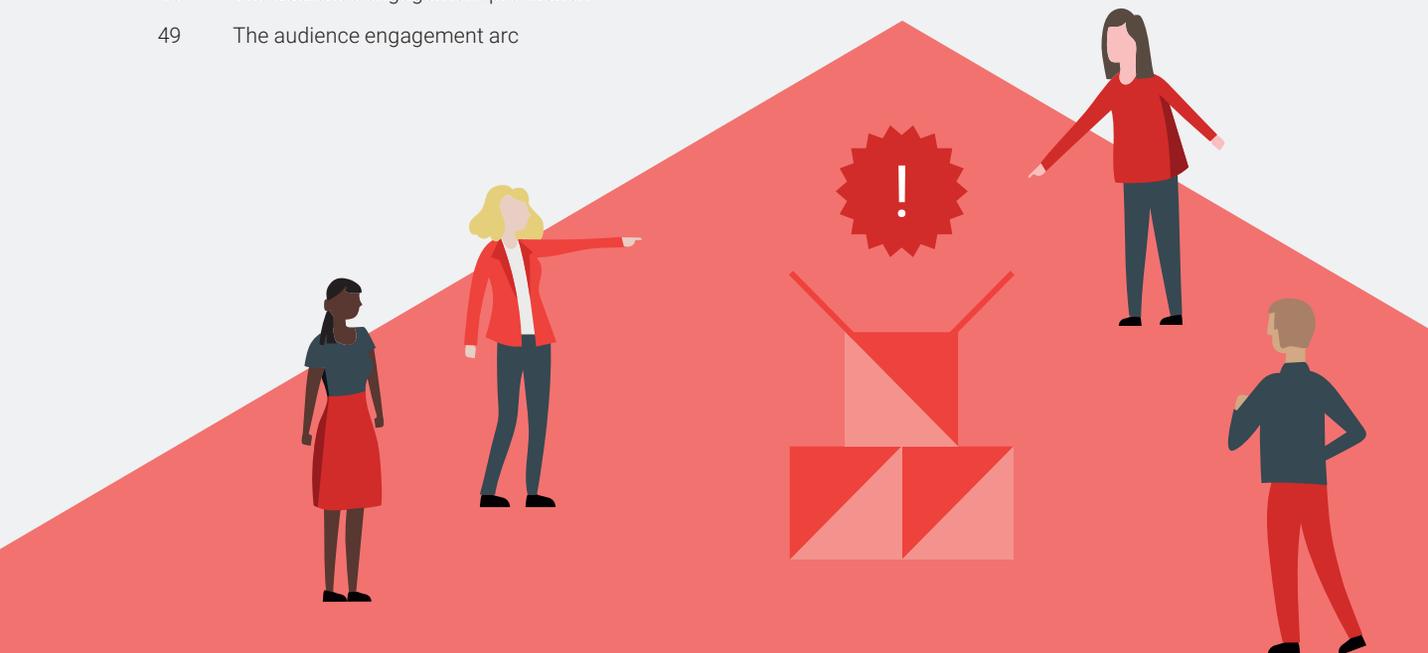
While there are various reasons for audience segmentation, it can still be seen as a relatively shallow tool for understanding audiences. When Ben Walmsley discusses arts audiences, he argues that there is a “need to fundamentally reconfigure and re-conceptualize the arts marketing mix” based on the increasingly holistic and collaborative relationship between arts audiences and the content they are experiencing. His solution substitutes the ‘four Es’ (experience, exchange, environment, and engagement) for the traditional ‘four Ps’ of marketing (product, price, place, promotion).

The next section looks at how such an approach aligns with the emerging practices within immersive art, culture, and entertainment.

# Journey phase 1: reaching audience awareness

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# Journey phase 1: reaching audience awareness

“Particularly in London there is a large, growing audience who, at the moment, are willing to pay - but less willing to pay than 10 years ago, yet there are many more of them.”

Immersive Producer



<b>ACTIVITIES</b>	See a social media post
<b>MOTIVATIONS</b>	Interest in experimental theater, secret cinema, or similar
<b>EMOTIONS</b>	Intrigued
<b>BARRIERS</b>	Price, location

Examples of the activities, motivations, emotions and barriers that audience members potentially experience in becoming initially aware of an immersive production.

“There is something about it being a show that not everyone can handle, that becomes then part of how we market the show, or at least how the word-of-mouth markets the show.”

Immersive Producer

### HIGHLIGHTS

- Traditional forms of marketing do not communicate the unique nature of immersive experiences, making immersive productions challenging to market - framing immersive experiences as storytelling in the age of omnipresent content is not necessarily a viable strategy
- Articulating clearly why the production can only be possible via immersive technology is crucial for securing internal buy-in and investment, and communicating the value proposition to potential audiences - emphasising the experiential aspect seems to create differentiation
- Expected levels of audience interaction can be difficult to convey, and a number of practitioners recommend diverting first-time users away from heavy interactivity
- Social media is an easily accessible marketing channel, but does not solve the challenge of communicating immersive's unique experiential aspects
- Immersive creators often rely on venue or brand partnerships, where the partner provides the marketing resource - social media is the primary channel for promoting the work, while word-of-mouth is important
- Technology proficiency and/or acceptance can play a large part in audience attendance or purchase considerations and eventual satisfaction
- Immersive producers should consider how to blend production activities into marketing and adopt holistic thinking around audience engagement: community building and pre-event and launch activities can significantly increase awareness, while facilitating post-event activities contribute to loyalty

## Journey phase 1: reaching audience awareness

### MARKET SIZE

Creating awareness and acquiring customers are a function of the scale of the market being addressed.

For example, a general purpose mobile application can potentially reach billions of smartphone-owning individuals. The market potential for an immersive production is much smaller, and the scale of UK audiences who have engaged with immersive production or will potentially do so in the future is not yet known.

According to data collected by investor Tipatat Chennavasin, by May 2019 over 60 VR titles had each generated over one million dollars in global revenue, with the best-selling games exceeding \$10 million.<sup>30</sup> Oculus Quest has since launched as the standalone and therefore most consumer-friendly headset, reportedly accelerating content sales across all Oculus platforms, and achieving over \$100 million in software sales in its first four months.<sup>31</sup> In the broader immersive space, reportedly more than 700 new immersive experiences, including location-based productions, were catalogued in North America during 2017.<sup>32</sup> Anecdotally, London has seen a growth in location-based immersive experiences during 2019, including venues such as the Saatchi Gallery and Otherworld, but there is no data available for the extent to which this market has grown since, and what expectations for the UK would be.

While the consumer market for VR content is growing, interviewees who had launched content for VR platforms felt that the data available through stores is not granular enough to yield actionable audience insights, and that growth seems to take place within a relatively small early-adopter and enthusiast audience. In September 2019, Oculus announced that additional behavioral store data, such as purchase funnels and product page engagement metrics, would be made available for developers, but such tools do not directly sell any more headsets or unlock broader audiences.

## Journey phase 1: reaching audience awareness

### SOCIAL MEDIA AND WORD-OF-MOUTH STRATEGIES

The Immersive Design Industry Report for 2019 ranks 'spreading the word' about immersive products as the second-highest difficulty that producers face.<sup>33</sup> In today's media landscape, creating awareness requires adopting quantitative marketing techniques and leveraging social media platforms, which means creating targeted campaigns for social network feeds and bidding for exposure in search engine results.

Social media presents both an opportunity and a challenge for small actors in the immersive market, and most practitioners interviewed for this study said it was their primary marketing platform. Relatively small investments into social media marketing can help reach niche target audiences, provided that the producers have access to targeting know-how. Limina Immersive used social media to good effect with their VR theatre space in Bristol in 2019, and the BBC saw successful amplification for their library pop-up project on Twitter (April to June, 2019).<sup>34</sup> For over half of the participating audience, the BBC pop-ups were their first taste of VR, and 96% of users found the experience enjoyable. VR was found to be especially powerful in creating emotional connections with places and events.

Recognising that understanding immersive content's unique qualities requires audiences "to see it to believe it",<sup>35</sup> it is understandable that although typical social media marketing assets can achieve a wide reach, they do not necessarily enable producers to communicate the essence of the experience. Visuals of immersive productions that include 360° video or 3D real-time assets are difficult to reproduce in high quality marketing materials. Some practitioners have found that using imagery and messaging that conveys the mood of the experience is a more feasible solution when using traditional channels.<sup>36</sup>

A customer is only acquired when they follow a call to action, such as registering, downloading, making a purchase or visiting a venue. As this stage can be difficult for immersive productions, producers need to be innovative in their marketing activities, possibly blending production activities into marketing as early as possible to begin creating awareness, building anticipation and establishing community around their production. For example, distributing free demo versions, or setting up a pop-up teaser of the upcoming production could deliver pre-launch immersive promotional material. As conveying the unique aspects of the experience is a challenge, and because understanding who to target is not always entirely clear, more insight could be gathered from the marketing experiments of mobile game companies. Quantitative marketer Eric Seufert writes:

**"The beauty of the modern, event-based algorithmic mobile advertising paradigm is that advertisers don't even need to make assumptions about how audiences will react to various ad creatives: they can simply provide Facebook and Google with very many ad variants and let those platforms make the best possible pairings between ads and audience segments."**<sup>37</sup>

However, as Seufert goes on to observe, such opportunity has also led to fraudulent, misleading marketing practices, which are obviously not recommended. What is potentially impactful, however, is for immersive producers to use ad variants to establish which types of messages and visual communication attract the most attention in their target audience, or define the target audience using the characteristics of those clicking on the ads. In practice, however, this kind of activity may be beyond the limited resources of small immersive production teams.

## Journey phase 1: reaching audience awareness

### PARTNERSHIP STRATEGIES

In creating awareness, existing brands and intellectual properties have provided a launchpad for immersive productions, such as Jeff Wayne's *The War of the Worlds* by dotdotdot and *Star Wars™ VR: Secrets of the Empire* by The Void.<sup>38</sup>

It is important for location-based immersive productions to partner with the venue and draw from its marketing capability - a well-known venue or central physical location puts productions in a better place to succeed. Similarly, using public spaces or festivals enables producers to leverage the footfall of audiences already visiting the location or event. A similar development was identified in the Arts Council England's report on the UK theatre market, regarding newer theatre companies and their ways of operating.<sup>39</sup>

This approach requires immersive producers to convince venue owners or commissioners of their production's value. Some interviewees had also used demonstrations to venue holders also as opportunities to gather user insights while their production was still ongoing, and some producers have offered to collect user data, such as footfall, for the venue as part of their partnership.

Even in more established institutions, experimenting with new technologies is often dependent on other partnerships, such as with the technology companies themselves.<sup>40</sup> An immersive startup's passion for the technology and content may drive a production, but in larger institutions immersive projects also require a lot of work in securing internal buy-in. In their museum paper, Kidd and McAvoy observe how new technologies raise challenges with institutional buy-in, that is, ensuring that "people within an organization are comfortable with the experience being produced, and confident – and coherent – in their promotion of it".<sup>41</sup>

### POSITIONING IMMERSIVE

Defining what immersive means to audiences and justifying the investment is crucial, and unless producers can articulate the value of their production or answer the question "Why immersive?" for stakeholders, partners or investors, they are not going to be able to articulate it to audiences.

