The potential of urban screens to form new audiences for heritage institutions: a case study of the BBC Big Screens

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Abstract

This report presents the findings of a scoping study that explores engagement between a heritage institution and its local community. The report addresses this topic by considering the opportunities and limitations of urban screens to form new audiences for heritage institutions; specifically through a case study of the BBC Big Screens. Literature suggests that urban screens have the potential to form new types of audiences for heritage institutions yet processes for achieving this are rarely described. This report proposes that understanding these processes may help address issues of measuring engagement associated with urban screens and contribute to assessing the value of urban screens for communities and heritage institutions. Key themes of participation, site and value are explored through a literature review. These themes are then used to structure the analysis and discussion of the case study. Further questions for future study are described.

1 Introduction

This report presents the findings of a scoping study that explores engagement between a heritage institution and its local community. The study is based on a review of academic literature and an ethnographic case study of BBC Big Screens. The outcomes of *Mediating Heritage,* an international, interdisciplinary workshop of academics and curators organized by the authors, contributed further insights. The primary aim of the study is to further understanding of how the convergence of cultural heritage, digital technologies and the built environment affects people's experience of heritage and the extent to which interactions with, and consequent understandings and productions of, heritage are altered by digital technologies. This objective is addressed by examining the potential of digital technologies to form new audiences for heritage institutions.

In the age of digital technologies the role and significance of heritage is changing; heritage is being reconceptualised as mobile, global, fluid, related to content and technologies and embedded into wider cultural sectors and processes. Yet, as public sector funding for many

cultural institutions is cut, there is also a need to rethink how community bases of local and national identity are supported. The rise of digital curator positions within heritage institutions suggests increasing interest in technology as an initiator of heritage and as a means to engage audiences. Digital technologies offer the possibility of a more personal and active experience of heritage for individuals and communities that is not tied to specific geographic locations. This has the potential to increase access to cultural heritage and enable communities and individuals to act as curators and creators of heritage content.

The main goal of this report is to examine the potential of urban screens to form new audiences for heritage institutions. Understanding strategies for engaging audiences will help digital curators to implement the technology and benefit from the opportunities offered. In order to develop an understanding of strategies for using urban screens to engage local communities with heritage institutions, a deeper appreciation of the choices available to digital curators is required. It is proposed that this appreciation can be obtained through analysis of the tasks and considerations of those individuals employed in engaging local communities with urban screens. Identifying the response of local communities to these engagement strategies assists in understanding the success of these approaches.

The first section of this report presents an overview of the potential opportunities and limitations of urban screens with regard to heritage institutions. The background and context of the BBC Big Screens project are described. The second section is organised around key themes drawn from literature. This enables questions of engagement and value to be considered through literature from different fields. Architectural theory, theories of human-computer interaction and insights from heritage and museum studies contribute to this review. The analysis of the case study, presented in the third section, is organised around the key themes identified in the literature. Building on this, the discussion section considers aspects of engagement and value revealed by the case study but not described in detail in the literature. Finally, further questions for future study in this area are presented.

2. Urban screens

Urban screens are celebrated as having the potential to form new types of audience yet difficulties in measuring this engagement are acknowledged (Taylor 2006). The potential for urban screens to form new types of audience is demonstrated by practical examples of their use. Urban screens enable communities to act as curators, increasing the diversity of voices within heritage institutions (Museum of London 2012). By promoting new forms of shared viewing urban screens reinvigorate public space and civic culture (Mcquire 2009, Arcagni 2009, Struppek 2006). The location of urban screens promotes regular exposure to content enabling audience members to form an emotional connection with the screen (Schuijren & McQuire 2009). By bringing people together urban screens provide an environment for the exchange of ideas, jokes and playful behaviour (Cubitt 2009, O'Hara et al. 2008). These examples illustrate the potential for urban screens to form new types of audiences for heritage institutions, however, processes for achieving this are rarely described. This report proposes that understanding these processes has the potential to address issues of measuring engagement with urban screens and contribute to assessing their value to communities and heritage institutions.

Some of the difficulties associated with measuring engagement with urban screens can be attributed to the need for robust and flexible evaluation methods (Taylor 2006). Understanding the social value of the screens is considered a more significant issue (O'Hara et al. 2008). Heritage institutions desire to provide value to their audiences. Communities are

perceived to value heritage institutions when they become engaged with them. Processes for bringing about this engagement are poorly understood. Engagement with urban screens can be described in terms of participation (O'Hara & Glancy 2009). Increasing participation with heritage institutions can result in broadening diversity and eliciting a sense of ownership. Embedding heritage institutions in national, regional and local life is seen as key to this approach (Wilkinson 2006).

Understanding the value of urban screens to local audiences is an essential part of the process of engagement. Procedures for measuring value are initiated by institutions. Qualitative and quantitative methods are used to capture communities' perceptions of the value offered by heritage institutions. Research into participation describes techniques for engaging audiences. Encouraging audiences to move from awareness to participation has been identified and observed as a primary challenge of engaging audiences with large screens (Brignull & Rogers 2003). Digital technologies offer a means of engagement that increases participation maximising the value of the screens to local communities.

2.1 BBC Big Screens

Heritage artefacts help us to tell stories about ourselves (Fairclough et al. 2007); the BBC creates heritage artefacts through its production and archiving of television programmes. In 2002 the BBC began an experiment in public space broadcasting using a large screen installed in Manchester City Centre during the Commonwealth Games. This screen enabled a new form of viewing that differs from watching television at home (Mcquire 2010). Through partnerships with the city council and local arts organisations the original BBC Big Screen enabled members of the local community to create their own content for the screen; content that can be described as community created heritage. The success of this initial experiment led the BBC to become a partner in the Big Screen Network - a collection of twenty-two permanent large screens installed in city centres across the UK. This expansion of Big Screens was conceived as a means for cities outside of London to experience and participate in the excitement of London 2012 Olympics (Gibbons & Mcquire 2009). At this time, members of the Big Screen Network included the BBC, local authorities and LOCOG (the London organizing committee for the Olympic and Paralympic games).

Each of the twenty-two Big Screens is situated in a civic space; this combination of Big Screen and surrounding civic space is known within the Big Screen Network as the Live Site. Local authorities organize events in these Live Sites to complement the programming on the screen. Live Site events may be screen-based, for example the screening of work by local filmmakers or a live broadcast from the Royal Opera House, or they may involve a hybrid of screen and built space, for example, 'have a go' tennis sessions to accompany the BBC's coverage of Wimbledon or a paper boat making activity at the screening of the Queen's Diamond Jubilee Thames Pageant. The purpose of a Live Site event can be to inform, entertain or fundraise. The geographic scope of an event can range from hyper-local - an event that only interests those in the immediate vicinity of the Live Site - to international, for example World Cup football, Wimbledon or the Olympics. Live Site events may be perceived to have niche appeal, such as a Sikh festival or Opera broadcast, or to be of broad interest, for example, football matches or the Olympics. The Big Screens can also show interactive content where the audience are able to influence the screen through their behaviour and actions (O'Shea 2009, Hudson-Powell et al. 2011).

This study turned out to be extremely timely. LOCOG's involvement with the Big Screen Network ended in September 2012. At the same time, the BBC announced they would leave the Big Screen Network at the end of March 2013. This decision forces local authorities to

reconsider the purpose, funding model and ambitions of the Big Screens. In our interviews, members of the Big Screen Network speculated on the effect of these changes on the potential for the Big Screens to engage with local communities. These informed speculations provide insights into current practices and processes. This report focuses specifically on the strategies of engagement between the Big Screen and local communities. The first section considers how these strategies of engagement relate to urban screen theory and identifies key themes.

3 Reviewing the literature

This section is organised around key themes drawn from existing literature. These themes focus on engagement. It is proposed that this may form a basis for understanding the potential of urban screens to form new audiences. Structuring the review around themes enables questions of engagement and value to be considered through literature from the fields of architecture, human-computer interaction and heritage and museum studies. The section begins by outlining types of value within heritage. This is followed by a description of the spatial and programming considerations for urban screens. A proposed analytical concept is then described; this concerns spatial and participatory thresholds. The next section of this report uses these key themes to structure an analysis of current practices and processes of engagement with regard to the BBC Big Screens.

3.1 Value of heritage institutions for local communities

Heritage can be simply defined as *"what people value and want to hand on to the future"* (Clark 2006). The value of heritage to communities can be intrinsic or instrumental. Intrinsic value is the aesthetic, social, scientific or historical value associated with a heritage object; instrumental value is the value gained from engaging with a heritage object. Instrumental value can benefit a community by eliciting financial prosperity, a sense of identify or social cohesion (Clark 2006). In being seen to provide value to communities heritage institutions face several challenges. A need to increase diversity in audiences, broaden engagement and elicit a sense of ownership is acknowledged (Clark 2006). To achieve this the Museums, Libraries and Archives Council (MLA) aim to put museums, archives and libraries at the heart of national, regional and local life (Wilkinson 2006). Capturing and presenting evidence of the value of heritage is a further challenge (Clark 2006). Achieving this while accounting for the numerous types of value is difficult. Attempts to do so tend to focus on quantitative not qualitative outcomes and place too little emphasis on the views of local communities (Accenture 2006).