Immersive producers or distributors can deliberately use their venue or location to help position "the company's offering and image to occupy a distinctive place in the mind of the target market".<sup>42</sup> For example, immersive productions which lean more towards art than entertainment, such as Marshmallow Laser Feast's 'We Live in the Ocean of Air', or the National Theatre's 'Draw me Close' can be positioned as creative or expressive location-based VR to differentiate themselves from immersive gaming content. All marketing materials and activities would align with this positioning.

## Journey phase 1: reaching audience awareness

### BUILDING COMMUNITY AND ANTICIPATION

“Community management is something we have put a lot of emphasis on from day one. ... It’s important not only from a product development perspective but from a customer acquisition perspective. You work hard with the community and you engage the community and if you do that in the right way then that’s a referral and a word-of-mouth thing; it’s about reviews in the store but it goes far beyond that; we have customers who really engage and write us amazing success stories on how impactful the product has been on their lives. [...] If you don’t nurture that community, you are really missing a trick”.

VR Startup Founder

## Journey phase 1: reaching audience awareness

### AUDIENCE ENGAGEMENT PRE-LAUNCH

Ben Walmsley's comprehensive study into dance audiences yields interesting premises for a more robust understanding of immersive audiences, and provides food for thought on how to tackle marketing challenges. The study arose from the observation that customer relationship management studies tend not to focus on arts and culture.<sup>43</sup>

Walmsley's study looks at creating pre-performance engagement online, and how to foster the audience's anticipation and enjoyment. The goal was "understanding how factors such as anticipation and enjoyment are related to audience development and enrichment" and exploring the potential for deepening and fostering interactions between art institutions, artists, and audiences in this way. The research questions the extent to which such an online engagement platform can break down barriers to arts attendance, and aims to contribute to digital audience engagement in pre-production, a field that has been under-studied.

During the study, the public was asked to vote for a work to be commissioned from a number of dance artists' pitches. Once work on the selected production started, the audience could follow it through the online platform and engage in dialogue with the artists. Walmsley cites research which found that the best predictor of audience captivation is a heightened sense of anticipation: sets of positive expectations and openness to whatever the production will ultimately offer. Using pre-performance events, anticipation can be built with the goal of encouraging audiences to start building empathy towards the artists and producers.

The results of the project were mixed. Walmsley found that audiences engaged with a reflective stance towards the production and dialogue with the artists, yet the goal of creating a tight social community did not quite come to fruition, partly because other audience members' activity and presence were not visible enough on the platform. The positive outcomes included "privileged insights into the artists' creative processes", and participants feeling.

**"When asked whether the process had affected their ability to provide constructive feedback and whether it might encourage them to attend dance more frequently, the overall consensus was that Respond [the online platform] had challenged almost all of the participants (89%) to be more open, empathetic, questioning and confident in providing feedback, in many different contexts. This confirmed the findings of previous studies into the impact of effective audience development and participatory activity."<sup>44</sup>**

Ben Walmsley

In general, it was found that maintaining online communities takes a lot of resource that smaller producers might not have or will not prioritise. However, findings from this study's research and interviews support the importance of such activities, and investing in community building and the anticipation it creates for future projects is worth exploring. Taking such an approach would expand audience-centred thinking around the entire audience journey, and the arc of activities along that journey. It is clear that the immersive content ecosystem in the UK would benefit from such initiatives.

## Journey phase 1: reaching audience awareness

### THE AUDIENCE ENGAGEMENT ARC

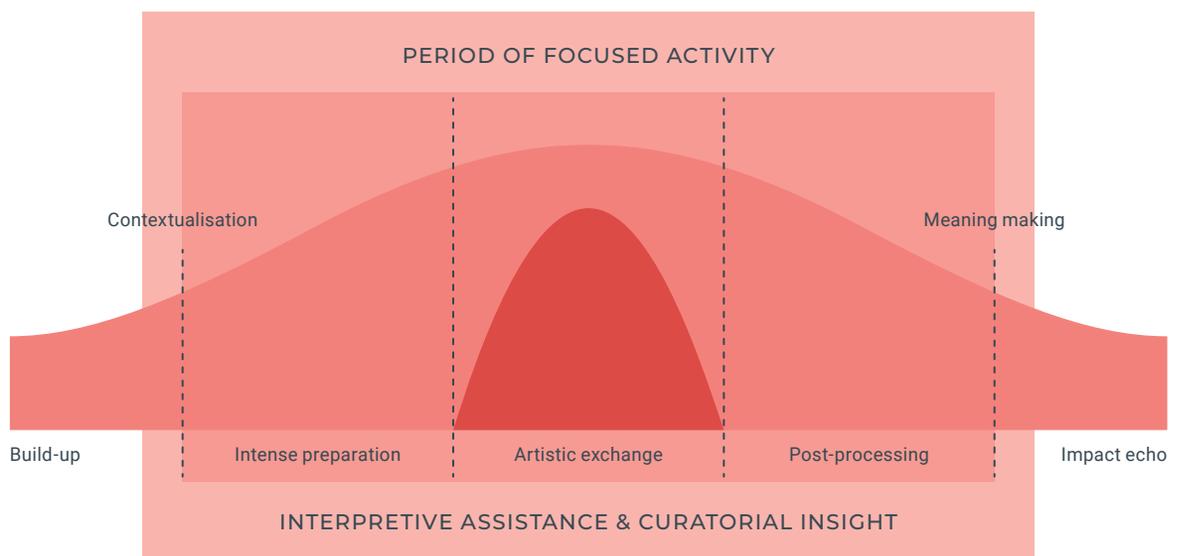
Brown and Ratzkin's 'arc of audience engagement' supports an approach that applies more context, anticipation, and reflection to the customer journey.<sup>45</sup>

“Engagement is more than what happens when someone sits in a seat or stands in front of a painting; it is the totality of the arts experience from the moment someone decides to attend. The path an audience member chooses to take through the Arc of Engagement is partly influenced by the nature of the art itself (e.g., performing arts programs and

museum exhibitions offer different engagement opportunities), as well as the audience member's own appetite for engaging. From an institutional perspective, engagement is a unifying philosophy that bridges marketing, education, programming and event development, in the sense that engaged audiences are more likely to give.”<sup>46</sup>

Brown & Ratzkin

This approach also aligns with the call for more holistic audience relationship building based on the four Es: experience, exchange, environment, and engagement.

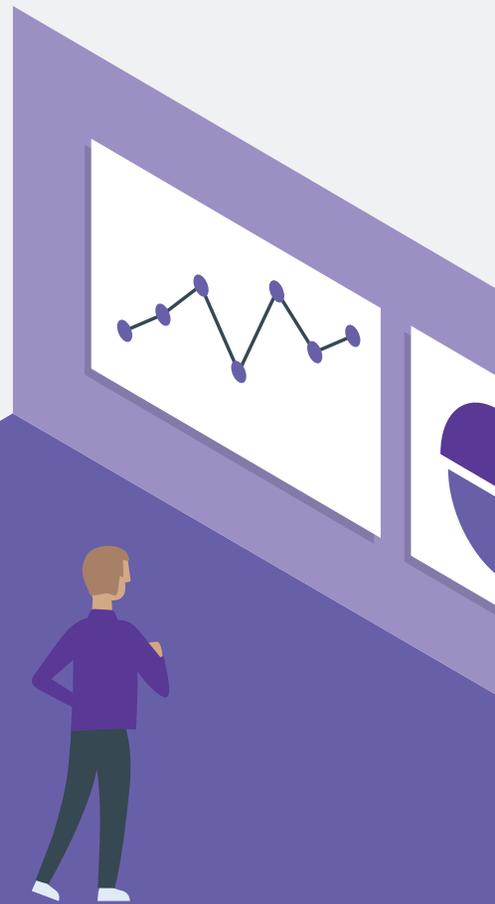


The arc of engagement

# Journey phase 2: audience considerations

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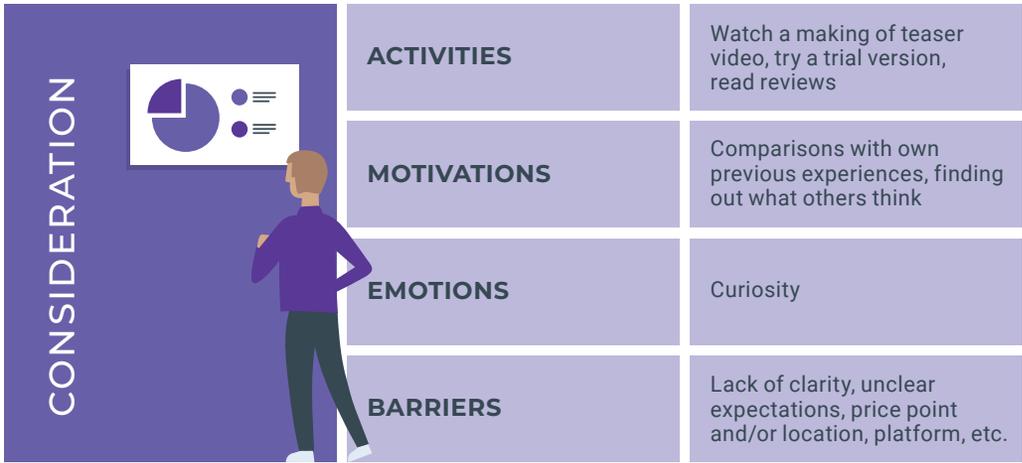
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# Journey phase 2: audience considerations

“Audiences don’t have any idea of what to expect from an immersive experience.”

Immersive Producer



Examples of activities, motivations, emotions, and barriers that audience members potentially experience when considering attending an immersive production.

“Audiences do not necessarily enjoy surprise if it comes through unexpected levels of interaction required of them - not in a similar manner as they would be enjoying a twist ending.”

Augmented Reality Producer

### HIGHLIGHTS

- Multiple factors influence decisions to attend an immersive experience and contribute to expectations, such as the level of interaction required
- Consideration for immersive experiences is similar to the entertainment experience in general (price point, venue, social context, genre or topic all play a part)
- Technology acceptance - how audiences see the perceived value of an immersive dimension as an addition to their existing leisure and entertainment habits
  - factors strongly into audience interest
- With location-based experiences, duty of care is key: design thinking and experience design methods can help positively frame the venue and experience and divert any preconceptions of technology being unfamiliar or intimidating
- If their role does not align with expectations, audiences are likely to feel dissatisfied, examples being unfamiliar rules of engagement and or a level of discomfort with their assigned role (which can range from passive viewer to active participant)
- Immersive technologies at home suffer from apparently trivial frictions (such as wiping dust off the headset) becoming barriers to frequent use and habit formation
- Analysis of audience considerations when attending immersive experiences can benefit from previous studies in areas such as tourism, where there is a body of research into the factors that influence an individual's choice of travel destination

## Journey phase 2: audience considerations

### IMAGINED AFFORDANCES FUEL CONSUMER CONSIDERATION

Communication scholars Nagy and Neff take the notion of 'affordance' from design and technology studies, and expand its definition to describe human-technology interactions. What they call 'imagined affordance' is a way to explain the various expectations that people bring with them when confronting a novel technology or its application:

**“Imagined affordances emerge between users’ perceptions, attitudes, and expectations; between the materiality and functionality of technologies; and between the intentions and perceptions of designers. We use imagined affordance to evoke the importance of imagination in affordances – expectations for technology that are not fully realized in conscious, rational knowledge.”<sup>47</sup>**

Nagy & Neff

Various imagined and sometimes contradictory affordances exist in the consumer headspace regarding immersive productions. Media depictions of immersive technologies can colour expectations, for example, the imagined interfaces seen in movies such as 'Iron Man' or 'Minority Report', which are not currently feasible. These preconceptions do not stop at the technology itself, but can apply to how audiences perceive the content, too. Using focus groups to help map immersive experiences, audience visits or purchase intentions does not seem feasible, as the discussion will be influenced by the various imagined affordances, some potentially misguided, that participants would articulate.