One approach to addressing these challenges and shortcomings is to employ digital technologies. Digital technologies increase access to heritage and open up new audiences and perspectives on cultural heritage artefacts and sites (Hooper Greenhill 1992). Public engagement with heritage through digital technology can take place outside of heritage institutions and enable people to create new heritage objects that talk directly to people's lived experience (Stewart 2012; Oxfam 2011; Museum of London 2012). Contributing to the construction of heritage artefacts and interpretations can help empower communities and crystallize identities (Giaccardi 2006). Yet the use of personal technologies also runs the risk of excluding those without access to such technologies – those on the wrong side of the digital divide (Crang et al. 2006).

The broadest definition of the term urban screens encompasses personal mobile technologies as well as large-scale fixed screens. Urban screens can be defined as a response to the potential of layered physical space and digital space - or what has been called hybrid space

(Mcquire et al. 2009, De Souza e Silva 2006). Mcquire suggests that large-scale urban screens have been disregarded as a potential civic resource due to their fixed location, planning constraints, restrictions on content and controlled authority. Mcquire argues that this dismissal is premature and that, given the right circumstances, large urban screens are capable of eliciting powerful feelings of connection (Mcquire 2009).

Traditional questions around access, editorial decisions and potential to make one's voice heard, are still valid with regard to urban screens. Mcquire uses the editorial approach to programming adopted by the BBC Big Screens that explicitly includes artists and community groups (Gibbons & Mcquire 2009) to suggest that the value provided by urban screens cannot be measured simply by commercial revenue (Mcquire 2010).

This report proposes that urban screens can provide value for heritage institutions by forming new audiences and so increasing access and diversity. Engaging local communities with urban screens is regarded as providing instrumental value for communities. Instrumental value has been discussed as a means of eliciting cohesion, financial prosperity and sense of ownership (Clark 2006). The literature provides examples of digital technology being used to increase access and diversity to heritage and to evoke social identity. Urban screens are regarded as an explicit example of this approach.

3.2 Material considerations for urban screens

To maximise the value of urban screens and fulfil their potential to form new audiences it is vital that consideration is given to their location (Schuijren & McQuire 2009, Cubitt 2009). In their guidance for local authorities English Heritage and the Commission for Architecture and the Built Environment (CABE) outline best practice for installing large digital screens in public space (English Heritage & CABE 2009). This advice considers the implications of an urban screen on the environment over its lifespan. English Heritage and CABE suggest that prior to installation consideration should be given to planning restrictions, appropriate and inappropriate settings, sustainability issues, energy efficiency and potential effects on the wider environment such as surrounding architecture, activity and inhabitants' enjoyment of the space. Fatah gen Schieck argues that balancing the relationship between the material and immaterial elements of urban screens - obsolescence, privacy, noise and light pollution, the purpose of the screen, the programming content and the built environment of the site - offers a means to seamlessly integrate urban screens into the built environment (Fatah gen. Schieck 2006).

The position of urban screens in relation to the audience allows new kinds of viewing behaviours to occur as viewers spread out or form viewing clusters with friends or new acquaintances (Cubitt 2009). The ability to display changing and interactive content on the urban screen creates new broadcasting cycles and flows in response to audience actions. These enable new forms of sociality. All of the partners in the BBC Big Screen Network are interested in using interactive content (Gibbons & Mcquire 2009). However, Schuijren argues that interactive content may alienate an audience who pass through the space on a daily basis by demanding too much from them (Schuijren & McQuire 2009). Schuijren suggests it is preferable to take a measured approach to scheduling content using routine and familiarity to build a connection with the audience over time. Choice of screen content has also to be considered from a technical perspective; compatibility between media formats and the system playing the content is vital. Over time this compatibility can be become increasingly difficult to maintain as media formats and systems technologies progress (Cubitt 2009).

3.3 Thresholds of urban screens

The ability of urban screens to form new audiences has been discussed. Schuijren suggests that the regular occupants of the space in which the screen is located form the primary audience for urban screens. Curators aim to boost this audience by using the programming of the urban screen to draw people to the site. This reflects the aim of heritage institutions to increase access and diversity. As heritage institutions explore how digital technologies assist in engaging with audiences beyond the walls of the institution the concept of thresholds may help.

Thresholds can be social or spatial but are always sites of change and transition (Turner 1995). Architecture consolidates these transitions in material form as people move from one space to another. Architectural thresholds are simultaneously a permeable opening and means of passage and a way of establishing narratives of inclusion, exclusion and control (Stalder 2009). Augmenting traditional architectural thresholds such as doors and passageways with digital technologies replaces the idea of a threshold as a discrete boundary with the notion of the extended threshold - a series of spaces that are inhabitable and act as transitional zones. The threshold becomes a series of independent spaces where a visitor is in a continual state of transition where boundaries and borders are blurred.

O'Hara, Glancy and Robertshaw (O'Hara et al. 2008) highlight the idea of *spectatorship* where onlookers influence audience behaviour and suggest that during the showing of interactive content the spatial threshold of Big Screen extends beyond the actual playing space to include the tables and seating where the spectators are located. In their analysis O'Hara et al describe the Big Screen as a social resource that becomes appropriated into the everyday activities of the space as people stop in the space to take a break from their dominant activity such as shopping or work (O'Hara et al. 2008). Viewing of urban screen content is categorised as *walk-by*, *viewing while resting or waiting* and *viewing by appointment* (O'Hara & Glancy 2009).

Brignull and Rogers describe the *participation threshold* that has to be overcome before people willingly engage with a large interactive display at a public event (Brignull & Rogers 2003). O'Hara et al transpose findings from this body of work onto the types of audience behaviour witnessed around the BBC Big Screens. This offers insights into behaviours around the Big Screen and raises similar issues in terms of zones of interaction, social barriers and access and control (O'Hara et al. 2008).

Brignull and Rogers propose that before crossing the participation threshold potential participants need to know the benefits they will receive and the costs they will incur as a result of this decision. Suggested approaches to encouraging participation are to consider the site, context and location of the screen with regard to its audience and to employ a helper to answer questions (Brignull & Rogers 2003). In the description of the *Red Nose Day* game for the BBC Big Screens O'Hara, Glancey and Robertshaw suggest that employing a compère, a person specifically charged with encouraging and sustaining participation, can help connect players to the game by helping initialise play, explaining the gameplay, legitimising the activity and providing positive encouragement so giving people the confidence to participate (O'Hara et al. 2008).

The first section of this report presented an overview of the potential opportunities and limitations of urban screens with regard to heritage institutions and described the background and context of the BBC Big Screens project. This was followed by a literature review organised around key themes drawn from architectural theory, theories of human-computer interaction and heritage and museum studies. The next section of the report presents the methodology

and analysis of the case study. The analysis is organised around the key themes of site, participation and value identified in the literature. The discussion of the case study, in the following section, will consider aspects of these themes revealed by the interviews that expand on the description of the theme in the literature.

4 Case study methodology

The case study described in this report was carried out between June 2012 and January 2013. The study focused on three BBC Big Screens located in cities of varying population density. The population of the city where Screen A is located is around 750,000 people; Screen B is set in a city with a population of slightly more than 200,000 inhabitants. Inhabitants of the city where Screen C is located number just under 30,000. The research involved one-to-one semi-structured interviews with local authority Big Screen Officers, BBC Big Screen Managers, individuals who work in the vicinity of the Live Site and a university course leader who has a long term collaboration with the BBC and the Big Screen. There were seven interviewees in total. Through these interviews we explore the strategies and techniques used to promote engagement. Interview questions ranged from selection criteria for Big Screen content and the evaluation of Live Site events to the community response to different types of programming. We also asked each interviewee to describe what they believe will change once the BBC leave the Big Screen Network. The transcripts from these interviews were coded using grounded theory (Strauss & Corbin 1998). All excerpts presented in the report are exactly as spoken by the interviewees. References to interviews are denoted by, e.g., *(Int01 – 14:53)* where *Int* refers to the interviewee identified as a number and the following numbers refer to the timestamp of the transcript where the relevant section of text can be found.

5 Case study analysis

Forming new audiences around the BBC Big Screen can be described in terms of engagement and participation. Analysis of the interviews is organised around the key themes identified in the literature.

5.1 Site

At the outset of this study the spatial threshold was considered to be the area encompassing the Big Screen, the surrounding civic space and its access points - entrances to buildings and roads, or pedestrian paths, along which members of the public travel into, and through, the site. Within the Big Screen Network this area is known as the Live Site. To understand the relationship between the Big Screens and local communities we sought to discover the ways in which interviewees believe that the site, context and location of the Big Screen influence engagement.

Typically, Big Screens are positioned so that people pass by while on the way elsewhere (*Int03 – 15.13; Int04 – 7.11)*. However, the location of Live Sites in relation to commercial, residential and civic areas varies from town to town. Screen B is situated in a civic square; a pedestrian route passes through the square connecting a commercial area of the city, where the University is located, with a train station. Screen C was described as being in a '*residential*' area (*Int06 – 6.19)*. In interview it was emphasised that this location is unusual and that more commonly screens are located in civic or commercial areas. Variations in the location of the Big Screen with regard to the type of space have implications for the engagement of audiences. Different types of location effect visitor numbers and the potential disruption for local

communities. Big Screen Officers try to overcome these limitations by raising awareness of events and taking care that disruption to local residents and businesses is kept to a minimum. Due to Screen C being located in a residential area close attention is paid to ensuring that residents and businesses in the vicinity of the screen are aware of the Live Site event schedule. This is achieved by sending letters to each resident and business in the local area. The volume of the Big Screen is turned down when no events are scheduled to minimise disruption (*Int06 – 21.32)*. Matching the properties of an event to the spatial characteristics and inhabitation patterns of a space is critical to the event's success. Screen Officers recognise this relationship between engagement and site; the Screen Officer for Screen B described how fundraising events held at the weekend tended to be less successful than those held during weekday lunchtimes *(Int01 – 03.34)*. The Screen Officer explained that as the site is not in a commercial area it gets lower numbers of visitors at weekends compared to weekdays when people who work in the nearby civic offices are passing through.