Aside from those imagined, actual affordances of immersive technologies are struggling to find a place in audiences' minds, especially if people cannot see past real or perceived blockers. For example, the BBC's library VR pop-up initiative studied blockers to habit-creation in VR consumption, and identified a number of factors along the customer journey: the physical space where consumption takes place (especially its social function), where the headset is stored at home, whether it is dusty, whether they can remember how to use it, how to find something to watch or play, wifi speed required, and more.<sup>48</sup>

This all adds to the cognitive load that even early adopters of immersive technology might experience when considering engaging with content in VR, and especially when compared to the almost minimal friction associated with today's television: on demand, on any device, in any location. Ongoing research into VR documentary content in University of Bath, University of Bristol, and University of the West of England is evidencing similar issues.<sup>49</sup>

## Journey phase 2: audience considerations

### MOTIVATIONS FOR CONSUMING ART AND ENTERTAINMENT

Motivations for consuming entertainment have been explained by concepts such as 'selective exposure', where consumers choose content to change their mood, such as from boredom to excitement. Media psychologists Zillman and Bryant have argued that individuals' "behaviour regarding their choices in entertainment grows from a situational context, and that affective and emotional states and reactions play a key role in the formation of rather stable content preferences."<sup>50</sup> Zillman writes that "individuals move themselves to locales that constitute alternative environments and that provide opportunities for mood-altering experiences", or media brings such stimulus environments to individuals.<sup>51</sup>

Another view of this behavioural phenomenon is found in 'reversal theory'. According to Michael J. Apter, people seek or happen to reverse their mental modes from one to another (for example from boredom to excitement) by entering conditions or settings that strongly exert an emotional influence on them. Therefore people visit casinos, cinemas, sports arenas, and spas; and - to extend this example - location-based immersive experiences.

## Journey phase 2: audience considerations

### THE VALUE OF TOURISM STUDIES

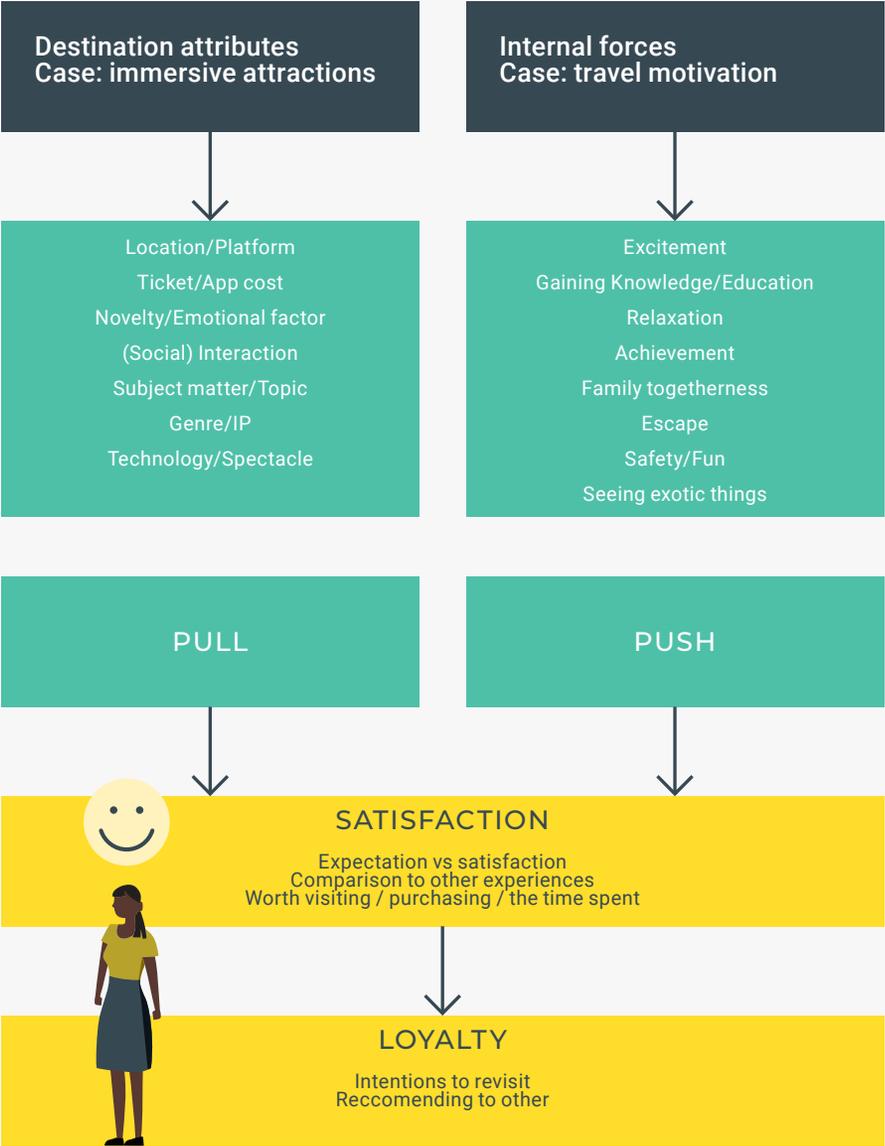
Yoon and Uysal's 'tourism destination loyalty theory' is widely cited in tourism studies, and has relevance to immersive experiences, especially those that are location-based. They argue that "motivation concept can be classified into two forces, which indicate that people travel because they are pushed and pulled to do so", and this motivation affects both satisfaction and loyalty.<sup>52</sup> Internal forces push, while external forces (such as destination attributes) pull audiences to travel, and - to the extent that expectations are met - they experience satisfaction while in the destination. Afterwards, loyalty becomes apparent in their intention to revisit and/or willingness to recommend to others.

Given the somewhat exotic nature of immersive productions for the majority of the arts, culture, and entertainment audiences, attendance and the process leading up to it can be likened to tourism. Therefore, one way to approach determining immersive audience motivations is to identify influencing factors for travel satisfaction that could impact on attendance in a similar way. For example, travel satisfaction is influenced by local culture, sights, food, and seeing and doing as much as possible while at the destination. Studies into immersive user experiences cite emotions that speak to similar dispositions and predictors of experiential and cultural values: inspiration, excitement, curiosity and expectations of "unusual perceptual experiences".<sup>53</sup>

Means-ends chain theory has also been used to explain how consumers make decisions. This is based on how perceived value meets expectations, and describes hierarchical relationships between the means (product or service attributes) and the benefits (how the attributes provide value for the consumer) and how those benefits reinforce personal values (the ends). Motivations can then be seen in the underlying reasons why customers want certain attributes or consequences. The model has been applied to numerous contexts, including tourism, which is relevant for immersive.<sup>54</sup>

As a synthesis of these two models, the following illustration proposes an immersive version of the tourism destination model. It presents the common travel-related 'pushes' (internal forces) as points of comparison, with a number of immersive-related 'pulls' (destination attributes) found to be relevant to immersive productions. More research would be needed to validate these tentative findings.

Journey phase 2: audience considerations



## Journey phase 2: audience considerations

### AUDIENCE TECHNOLOGY ACCEPTANCE

It is clear that familiarity with technology influences an audience's willingness to engage with immersive productions. In some cases, such as Darkfield's sonic theme parks, audiences do not have to engage with anything other than headphones, a technology that they are already familiar with (even though the setting inside pitch black containers adds a thrilling aspect to the experience). For others, acceptance is a key factor in audience consideration.

Since its introduction in 1986, the technology acceptance model (TAM) has evolved to become a widely-cited and applied approach to studying how willing consumers are to adopt new technologies for work and leisure. The model originally had two main variables: perceived usefulness and perceived ease of use, and aimed to capture how these factors influenced attitudes towards usage and intentions to (re)use.

This model has since been repurposed to cover use functions and motivations relating to immersive technologies, such as AR<sup>55</sup> and VR. Manis and Choi's paper on VR headset adoption introduced the variable of 'curiosity', because VR elicits interest in its potential and various uses.<sup>56</sup> This hypothetical version shows how the TAM could be applied in studying audience consideration for immersive productions. The arrows indicate how one factor can influence another, positively or negatively, and it has been assumed that age influences perceived ease of use and perceived value in a negative way. However, any assumptions would need to be validated through research, and would be likely to yield varying results, case by case.

Conducting a TAM study would entail studying audiences to find out if these correlations hold true, and how strongly each element influences the overall experience. This version of the model presents a starting point from which immersive producers could begin identifying the various lenses through which audiences see their productions and marketing activities.

### WILLINGNESS TO PAY

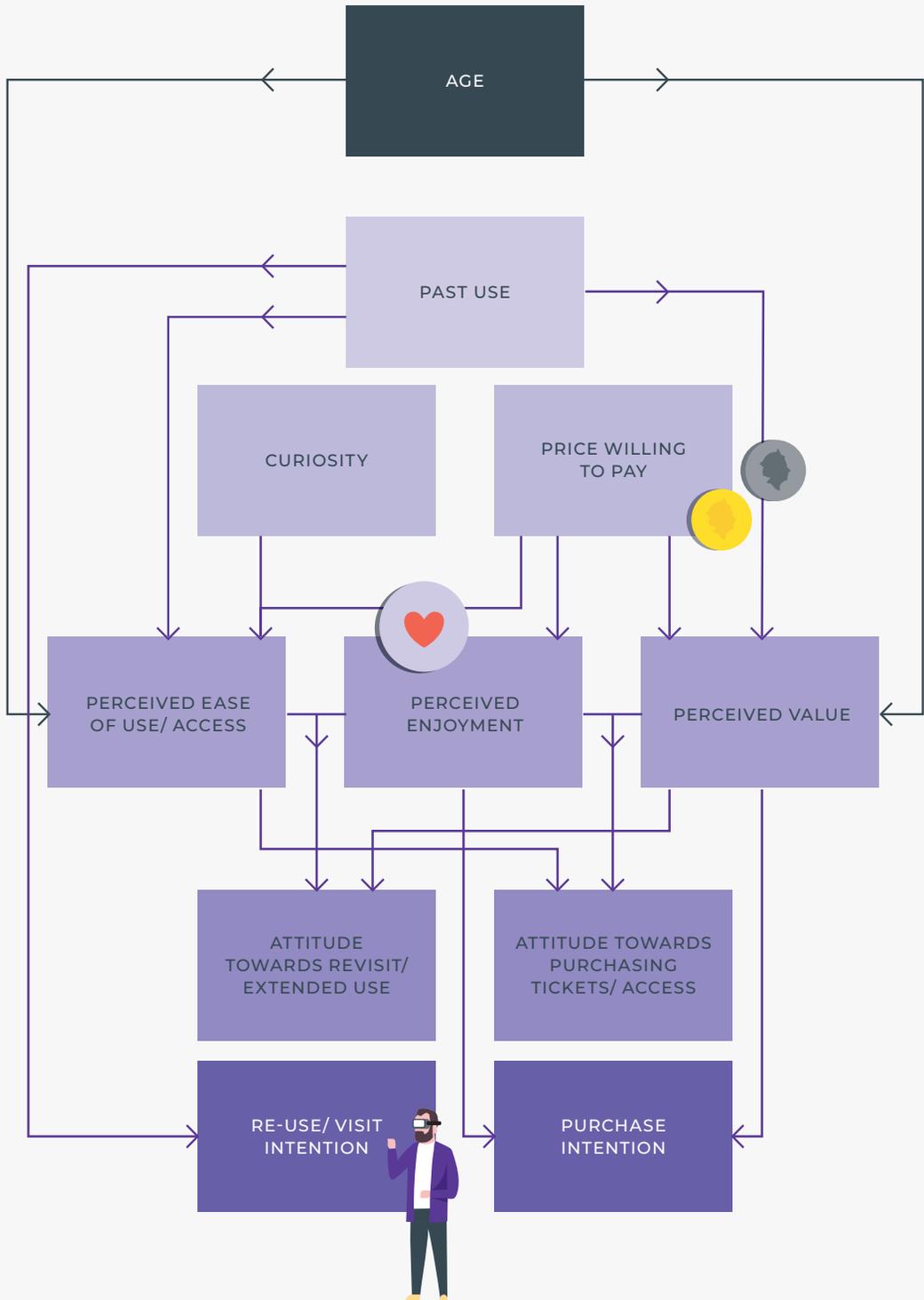
One of the most important aspects of audience consideration is how much people are willing to pay for a product, experience or service. This area is difficult to study, and the most prominent methodology is the price sensitivity meter, which aims to help gauge the optimal price point using a series of questions that correlate price and perceptions of quality.

The Performance Demonstrator used the National Theatre's production 'Draw me Close' as a pricing case study. Respondents were asked about the experience immediately afterwards on-site, and off-site after time had passed. Optimal price point was identified as £20 for on-site respondents, with the experience costing £15 fresh in their minds, and as £25 by off-site respondents.<sup>57</sup>

An earlier study conducted by i2 media research found that 58% of respondents were willing to pay to access immersive experiences at home, with an optimal price point of £9, and 70% of respondents were willing to pay for access to a location-based VR arcade, with an optimal price point of £17.<sup>58</sup> Similar methodology applied to other immersive projects has identified an average price point of approximately £10 across a number of creative experiences.<sup>59</sup>

The price sensitivity methodology is included in the immersive user experience toolkit developed by i2 media research, in collaboration with Digital Catapult. More information about the toolkit can be found in the next section of this report.

## Journey phase 2: audience considerations



## Journey phase 2: audience considerations

### THE 'COUNTRY OF ORIGIN' EFFECT IN THE UK

An under-studied factor for audience consideration in entertainment is the country of origin (COO) effect. COO was originally developed by Roth and Romeo as a model for product and marketing managers to use in assessing consumers' purchase intentions. The model has four dimensions for country image: innovativeness, design, prestige and workmanship.<sup>60</sup>

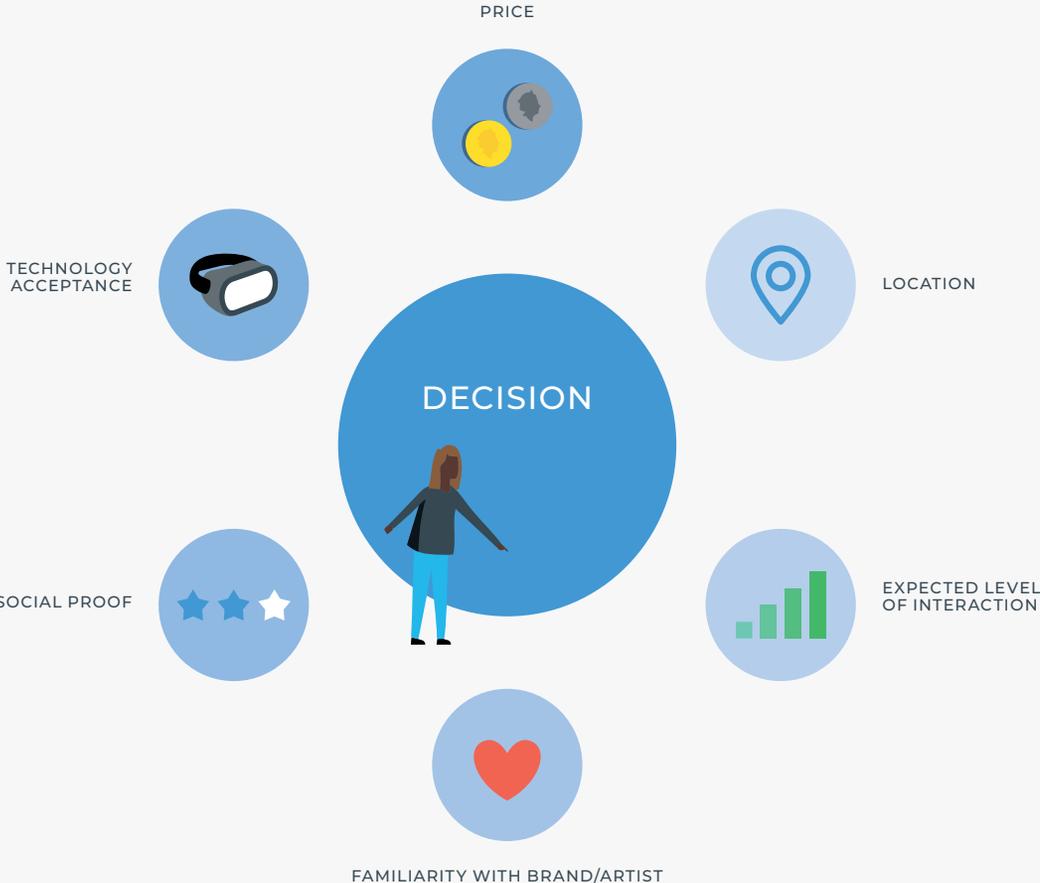
COO presents an approach for the UK to potentially brand as a nation highly correlated with innovative and high quality immersive entertainment. There is limited evidence, but according to one study with Indian urban youth, the UK was associated with high quality movies.<sup>61</sup>

Given the advanced UK immersive ecosystem and programmes such as Audience of the Future, a similar positive image could be developed for UK-based immersive productions that would positively influence visit and purchase intentions relating to immersive content originating from or shown in the UK.

### DECISION FACTORS WITHIN AUDIENCE CONSIDERATION

Based on the data collected during this research, this illustration summarises the variables that factor into audience consideration for immersive productions, and on which they base their decision whether or not to spend their time or money on attending/purchasing.

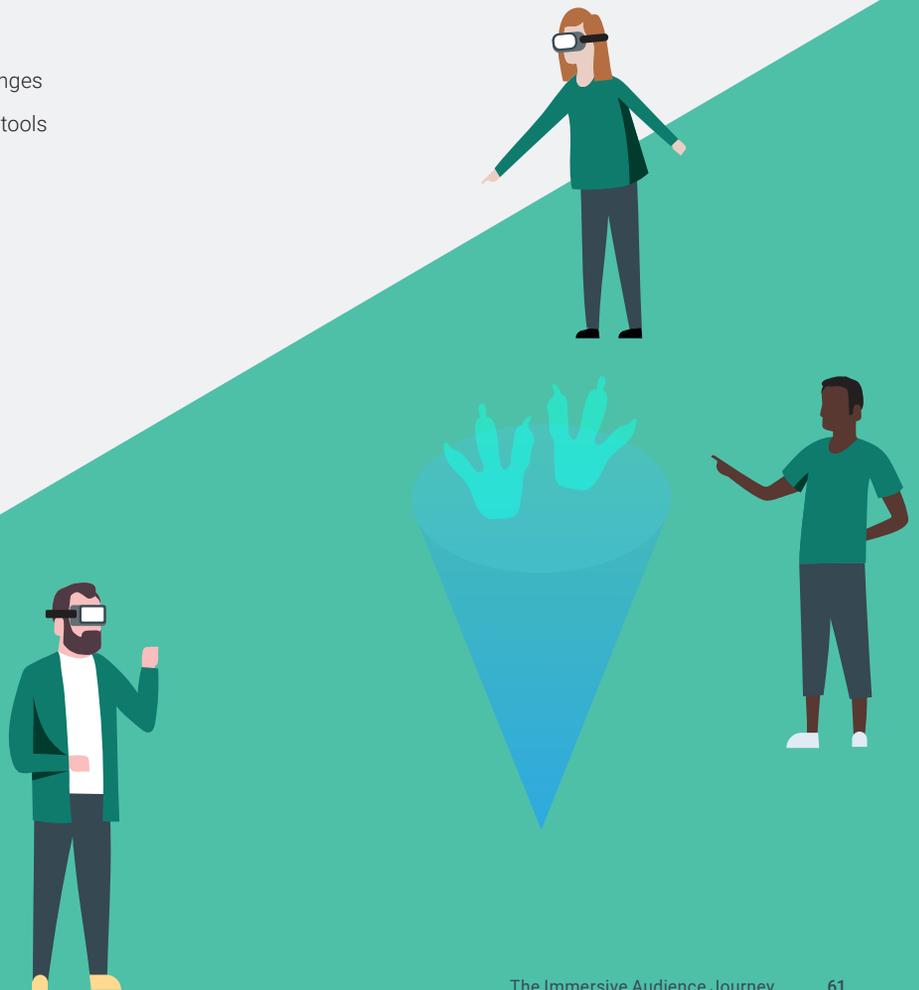
Journey phase 2: audience considerations



# Journey phase 3: evaluating audience experience

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# Journey phase 3: evaluating audience experience

“A design challenge is how to make users feel that everyone is having a totally different experience from one another.”

Immersive Producer

<b>IMMERSION</b> 	<b>ACTIVITIES</b>	Attending, taking a role, interacting
	<b>MOTIVATIONS</b>	Getting the most out of the experience
	<b>EMOTIONS</b>	Excitement, presence, sense of wonder, etc depending on the experience
	<b>BARRIERS</b>	Rules of engagement, technical glitches, etc

Examples of activities, motivations, emotions and barriers that audience members may experience while attending an immersive production.

“One of the things we can see really clearly from our research is that the expectations people bring along to the experience are hugely important in how they will experience the experience or whatever is presented to them.”

### Researcher

User experience and evaluation of immersive technologies, especially VR, is well-researched. However, both the technology and its applications are constantly evolving and methodologies need refreshing accordingly. There is a lack of studies on location-based experiences, so this section mostly focuses on how interviewees have obtained user evaluation of their projects. It also includes a summary of evaluation approaches that are relevant to the various phases of the immersive audience journey.