Being located in public space affects the Live Sites at a fundamental level by determining what can and can't be shown on the screen. The BBC Screen Managers believe that the Big Screens have a unique situation for which editorial control must be stronger than that for broadcast television or radio channels. This is because "*if you're at home and you see something that offends you you can walk out of the room, you can turn your television off, you can change your radio to a different channel. If you're in the public event space you have to walk through that event space so we have to be very mindful of the sort of stuff that we put on there" (Int05 – 12.53)*. Editorial control for the Big Screen is stricter than for other types of public space. A Screen Manager recalled the Arts Council's description of Live Sites as 'galleries without walls' (*Int04 – 7.11)* yet went onto explain how content cannot necessarily be shown on the Big Screen even if it has previously been shown in a museum because "*people don't choose to come into the public space to see the screen, the screen is there… but if you choose to go into the museum, when you've made that choice, it's the same with radio, you can choose to turn the radio off, you can change the channel, but with the screen you can't"(Int04 – 7.11)*.

Interviewees who work around the Live Site described how the Big Screen acts as a focal point for the space (*Int02 – 5.49)*. They suggested that changes to the built environment could encourage people to linger longer; "*it's not really got a cafe culture this square so, it feels more like a working one, a place where people are going to other places […] if there were more cafes along here on the ground floor […] people probably would be more leisurely in the square and there's not actually that much seating either in the square. I think people sit on the steps quite a lot in summer and they probably watch the screen from there. But I wouldn't call, when I think of the sort of squares I see in France it's a very different feel to that where you are encouraged to sit and relax a lot" (Int03 – 15.13)*. This suggests that provision of an urban screen may not form new audiences if the surrounding space does not offer a comfortable environment that supports viewing and participatory activities.

The aim of this section was to uncover the extent to which interviewees consider the site, location and context of the Big Screen to influence behaviour and to identify potential opportunities and limitations of Big Screen Live Sites to engage audiences.

5.2 Participation

The site, context and location of the Big Screens were understood by interviewees to influence the programming, viewing duration and relationships with local residents and businesses. Actively engaging in communication with local residents helps manage expectations. Engaging with audiences remains a challenge. Literature suggests that increasing engagement can be achieved by raising awareness of the Big Screen and associated events, informing potential

participants of the benefits and costs of engagement, and careful programming of screen content (O'Hara et al. 2008, Brignull & Rogers 2003, Schuijren & McQuire 2009). Understanding how participation with BBC Big Screens is encouraged by Screen Officers and Managers helps reveal how new audiences form around urban screens.

Raising awareness

The BBC Big Screens are capable of attracting large audiences. The people who work around the screen described the public response to the Olympics saying that "*a lot of people were watching the Olympics throughout the summer" (Int03 – 16.19)* and that "*by sort of 9 o'clock the square was filled, watching the whole day's events"* estimating that there were "*a couple of hundred at least, all the bean bag chairs were taken, they had probably about ten of those, and then they had four or five rows of chairs and they were always busy, and then they had the events tent, just in front of the statue here, and that always had people sort of floating around finding out what was going on" (Int02-3.39).*

Big Screen Officers described how they use a variety of techniques to raise audience awareness of events. Although there has been a shift to online communication and promotion using social media such as Facebook and Twitter, Big Screen Officers recognise that not everyone is online and so continue to produce printed promotional material. Publishing these as a supplement to other council communications material is a way to cut costs (*Int01 – 25.36, Int01 – 25.36*). During the Olympics an on site presence in the form of A-boards detailed the days events for passers-by (*Int01 – 24.16).* Installing temporary seating and signage raised awareness of events taking place around the Big Screen. Advertising techniques using social media, local press and print publications promoted events more widely and aimed to attract people to the Live Site specifically for the event.

The choice and careful scheduling of Big Screen content is used as a means of focusing attention on the screen and encouraging extended viewing. BBC Screen Managers reported that "*short form"* content (*Int04- 23.01; Int05 – 21.32)* works best to raise awareness of the Big Screens. This is due to the average '*dwell time' (Int04 – 23.53)* – how long a member of the public watches the screen - being only one minute long. Breaking content down into short chunks with different types of programme shown at regular times throughout the day, for example, news until 9am, at lunchtime and in the early evening, enables regular visitors to predict the screen schedule. When discussing types of content that attract people to the Big Screen, one Screen Manager noted that showing archive footage of the city (*Int04 – 20.11)* is consistently effective at engaging audiences*. These programming strategies target the transient population of the Live Sites with the intention to prolong their viewing.

Onlookers, active engagement and collaboration

The literature proposes three types of engagement with the BBC Big Screens, onlooker, viewer and those who are actively engaged (O'Hara et al. 2008). Analysis of the interviews suggests that collaboration can be considered as a further category. The interviewees describe a variety of strategies employed to attract and sustain the engagement of each of these types of audience and to encourage the transition from low-level awareness to greater participation.

Onlookers pay only slight attention to the Big Screen. Engagement may last for only a few seconds as they glance at the screen while crossing the square to work gaining a '*shallow awareness*' of the screen content. This type of engagement was recognised by the people who work around the screen as demonstrating a passing interest *(Int03 – 16.19).*

Others may experience a more active engagement as they take part in '*have a go*' events. This type of event is considered by the BBC Screen Managers to work best in terms of engaging audiences because "*the screen is part of a fuller thing*" *(Int04 – 26.03).* Local authority Big Screen Officers support this view, suggesting that successful engagement happens when "*people can see easily what it is and how to get involved*" *(Int01 – 03.07).* This type of engagement reaches beyond the boundaries of the Big Screen and extends into the civic space.

Collaboration was not identified in the literature as a type of engagement. This report defines collaborators as community members who co-produce Live Site events or Big Screen content alongside the Local Authority Screen Officer or BBC Screen Manager. The type of engagement experienced by collaborators is of a different nature with regard to duration, involvement and location to that of onlookers and people who are actively engaged.

Involvement, with reference to collaborators, is a relationship that evolves over a long period of time *(Int07 – 5.41).* This relationship entails sharing responsibilities, for our interviewee this meant sharing technical and editorial responsibilities for screen content. As the relationship evolved the level of involvement increased to the point where a fibre optic connection linking the collaborator's institution to the Big Screen was installed *(Int07 – 8.41).* The collaborator believes that trust is key to a successful collaboration; "*firstly it's about trust, trust we will work to all factors that broadcast industry demand, meet a deadline, pitch, produce and deliver exactly what we said we would, no surprises*" *(Int07 – 15.06).* There do not appear to be any studies that consider the experience of collaborators with regard to the Big Screen. We are keen to understand how this role fits into the patterns of engagement recognised by earlier work.

Additional challenges for participation

Despite their experience, Screen Officers and Managers admitted to being sometimes surprised by the public response to an event "*you turn up on the day and you think, what's happened*" *(Int01 – 22.41).* Often the response was unexpectedly positive, for example where the number of people attending an event was greater than expected or where they remained at the site longer than anticipated; "*the first Royal Opera House, the live opera satellite, had five, six hundred people there for whole evening - in an urban space. So you've got the trains in the background, you've got the town clock and you've got the pub, but they all came with chairs*" *(Int04 – 24.50, Int07 – 27.43).* Occasionally though Screen Officers described events that hadn't gone as well as they hoped in terms of attendance or fund-raising *(Int01 – 03.34).* Interviewees identified two additional challenges for participation that they believe contribute to this unpredictable audience response.

The first challenge is understand the temporal rhythms of the Live Sites. Interviewees described daily, weekly and annual patterns of inhabitation that affect how a Live Site is used. One person who works in the vicinity of a Live Site described his view of the daily rhythm: "*We open at half past seven in the morning and generally that is the civic office building, which is all the council buildings behind us, their workers going in and then it's the students that start at nine, we pick up a lot of their business up until nine o'clock, then they come out again at eleven o'clock and new students go in, so we have a turnaround then, and then around one o'clock is lunchtime when the students kick out, we do quite well about then, and then five o'clock when the civic buildings finish for the day*" *Int02 – 1.05.* This challenges Screen Officers and Managers to schedule Big Screen programming and events to accommodate and exploit these rhythms. Temporal rhythms tended to be noted as changes in the number, or type, of people entering the Live Site. The Screen Officer and people who work around a Live Site observed

how the annual rhythm of school and university holidays reduces, or increases, the number of potential customers according to the nature of their business (*Int01 – 03.34; Int02 – 4.43; Int03 – 2.04)*. These rhythms and patterns vary from one site to and are influenced by the nature of the space. The Screen Officer for Screen B described how events held at the weekend tend to be less successful than those held during the week due to a lack of footfall at those times (*Int01 – 03.34);* in contrast, the Screen Officer for Screen C, located in a residential area, found weekend events to most successfully engage audiences.

The second challenge is the weather. Screen Officers and people who in the vicinity of a Live Site also acknowledged that the weather plays a large part in engaging the public with the Big Screen and associated events (*Int02, Int06).*

The range of strategies employed to encourage and accommodate different types of engagement demonstrates the potential for the Big Screens to form new audiences. The recognition of additional challenges to participation helps illustrate potential obstacles to engagement.