### HIGHLIGHTS

- Systematic user testing is part of any project for larger, more established organisations, whereas for smaller organisations it is something that has a tendency to be deprioritised or takes place too late in the process
- Clear documentation and sharing the results with the production team are essential to applying the findings, otherwise they simply become a set of good intentions
- Immersive productions that combine physical and virtual immersive sequences are complex and therefore challenging to evaluate
- Location-based productions enable creators to see how audiences interact with their work first hand, although evaluation by observation becomes more difficult as audiences grow larger
- In museums and galleries, placement of immersive work in relation to other attractions can influence its popularity positively or negatively
- Post-engagement and impact are currently difficult to capture and can be largely speculative in relation to, for example, behavioural change
- Traditional methods tend to be insufficient in capturing the immediate quality of the experience from a user point of view
- Audience insights can be valuable in informing the design process; similarly it can help to identify the touchpoints that matter most and that can be addressed to improve the product

## Journey phase 3: evaluating audience experience

### CURRENT EVALUATION CHALLENGES

A substantial body of research exists on evaluating user experiences with immersive technologies. Researchers have developed questionnaires and evaluation frameworks around psychological phenomena such as presence,<sup>62</sup> which is pertinent to VR. For AR, there have been studies into 'context immersion' in efforts to capture user experiences.<sup>63</sup> The technology acceptance model discussed in the previous chapter has also been factored into similar studies.<sup>64</sup>

Overall, the challenges can be summarised as two main issues:

- The immediacy of immersive experiences is such that its qualitative nature is difficult to capture during the experience itself
- The fact that immersive productions often take place within large spaces, such as an entire room or even a building, makes them difficult to observe by a team of researchers on site

BBC User Experience Principal Nick Ritchie has recounted his experiences of testing VR with users, when he found that research methods used for traditional media felt insufficient. For example, the 'think aloud' approach, where participants are asked to speak their minds while engaging with a prototype, does not necessarily work, as being immersed and voicing one's thoughts conflict. His solution was to observe user behaviour and ask them about it immediately afterwards.<sup>65</sup>

The various ways that large-scale immersive productions can combine technologies also presents challenges for user evaluation. Immersive productions might span large spaces, such as the warehouse used in the Skepta rave organised at the Manchester International Festival as part of the Performance Demonstrator.

Capturing accurate and actionable insights from test audiences still remains a challenge. Immersive experiences often aim to be powerful, making reflecting on them and articulating the impact afterwards difficult for audiences. Marshmallow Laser Feast came across this when evaluating their installation 'We Live in the Ocean of Air': they found that people were not very good at remembering or describing intangible immersive experiences.<sup>66</sup> Conceptual blending, the cognitive process involving the simultaneous awareness of two spaces (in this case, the physical space and the immersive space) can make reflecting on the immediate experience difficult.<sup>67</sup>

## Journey phase 3: evaluating audience experience

### EXISTING APPROACHES AND TOOLS

There are approaches which aim to study more general immersive affordances, independent of any particular technology. The most recent and actionable of these is the immersive UX (user experience) toolkit. This enables content creators to evaluate their production with audience members across nine categories:<sup>68</sup>

- Audience quality of experience
- Audience attitudes towards content and technology
- Audience characteristics
- Interaction affordances
- Economic impacts
- Audience behaviours
- Audience traits and their immersive tendencies
- Creator's intended impacts
- Stakeholder target impacts

The UX toolkit was designed to be easily deployed for user testing or exit surveys. It has been used to evaluate various immersive productions since 2018, and an online version (Audience Impact Metric) is being launched in 2020 by i2 media research.<sup>69</sup>

Another line of research is to study indicators within immersive experiences, such as audience members' postural responses, which can show how behaviour in virtual environments differs from behaviour in real environments, or how close to real life the audience's reactions to the immersive experience are.

For location-based experiences, research is more sparse, but some work has been done on analysing exhibit placements within museums.<sup>70</sup> Similarly to segmentation, researchers and practitioners faced with evaluating audience experiences in a location-based context have to seek methods from interaction design, performance studies, tourism studies, event management studies and so on.

Interviews highlighted that producers need to understand the impact of their location on the user experience.

For example, if the location is set with fixed physical constraints, producers can tailor their experience to the space. However, if there is no set location, such as in a mobile AR concept, there needs to be early testing in a variety of locations to account for various transmutations of the experience.

Journey maps that put emphasis on user experience can also help with evaluation. One AR app developer had applied this method by developing an ideal user journey and then comparing test findings with it. This approach can potentially help productions where the narrative of the content needs to be merged into the physical space of the venue, and - as one interviewee stated - the producer has to find ways to gently guide audiences to the content in the space and keep them occupied.

Social dynamics within the space also need to be accommodated within design. Journey maps with emotional arcs can help creators to anticipate social dynamics, and can be used to validate observations of how audience members actually experience the work.

## Journey phase 3: evaluating audience experience

### RESEARCH OPPORTUNITIES

The Design Council's recently updated Double Diamond approach provides a useful framework that focuses on creating the experience and how audience insights can feed into the production process.<sup>71</sup> This framework defines a process where activities start from understanding a problem (discovery) to gathering insights and reframing the problem (define). Then, the process moves to experimentation (develop), before finding and creating the design that works (deliver).

In the table opposite, the different evaluation methods and practices shared by interviewees and documented in academic research papers are placed into the Double Diamond framework:

## Journey phase 3: evaluating audience experience

Audience journey/ design phases	<b>Discover:</b> uncover the problem	<b>Define:</b> gathering insights, redefining the challenge	<b>Develop:</b> experimenting with various solutions, co-designing with a range of different people	<b>Deliver:</b> testing different solutions and finding the ones that work
<b>AWARENESS</b>	<p>Who is the audience?</p> <p>What is its size?</p> <p>Look for data to define the audience in detail.</p> <p>Create first assumptions about a target audience.</p>	<p>Refine assumptions on target audience.</p> <p>Create personas from the results, to make representatives tangible for the following phases.</p>	<p>Visualise the mood of the experience with concept art or marketing concepts in a way that would speak to the audience.</p>	<p>Experiment with the test marketing materials on online platforms to see which variations garner most interest.</p>
<b>CONSIDERATION</b>	<p>What do they respond to?</p> <p>How do they interpret immersive?</p>	<p>Recruit people who are representative of the audience to co-design.</p> <p>Showcase existing immersive work to narrow down their preferences.</p>	<p>Create concepts, or if possible, prototypes of slices of the experience.</p> <p>Facilitate co-design sessions with audience members.</p>	<p>Measure e.g. click-through rates on different advertising creatives and channels.</p>
<b>DECISION</b>	<p>What does the defined target audience perceive as value in immersive?</p> <p>What other aspects factor into their decision?</p>	<p>Define the value proposition of the production, whether it is mainly entertaining, educational or seeks to change attitudes (or a combination of elements).</p>	<p>Include usability and accessibility considerations in the design.</p> <p>Define price points and how to study willingness to pay.</p> <p>Refine value proposition with production team.</p> <p>Create prototypes, organise tests.</p>	<p>Observe user tests, analyse, and prioritise results.</p> <p>Iterate the concept based on findings.</p>
<b>IMMERSION</b>	<p>What level of immersion and interactivity are they looking for/ willing to try?</p> <p>Is a specific technology a barrier to entry?</p>	<p>Define the experience design goals, such as learning outcomes.</p> <p>Define what data needs to be collected to evaluate whether these goals are met.</p>	<p>Choose technologies and platforms that are feasible for the audience and for achievement of the design goals.</p> <p>Make sure physical location supports design goals.</p> <p>Recruit testers for upcoming phases.</p>	<p>Use prototypes often and early to mitigate novelty if production is designed for repeated use.</p> <p>Test evaluation setups/ data collection to ensure required data is gathered.</p>
<b>SATISFACTION AND LOYALTY</b>	<p>What is the long term impact of the production?</p> <p>Does it change audiences' ways of consumption or behaviour in general?</p>	<p>Design how the production could foster longer term engagement, and how that could be studied.</p>	<p>Draw from the learnings of longitudinal media studies to see how a study could be run.</p> <p>Reach out to research partners.</p> <p>Design how to execute study.</p>	<p>Prepare the means for audience members to participate in the study.</p> <p>Revise approach if recruiting participants post-event is challenging.</p>

# Journey phase 4: satisfaction and loyalty

## Contents

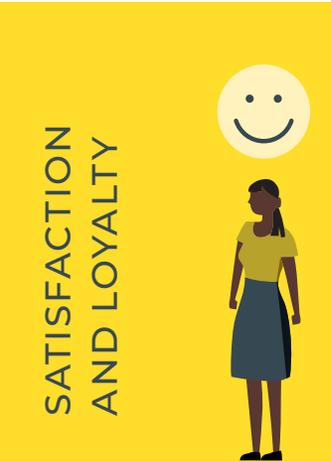
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- 71 Audience retention goals



# Journey phase 4: satisfaction and loyalty

“[The] reuse value of novel immersive experiences can stem from watching other people’s reactions to it.”

Immersive User Researcher



<b>ACTIVITIES</b>	Telling friends, posting photos, writing reviews, recommending
<b>MOTIVATIONS</b>	Sharing, reflecting
<b>EMOTIONS</b>	Satisfaction, dissatisfaction
<b>BARRIERS</b>	Expectations not met, service dissatisfying, etc

Examples of activities, motivations, emotions, and barriers that audience members potentially experience after attending immersive productions and sharing their experience with others.

## Journey phase 4: satisfaction and loyalty

### HIGHLIGHTS:

- Audience satisfaction contributes to willingness to re-engage and willingness to recommend, therefore producers should invest in these aspects of the customer journey beyond the immediate boundaries of the experience itself
- Immersive producers and distributors have differing priorities - for example, retaining customers is more important for a natural history museum than for an immersive startup
- Possible approaches to building loyalty and longevity include enabling audience members to reflect on and compare their individual experience to others by watching afterwards; and building replay value (variations within the experience that encourage repeat visits) into the production itself
- Satisfaction is a result of a holistic customer experience across the whole customer journey, and the various touch points along the journey feed into it
- The post-experience offering contributes to the lifetime customer and audience value: facilitating fandom and recall through merchandising and memorabilia, and generating word-of-mouth recommendation

### EXPECTATION INFLUENCES LOYALTY AND ADVOCACY

Research on consumer satisfaction defines it as an emotional and cognitive state that results from negative and positive evaluations of a service or a product. In Bigne et al's study of theme park experiences, they suggest that when anticipating an experience with a product or service, consumers want to disprove their fear of disappointment, and their consideration of the experience will focus on this objective. Consumers select services in the hope that they can alleviate concerns: "a service short of performance expectations can cause displeasure, and that performance exceeding expectations can cause pleasure".<sup>72</sup>

Displeasure, then, tends to emerge when expectations are not met. This puts novel immersive productions into a challenging position, as audience expectations might rely altogether on marketing materials - a challenge that experimental creative productions have always faced. Uwe Gröschel studied participatory theatre performances in Manchester, and describes how some participants felt discomfort and anxiety because they did not fully understand what was expected of them as spectators. They also felt that the performance betrayed some of their expectations based on traditional theatre, such as not always having a clear view of the performers.<sup>73</sup>

## Journey phase 4: satisfaction and loyalty

In immersive productions, new technologies and their ease or complexity of use can evoke the entire spectrum of audience comfort. For example, putting on a VR headset is a delicate experience that holds promise for certain audiences, but is a turn-off for others.

One research interviewee observed that most audience members end up comparing their experience against that of others around them. Creators need to balance interaction and content to make sure that those who engage more do not necessarily get more out of the experience. If this happens, the less interactive audience members might feel dissatisfied and that the experience and its marketing has let them down.

In the theme park study, the researchers found that pleasure and satisfaction directly influence loyalty, but that - surprisingly - "satisfaction is not a significant antecedent of willingness to pay more". Fears and concerns about an experience will influence willingness to pay more directly.

This means that audience expectations of the experience when they decide to purchase a ticket or an app are key to how satisfaction and loyalty emerges. This reinforces the need to consider the audience journey as a whole, including those aspects that factor into loyalty, such as merchandising, which is important for loyalty and viral impact:

**"It may thus be helpful to assist visitors in remembering the experience through after-sales services such as brochures, certificates or other memorabilia that remind of the physiological pleasure, in order to bolster word-of-mouth propaganda."**<sup>74</sup>

J Bigne et al

### AUDIENCE RETENTION GOALS

The importance of re-engaging or retaining immersive audiences will vary. For example, national institutions such as the Natural History Museum in London, attract vast numbers of UK and international tourists who will not necessarily return. This is very different to a mobile studio developing an AR application for smartphones and distributing it through app stores. Especially in the context of the freemium business model, retention and frequency of engagement are keys for monetisation on mobile, and this applies to mobile AR as well.

However, high download figures become a vanity metric if user churn is high, and there is a risk that marketing investments may not generate returns. A museum, on the other hand, can evaluate success through audience numbers and exhibition-specific learning outcomes. Yet they still struggle with the challenges of understanding if there is a specific audience for immersive exhibitions, and if so, who they are and how to attract them.

Location-based immersive productions can be divided into two strands: complex productions, such as 'The War of the Worlds' or 'We Live in an Ocean of Air' encourage revisits but, as premium experiences, cannot base their business model on audiences returning. Whereas immersive startups such as Darkfield and Playlines offer shorter experiences at a relatively low price to minimise the barrier for entry and encourage returns.

## Journey phase 4: satisfaction and loyalty

Immersive or mixed reality arcades<sup>75</sup> may want to base their business model on memberships and repeat visits or adopt time-based price points. Considerations for developing a more comprehensive monetisation model include pre-event and post-event experiences, merchandise, and episodic or serialised content. The model could factor in satisfaction and audience loyalty, and greater uptake by consumers may contribute to the wider adoption of immersive technologies, such as headsets.

Anecdotal evidence from interviews suggests that designing 'replay value' into a production (through, for example, random elements or branching paths within the experience) stimulates multiple audience visits. The challenge is how to make audience members feel that everyone is having a totally different - yet equal - experience from each other, so that a revisit would enable them to explore it in a different way. Interviewees also felt that audience members who have already had their own experience would enjoy seeing others experiencing it. This kind of retention or after-show aspect would need to be designed into the production as part of the audience journey.

Finally, if immersive productions manage to provide truly memorable moments with a longer term impact, then this creates potential for audience members to make immersive a preference in their future selection of art, culture, and entertainment.

# Summary and reflections

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# Summary and reflections

## REFLECTIONS ON RESEARCH QUESTIONS

This research began with four primary questions:

- How do immersive practitioners think about reaching, entertaining, and retaining audiences?
  - It is evident that while immersive producers in the arts, culture, and entertainment space can draw from existing practices and infrastructure (such as ticketing services), some resources are not available to them, such as the Audience Finder tool, or producers do not possess the know-how to fully take advantage of them, such as user evaluation methods and user acquisition practices at scale
  - How can immersive audiences be studied in different stages of the production process?
  - Customer journey mapping introduces service design thinking to show how immersive productions and their audiences benefit from a holistic approach, and that executing the production - the experience itself - is only one part of attracting audiences. To develop audiences in ways that leverage audience research requires investment of resources into these activities before, during and after production
- Is it useful to map the process of becoming a consumer of immersive productions, events, or applications with service and design thinking tools?
  - The value of service and design thinking tools will ultimately be decided by whether or not this makes sense from the producers' point of view. While initial traction has been gained within the Demonstrator groups, disseminating the research results to the broader community of immersive producers will give the final verdict on the questions. The Immersive Audience Journey template is part of those results: its dissemination will include observing how immersive startups can use it to their advantage, and how the approach might need to be tailored to different projects
  - Can such mapping help to identify areas which are underdeveloped and/or under-studied?
  - The customer journey approach has helped to identify specific underdeveloped areas, such as pre-engagement activities, community building, audience segmentation and constitution, and activities that aim to build loyalty, retention and recommendation. This research was conducted at a time when the Audience of the Future Demonstrators were facing these challenges and working towards solutions, and a number of proven practices will doubtless emerge from their work, to be documented towards the end of the programme in early 2021

## Summary and reflections

### AUDIENCES WILL DEFINE THE MEDIUM

In 1981, established audience scholar Dallas W Smythe wrote about how audiences and their behaviour define the medium, rather than the medium defining the audience.

**“The mysticism attached to technique (and ‘technology’) has incorrectly assumed that the medium basically defines the audience. But as a historical analysis of the rise of the mass media will show, the opposite has been true: the availability and actions of the audience is the basic feature in the definition of the media, singly and collectively.”<sup>76</sup>**

Dallas W. Smythe

For Smythe, thinking that audiences are tied to a specific software or hardware constitutes a ‘technological trap’. Almost forty years later, in 2017, researchers tasked with creating future scenarios about audience transformations echoed Smythe’s position.

**“Technological advances are key to – but not the only explanation for – changing relations between audiences and industries.”**

R Das and B Ytre-Arne

Das and Ytre-Arne also voiced concerns about big data and analytics creating an imbalance of power between producers and platform owners and their audiences. Audiences are increasingly being engaged to become ‘prosumers’ who provide content for platforms, but that content is then co-opted for the platform holders’ revenue streams.<sup>78</sup>

## Summary and reflections

The emergence of business practices around so-called big data has obviously been consequential for audience research:

**“Unlike an earlier era, where market researchers would examine consumers in direct relation to a given product, the vast datasets of the social media era are purposefully intended to automatically correlate past and potential behaviours in relation to all or any products, activities or actions.”<sup>78</sup>**

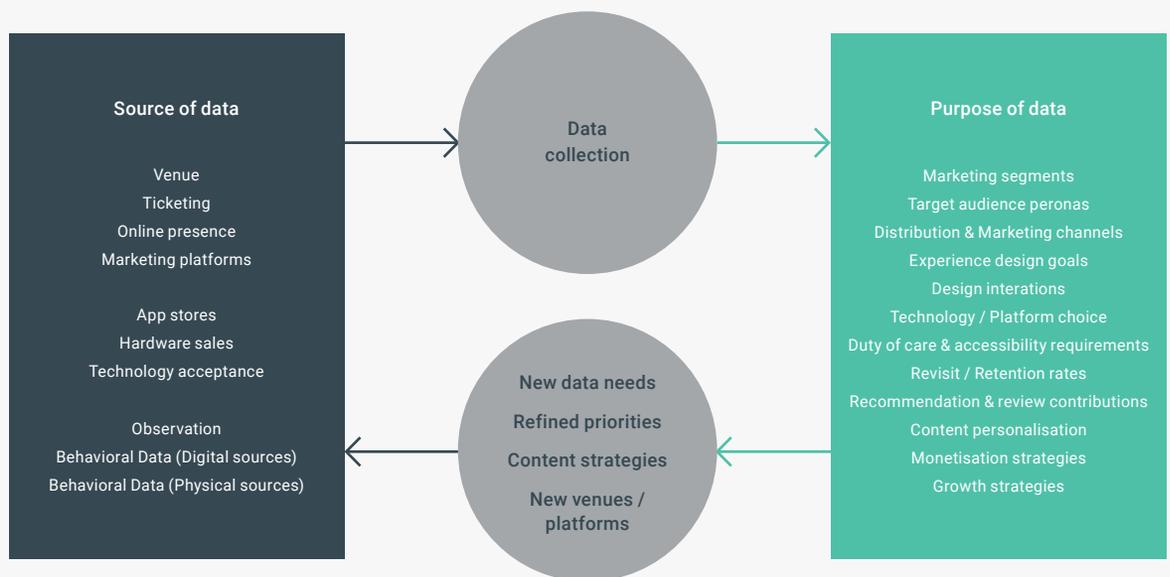
Athique

Through digitally distributed products, the means to collect data are standard to implement from a technology perspective. Collecting behavioural data from location-based immersive experiences is a more complex undertaking. When, and if, immersive producers begin to employ technologies that track passive aspects of behaviour within physical locations - such as patterns of movement - ethical implications around privacy and data collection become even more important.

The illustration to the right provides a snapshot of the various shapes that an audience feedback loop can take when set up to gather and operationalise audience data for immersive productions.

Immersive producers can leverage various sources of data, but the insight means nothing unless learnings from it are integrated into future production and service processes. These insights will, in turn, generate new data requirements, as well as informing growth strategies, marketing choices and creative direction.

## Summary and reflections



## Summary and reflections

### CURRENT IMMERSIVE AUDIENCES ARE SHAPING THE FUTURE

Based on findings to date, immersive audiences can be identified as a subset of the audiences that attend and consume art, cultural, and entertainment events and products. These people are festival goers, tourists, gallery visitors, experimental theatre and secret cinema enthusiasts, and video and mobile game players - and only a fraction of their number has experienced immersive productions so far. The opportunity to grow that audience subset has been embraced by companies in the immersive space, such as Darkfield, dotdotdot and Limina Immersive, who have all targeted broad audiences, and in particular those still unfamiliar with immersive content.

During the practitioner interviews conducted for this study, creators expressed a need to gain deeper audience insights and a willingness to take learnings about audiences from one production to the next. While this report does not provide conclusive answers, it does point to where and how to start looking for the answers along the immersive customer journey.

The future challenge for studying immersive audiences is to understand the types of people within broader audience segments who include immersive productions as part of their entertainment and arts consumption, and who are ready to spend both time and money on them. Early findings from ongoing studies at universities in Bristol and Bath around VR headsets and non-interactive documentary content indicate that audiences might not yet be ready to embrace immersive in homes, but at venues such as immersive theatres, VR arcades and museums, they would.<sup>79</sup>

While there is a need for research to drill down into the nuances of immersive productions (given their differences in distribution, location and genre), regardless of the production type, questions can only be answered using data gathered from actual visitors and users, and seeing how the patterns in that data can be segmented into groups that inform the creative processes for audience engagement and user-centered design.