5.3 Value

The final theme in developing an understanding of the potential for the BBC Big Screens to form new audiences involves identifying interviewees' perceptions of the value of the Big Screens. The literature described several aspects of value, social value, aesthetic value and financial value. Analysis of the interviews sought to uncover how the types of engagement detailed in the previous section contribute to different perceptions of the Big Screens' value.

Measuring value

Screen Officers and Managers identified the engagement of local communities as a vital element in ensuring the success of the Big Screen. Measuring this engagement was done primarily through quantitative techniques. Screen Officers and Managers emphasise that their goal is to maximise attendance to events and increase the amount of time people spend in the space - describing the aim as being to *"get a crowd and keep a crowd" – Int04 – 28.46*. During the Olympics staff at the Live Sites counted how many people engaged with the events through intermittent headcounts (*Int06 – 16.30).* By describing the headcount figures as a percentage of capacity it is possible to compare attendance across Live Sites (*Int06 – 28.22).* However the collected figures can only provide a rough estimate of audience size due to the transient nature of the Big Screen audience (*Int06 – 16.30).*

Qualitative methods are used to obtain feedback from local communities. The effectiveness of this approach is limited by the nature of the event, for example, it was reported that requesting audience members to complete feedback surveys at live opera broadcasts was not successful. Passive approaches to capturing information are also employed. Placing a suggestions box in a Live Site was not successful - it only got a single response *(Int01 – 23:07).* Social media provides another tool for gathering feedback; one Screen Officer described using a Facebook page to encourage people to upload comments and take part in an online survey.

Value to Big Screen Network partners

Being part of the Big Screen Network was perceived as bringing value to the Screen Managers and Officers in terms of workload and accountability. Network partners share contacts and ideas that benefit one another, for example, the BBC brought LOCOG into the network. Resources can also be shared; one Screen Manager provides support for two Big Screens; the technical resources of the BBC are shared with local authorities; technically competent

volunteers are shared across the network as when twenty-two students who were experienced collaborators with Screen B were employed during the Olympics to provide support at other Live Sites across the network. This exchange is valuable to Big Screen Officers and Managers as it helps them to manage their workload and can offer access to potential sources of funding *(Int06 – 13:22, Int04 – 15:20)*.

The clear division of responsibilities amongst Big Screen Network partners provides further value. Responsibility for the Live Site is divided between the BBC and the local authority; local authority Screen Officers are responsible for live events and the BBC Screen Managers take primary responsibility for content on the screen. This means Big Screen Officers and Managers can pass responsibility for the decision-making process to another partner so preserving their personal relationships with community contacts. The policies and hierarchy of the institutions provide a further shield for Screen Officers and Managers *(Int05 – 27:03)*.

Being part of a network can also incur costs for the partners. While the BBC editorial policy provides a convenient shield for broadcast decisions, local authority Screen Officers acknowledge a feeling of frustration at having to comply with this editorial policy. In particular, the clause that forbids the broadcast of any campaign that seeks to alter audience behaviour. This prevents local authorities from promoting initiatives encouraging residents to stop smoking or against drink driving. Local authorities are looking forward to publicising these campaigns using the Big Screens once the current contract with the BBC ends *(Int01 – 18:04)*. The BBC Screen Managers are aware of this frustration but see the situation in more nuanced terms and are conscious of the usefulness of institutional policies for protecting their relationship with local authority Screen Officers *(Int04 – 15:20)*.

Value to members of local communities

Screen Officers and Managers provided evidence of qualitative value that the Big Screen brings to local communities. BBC Screen Managers described working with young people in schools and universities to turn them into better filmmakers and support them through their creative journey *(Int05 – 25.17)*. Providing a public platform for local artists and school children to show their work was seen as valuable as it raised their profile within the local community and gave them an opportunity to show off their work to friends and family *(Int05 – 14.28)*. Screen C contributed to the re-inhabitatation of the city centre when, after several years during which community festivals moved towards the outskirts of town, community groups wanting to make use of the live feed on the Big Screen began to hold festivals in the centre again *(Int05 – 1.43)*.

People who work around a Live Site identified other types of value generated by the Big Screen that were not mentioned by Big Screen Officers and Managers. One person valued the screen and its associated events for increasing business revenues; they described how their takings usually drop during the summer months while the university, which is local to the site, is on holiday. However, this year, it "*just carried on because of Olympics and people who came to see them on the screen – huge knock on effect*" *(Int02 – 4.43)*. Another person who works around a Live Site valued the Big Screen for attracting diverse audiences, describing how the live opera broadcasts brought together "*all kinds of people stopping to listen and watch it, never seen anything like that in* [city name] *before*" *(Int03 – 12.19)*.