# Tools for designing immersive audience journeys



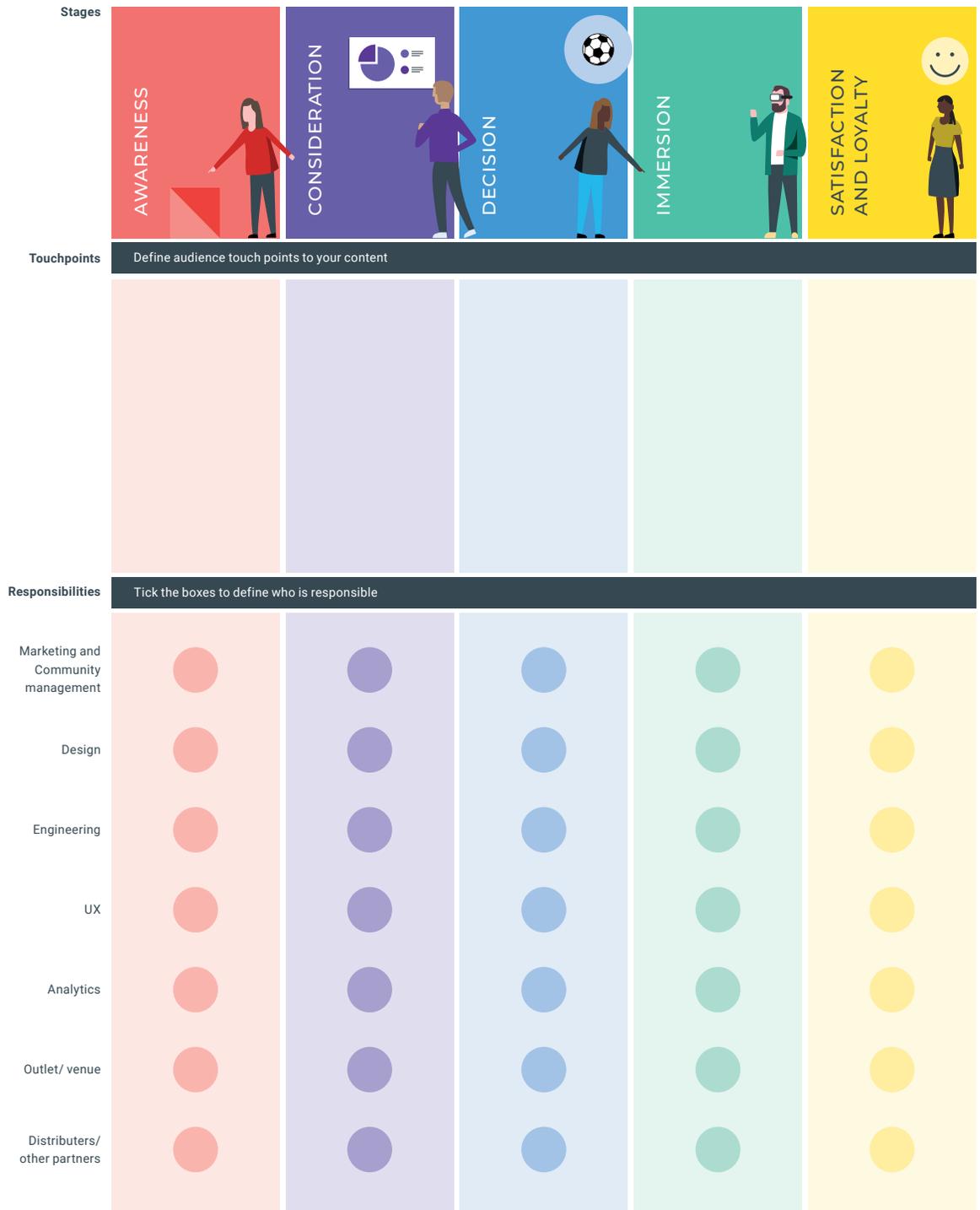
# Tools for designing immersive audience journeys

These journey map templates are intended to support immersive producers when designing their audience journeys, from a production (task/responsibility focus) and experience design (emotional arc) perspective.

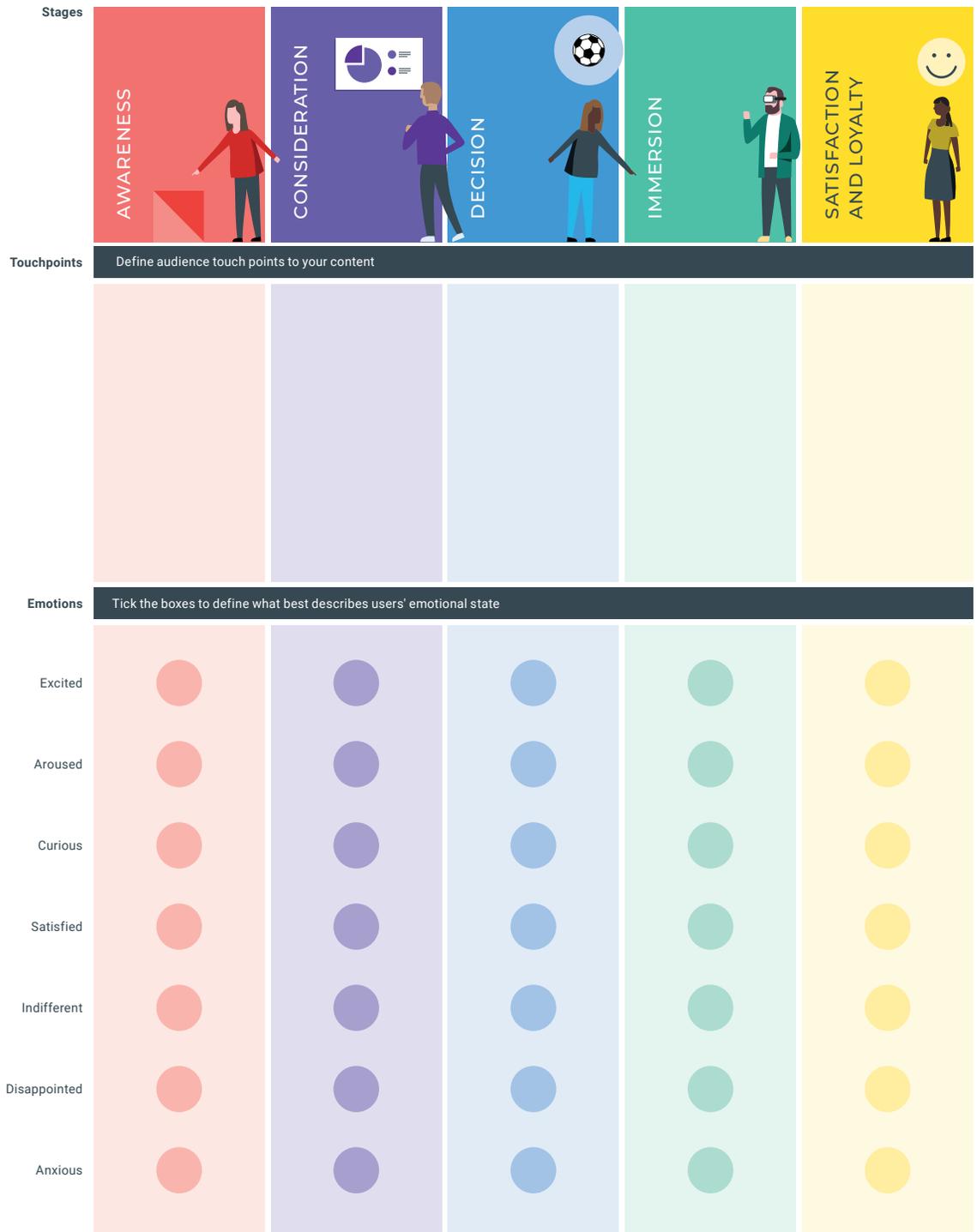
The first is an interpretation of the customer journey map for immersive productions: identifying and describing the different touch points that audiences have with the production, and then defining what competency or part of the organisation is responsible for supporting each for a successful outcome.

The second template looks at the emotional arc of the audience or segment throughout the journey. This map is designed to inspire solutions that create positive audience reactions to production activities, from marketing to re-engagement, and thereby prevent or avoid indifference, dissatisfaction or even anxiety.

# Tools for designing immersive audience journeys



# Tools for designing immersive audience journeys



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1. Immersive Economy in the UK 2019. The growth of the virtual, augmented and mixed reality technologies ecosystem. <https://www.digicatapult.org.uk/news-and-views/publication/the-immersive-economy-in-the-uk-2019/>
2. Schröder, K.C. (2019) Audience Reception Research in Post-broadcasting Digital Age. *Television & New Media* 2019, Vol. 20(2) 155–169.
3. Therefore, existing work around consumption of 360-degree video content via cardboard headsets, e.g. in journalistic and other non-fiction contexts, does not necessarily provide insights that can be applied to our context.
4. These included CreativeXR Showcase and Market, Raindance Immersive Storytelling Summit, Limina Immersive Creative Audiences Summit in London, and Beyond Conference in Edinburgh.
5. European Commission (2017) How to place audiences at the centre of cultural organisations. Guide part I, tools of audience development: a practical guide for cultural operators.
6. Kidd, Jenny & McAvoy, Eva Nieto (2019) *Immersive Experiences in Museums, Galleries and Heritage Sites: a review of research findings and issues*. School of Journalism, Media and Culture, Cardiff University. ISBN: 978-1-913095-16-1
7. Nesta and Arts Council England (2018) *Experimental Culture*. [https://www.artscouncil.org.uk/sites/default/files/download-file/Experimental\\_Culture\\_report\\_190318.pdf](https://www.artscouncil.org.uk/sites/default/files/download-file/Experimental_Culture_report_190318.pdf)
8. Das, R. & Ytre-Arne, B. Eds. (2017). *Audiences, towards 2030: Priorities for audience analysis*. Surrey: CEDAR. <http://epubs.surrey.ac.uk/842403/7/For%20web%20CEDAR-report.pdf>
9. <https://m.facebook.com/zuck/posts/10111311886191191>
10. Limina Immersive Creative VR Audiences Summit, London, 30 September 2019.
11. See e.g. MacInnes. P. (2016) 'A night at secret cinema: forced fun gives way to immersive extravaganza' <https://www.theguardian.com/film/2016/feb/26/secret-cinema-review-forced-fun-immersive-extravaganza>
12. Flavian, C. et al (2019) The impact of virtual, augmented and mixed reality technologies on the customer experience. *Journal of Business Research* 100 (2019) 547–560. <https://doi.org/10.1016/j.jbusres.2018.10.050>
13. Stickdorn, M., Hormess, M., Lawrence, A., Schenier, J. (2018) *This is Service Design Doing. A Practitioner's Handbook*. O'Reilly Media, Inc.
14. Ibid.
15. 'Virtual Realities: Immersive Documentary Encounters' is an ongoing research project carried out by universities in Bath and Bristol. See <http://vrdocumentaryencounters.co.uk/>
16. See e.g. Zaitsev, A. (2019) How to choose an LBVR product. <https://skarredghost.com/2019/12/06/how-to-lbvr-price-revenu/>
17. Culture-based segmentation. Arts Council England. <https://www.artscouncil.org.uk/participating-and-attending/culture-based-segmentation>
18. Ashton, D. & Gowland-Pryde (2019) 'Arts audience segmentation: data, profiles, segments and biographies' *CULTURAL TRENDS* 2019, VOL. 28, NOS. 2–3, 146–161. <https://doi.org/10.1080/09548963.2019.1617938>
19. Nesta (2013) 'What big data can do for the cultural sector'. <https://www.nesta.org.uk/report/counting-what-counts-what-big-data-can-do-for-the-cultural-sector/>
20. Ashton & Gowland-Pryde 2019.
21. Pelletier, L. (2017) Audiences as seen beyond the socio demographic divide: encounters with dissonant arts consumers. Symposium on Audience Research. School of Performance and Cultural Industries, University of Leeds, 14 September 2017. <https://audience-research.leeds.ac.uk/wp-content/uploads/sites/39/2017/08/Pelletier-Audiences-as-seen-beyond-the-sociodemographic-divide-encounters-with-dissonant-arts-consumers.pdf>
22. Kolhede, E. and Gomez-Arias, J. (2016), 'Segmentation of infrequent performing arts consumers', *Arts and the Market*, Vol. 6 No. 1, pp. 88-110. <https://doi.org/10.1108/AAM-04-2014-0015>
23. Smith et al (2015) Understanding the Motivations of the Tourist Audience at Museum Victoria. Worcester Polytechnic Institute. <https://digitalcommons.wpi.edu/cgi/viewcontent.cgi?article=3759&context=iqp-all>
24. Kakyom Kim & Erinn D. Tucker (2016) Assessing and segmenting entertainment quality variables and satisfaction of live event attendees: a cluster analysis examination, *Journal of Convention & Event Tourism*, 17:2, 112-128 <https://doi.org/10.1080/15470148.2015.1101035>
25. Ibid.

## Footnotes

26. For a summary of player typologies, see Hamari, J. & Tuunanen (2014) 'Player types: a meta-synthesis' [https://trepo.tuni.fi/bitstream/handle/10024/99064/player\\_types\\_a\\_meta\\_synthesis.pdf?sequence=1](https://trepo.tuni.fi/bitstream/handle/10024/99064/player_types_a_meta_synthesis.pdf?sequence=1)
27. Quantic Foundry (2015) 'The Gamer Motivation Model' <https://quanticfoundry.com/2015/12/15/handy-reference/>
28. Newzoo(2019) 'Introducing Newzoo's Gamer Segmentation™: The Key to Understanding, Quantifying, and Reaching the New Era of Game Enthusiasts'. <https://newzoo.com/news/introducing-newzoos-gamer-segmentation-the-key-to-understanding-quantifying-and-reaching-game-enthusiasts-across-the-world/>
29. Walmsley, B. (2019), 'The death of arts marketing: a paradigm shift from consumption to enrichment', *Arts and the Market*, Vol. 9 No. 1, pp. 32-49. <https://www.emerald.com/insight/content/doi/10.1108/AAM-10-2018-0013/full/html>
30. 'VR software sales are impressive' <https://twitter.com/tipatat/status/1103759032781746176?s=20>
31. Upload VR: 'OC6: Users Have Spent Over \$100 Million In The Oculus Store' <https://uploadvr.com/oc6-spent-100-million-store/>
32. The Immersive Design Industry Report for 2019
33. "Interactive, Intimate, Experiential: The Impact of Immersive Design. 2019 Immersive Design Industry Annual Report." Immersive Design Summit 2019, San Francisco, California. <https://immersivedesignsummit.com/2019industryreport.pdf>
34. BBC (2019) Making VR a Reality. BBC VR Storytelling and Audience Insights Guide [http://downloads.bbc.co.uk/aboutthebbc/internetblog/bbc\\_vr\\_storytelling.pdf](http://downloads.bbc.co.uk/aboutthebbc/internetblog/bbc_vr_storytelling.pdf)
35. ARTillery (2018) Mobile AR Usage and consumer attitudes.
36. Limina Immersive Creative VR Audiences Summit.
37. Seufert, E. (2019) 'Why do mobile gaming companies use fake ads?' <https://mobiledevmemo.com/why-do-mobile-gaming-companies-use-fake-ads/>
38. <https://www.thevoid.com/dimensions/star-wars-vr/>
39. Arts Council England (2016). Analysis of Theatre in England. Final Report by BOP Consulting & Graham Devlin Associates. <https://www.artscouncil.org.uk/sites/default/files/download-file/Analysis%20of%20Theatre%20in%20England%20-%20Final%20Report.pdf>
40. Nesta and Arts Council England (2018) Experimental Culture. [https://www.artscouncil.org.uk/sites/default/files/download-file/Experimental\\_Culture\\_report\\_190318.pdf](https://www.artscouncil.org.uk/sites/default/files/download-file/Experimental_Culture_report_190318.pdf)
41. Kidd, Jenny & McAvoy, Eva Nieto (2019) *Immersive Experiences in Museums, Galleries and Heritage Sites: a review of research findings and issues*. School of Journalism, Media and Culture, Cardiff University. ISBN: 978-1-913095-16-1
42. The Brand Journal (2016). 'Brand positioning – a simple definition'. <https://www.thebrandingjournal.com/2016/11/brand-positioning-definition/>
43. Walmsley, Ben (2016) 'From arts marketing to audience enrichment: How digital engagement can deepen and democratize artistic exchange with audiences' *Poetics* 58 (2016) 66–78. <https://doi.org/10.1016/j.poetic.2016.07.001>
44. Ibid.
45. Brown, A. S., & Ratzkin, R. (2011). Making sense of audience engagement: a critical assessment of efforts by nonprofit arts organizations to engage audiences and visitors in deeper and more impactful arts experiences. San Francisco: The San Francisco Foundation. [http://wolfbrown.com/images/books\\_reports/documents/Making\\_Sense\\_of\\_Audience\\_Engagement.pdf](http://wolfbrown.com/images/books_reports/documents/Making_Sense_of_Audience_Engagement.pdf)
46. Ibid.
47. Nagy, Peter, and Gina Neff. 'Imagined Affordance: Reconstructing a Keyword for Communication Theory.' *Social Media + Society* 1:2 (2015): 1-9. <https://journals.sagepub.com/doi/full/10.1177/2056305115603385>
48. BBC (2019) Making VR a Reality. BBC VR Storytelling and Audience Insights Guide. [http://downloads.bbc.co.uk/aboutthebbc/internetblog/bbc\\_vr\\_storytelling.pdf](http://downloads.bbc.co.uk/aboutthebbc/internetblog/bbc_vr_storytelling.pdf)
49. See <http://vrdocumentaryencounters.co.uk/#publications>
50. Zillman, D. & Jennings, B. (1985) 'Affect, Mood, and Emotion as Determinants of Selective Exposure.' In Zillman, Dolf & Jennings, Bryant (eds.) *Selective Exposure to Communication*, 157–190. Hillsdale, NJ: Lawrence Erlbaum Associates.
51. Zillman, D. (1988) 'Mood Management: Using Entertainment to Full Advantage'. In Donohew, Leslie & Howard. E. Sypher & E. Tory Higgins (eds.) *Communication, Social Cognition, Affect*, 147–171. Hillsdale, NJ: Lawrence Erlbaum Associates.

## Footnotes

52. Yoon, Y. & Uysal, M. (2005) An examination of the effects of motivation and satisfaction on destination loyalty: a structural model. *Tourism Management* 26, 45–56. [https://www.researchgate.net/profile/Muzaffer\\_Uysal/publication/222395875\\_An\\_Examination\\_of\\_the\\_Effects\\_of\\_Motivation\\_and\\_Satisfaction\\_on\\_Destination\\_Loyalty\\_A\\_Structural\\_Model/links/5b917b45a6fdccfd541f5cbc/An-Examination-of-the-Effects-of-Motivation-and-Satisfaction-on-Destination-Loyalty-A-Structural-Model.pdf](https://www.researchgate.net/profile/Muzaffer_Uysal/publication/222395875_An_Examination_of_the_Effects_of_Motivation_and_Satisfaction_on_Destination_Loyalty_A_Structural_Model/links/5b917b45a6fdccfd541f5cbc/An-Examination-of-the-Effects-of-Motivation-and-Satisfaction-on-Destination-Loyalty-A-Structural-Model.pdf)
53. Digital Catapult, i2 media research & Nesta (2018).
54. Jiang, S., Scott, N. & Ding, P. 'Using means-end chain theory to explore travel motivation: an examination of Chinese outbound tourists'.
55. Rese et al (2017) How augmented reality apps are accepted by consumers: a comparative analysis using scales and opinions. *Technological Forecasting & Social Change* 124 (2017) 306–319. <http://dx.doi.org/10.1016/j.techfore.2016.10.010>
56. Manis, K. and Choi, D. (2018) The virtual reality hardware acceptance model (VR-HAM): Extending and individualizing the technology acceptance model (TAM) for virtual reality hardware. *Journal of Business Research* · October 2018 <https://doi.org/10.1016/j.jbusres.2018.10.021>
57. Presentation by National Theatre at the Audience of the Future Demonstrator Programme Shared Learning Workshop, 27/06/2019.
58. Digital Catapult (2018) 'Evaluating Immersive User Experience and Audience Impact: a report produced by Nesta and i2 media Research for Digital Catapult'. <https://www.digicatapult.org.uk/news-and-insights/publication/audience-immersive-report>
59. Digital Catapult (2019) CreativeXR and the audience experience. <https://www.digicatapult.org.uk/news-and-views/publication/creativexr-and-the-audience-experience/>
60. Roth, M. & Romeo, J. 'Matching Product Category and Country Image Perceptions: A Framework for Managing Country-of-Origin Effects' *Journal of International Business Studies* (1992) 23: 477. <https://doi.org/10.1057/palgrave.jibs.8490276>
61. Bose, S., & Ponnampalnam, A. (2011). Country of origin effect on services: an evaluation of entertainment. *Managing Leisure*, 16(2), 98–107
62. E.g. Slater et al (2009) 'How we experience immersive virtual environments: the concept of presence and its measurement'. *Anuario de Psicología* 2009, vol. 40, n° 2, 193-210. [https://www.researchgate.net/publication/228751198\\_How\\_we\\_experience\\_immersive\\_virtual\\_environments\\_The\\_concept\\_of\\_presence\\_and\\_its\\_measurement](https://www.researchgate.net/publication/228751198_How_we_experience_immersive_virtual_environments_The_concept_of_presence_and_its_measurement)
63. Mi Jeong Kim (2012) 'A framework for context immersion in mobile augmented reality'. *Automation in Construction* 33 (2013) 79–85. <http://dx.doi.org/10.1016/j.autcon.2012.10.020>
64. Rese et al (2017) 'How augmented reality apps are accepted by consumers: a comparative analysis using scales and opinions'. *Technological Forecasting & Social Change* 124 (2017) 306–319. <https://doi.org/10.1016/j.techfore.2016.10.010>
65. BBC VR Storytelling and Audience Insights Guide, 2019.
66. Presentation by National Theatre at the Audience of the Future Demonstrator Programme Shared Learning Workshop, 27/06/2019.
67. Fauconnier, Gilles & Mark Turner (2003) 'The Way We Think. Conceptual Blending and the Mind's Hidden Complexities'. New York: Basic Books.
68. Digital Catapult, i2 media research & Nesta (2018)
69. <http://i2mediaresearch.com/i2-metrics>
70. Flegel et al (2018) 'Evaluating Interactive Exhibits at the Postal Museum and Mail Rail' Worcester Polytechnic Institute. <https://digitalcommons.wpi.edu/iqp-all/5218/>
71. The Design Council (2019) 'What is the framework for innovation?' Design Council's evolved Double Diamond. <https://www.designcouncil.org.uk/news-opinion/what-framework-innovation-design-councils-evolved-double-diamond>
72. J.E. Bigne et al. (2005) 'The theme park experience: an analysis of pleasure, arousal and satisfaction'. *Tourism Management* 26 (2005) 833–844
73. Groschel, Uwe (2013) 'Audiences and Participants: Researching Theatre Users at Contact, Manchester'. PhD dissertation for School of Arts, Languages and Cultures, University of Manchester. [https://www.research.manchester.ac.uk/portal/files/64900922/FULL\\_TEXT.PDF](https://www.research.manchester.ac.uk/portal/files/64900922/FULL_TEXT.PDF)
74. J.E. Bigne et al. (2005)

## Footnotes

75. Future Today Institute (2019) Tech Trends report. <https://futuretodayinstitute.com/2019-tech-trends/>
76. Smythe, Dallas W (1981) 'On the Audience Commodity and Its Work.' In *Dependency Road*, 22–51. Ablex. Reprinted in Mennakshi Durham and Douglas Kellner, eds., *Media and Cultural Studies: Keywords*. Rev. ed., 230–56. Oxford: Blackwell.
77. Das, R. & Ytre-Arne, B. Eds. (2017). 'Audiences, towards 2030: Priorities for audience analysis'. Surrey: CEDAR. <http://epubs.surrey.ac.uk/842403/7/For%20web%20CEDAR-report.pdf>
78. Athique, A. (2018) 'The dynamics and potentials of big data for audience research' *Media, Culture & Society* 2018, Vol. 40(1) 59–74.
79. See <http://vrdocumentaryencounters.co.uk/#publications>

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