Working with the Big Screen brought value for the collaborators as they gained professional broadcast experience. In addition, the collaboration delivered indirect value by raising their profile within their university. The collaborator persuaded the Screen Manager to broadcast the university graduation ceremony live on the Big Screen. This ceremony is held behind closed doors yet by being shown on the Big Screen it became visible to any citizen. At the same time

the ceremony began to be broadcast live across the Internet making it accessible anywhere in the world. As a result of this increased visibility the collaborator described how the vice-chancellor of the university began to take notice of their work and how they have gone on to establish a good relationship.

Understanding the perceived value of the Big Screen to different groups of people helps to comprehend how Big Screens can form new types of audience. The type of engagement interviewees had with the Big Screen affected their perception of its value. Engagement is influenced by site, location, context and programmed content of the Big Screen. As the analysis of the interviews progressed deeper understanding of the intertwining of site, engagement and value was reached.

6 Discussion

The themes of site, participation and value were first identified in the literature review. These themes provided the basis for the analysis of the case study in the previous section. This section discusses how these themes can be expanded as a result of the analysis.

Analysis of the interviews suggests that two themes described in the literature can be developed. The first theme is thresholds. The literature described the *participation threshold* that inhibits audience engagement (Brignull & Rogers 2003). The spatial threshold surrounding the Live Site was defined as an area including the Big Screen, the surrounding civic space and its access points. The case study illustrates that the scope of the participation and spatial thresholds of the Big Screens can be expanded to include places and participants who are not co-located with the Big Screen.

The second theme to be expanded is participation. The literature offered insight into the use of helpers or compères to smooth passage across the participation threshold (O'Hara et al. 2008). The case study suggests that the Big Screen Managers and Officers play a similar role in facilitating understanding and participation between institutions and communities.

Finally, analysis of the interviews indicates that the value of the Big Screens is not fixed and depends on the perspective of the interviewee. Negotiation of these values is at the heart of the debate over the future of the Big Screens once the BBC leaves the Big Screen Network in April 2013.

6.1 Extended thresholds

The participation threshold was defined in the literature as the point at which individuals move from one stage of participation to another. This is defined as a shift in engagement indicated by changes in physical location or activity. For the purposes of this study, spatial thresholds were defined as the area including the Big Screen, the surrounding civic space and its access points.

Analysis of the interviews suggests that the spatial threshold can be expanded to include the location of universities, schools, community organisations and other sites where Big Screen collaborators are based. These locations are not necessarily physically connected to the Live Site. Connections are forged between these distributed locations and the Live Site by the Big Screen Officers and Managers who travel around the city to visit participants. In this way Screen Officers and Managers encourage and assist members of the local communities to cross the participation threshold. This study suggests that the definition of participant can also

be extended to include those people who collaborate in the creation of Big Screen content or events.

Considering the expansion of the Big Screen spatial and participatory thresholds suggests that the description of participation and the issues that arise in terms of catchment areas, zones of interaction, social barriers and questions of access and control can be rethought to take account of extended thresholds that include locations and participants not in the immediate vicinity of the Live Site. By understanding the locality beyond the immediate vicinity of the Big Screen and Live Site Big Screen Officers and Managers are able to organise events that reflect and engage local audiences.

6.2 Gatekeepers and social thresholds

At the outset of the scoping study it was believed that participatory and spatial thresholds would be the focus of this investigation. However, as the interviews progressed another threshold was uncovered. This is a social threshold embodied in the people employed by the Big Screen Network to elicit engagement between the Live Site and the local community. These employees, the local council Screen Officers and BBC Screen Managers, act as gatekeepers to the Big Screen Live Site disseminating information, liaising between groups and providing access to technical expertise, professional knowledge, local connections and support. The three types of threshold defined in this analysis – spatial, participatory and social - work as access points enabling collaboration, communication and exchange between members of the local community and the institutions of the Big Screen Network.

One aspect of the BBC Screen Managers' work involves providing information to people who would like to use the Big Screen to promote their community group or event. This type of work takes the form of a conversation as the Screen Manager helps communities develop their understanding of what they want and what is possible: *"they say they want some advertising on the screen, so I have to have the discussion about well, I can't advertise but I can promote your event and tell people where they can find information about this domino session, now if I was to sit down with them and start talking about mpegs or slides or Photoshop or all these different packages of where they'd need to have screen ready content I'd just be totally wasting my time, so you get those situations where you're literally writing down, tell me what the dates are, who can join, what sort of activities do you have here, is it free, tell me all these different things and I will then take it on as part of my own role, I will go back to the office and I will make them a slide, I'll mock up a very simple slide, I'll take it back to them, get them to sign it off, they think it's the best thing and it ends up on the screen"* (Int05 – 7.48).

Local authority Screen Officers disseminate information to the people who work around the Live Sites. The Screen Officers send monthly emails detailing the upcoming Big Screen schedule and alerting the people who work around the Live Site to future events (*Int02 – 7.26, Int03-10.34)*. These communications enable the people who work around the Live Site to take informed decisions about how to respond, for example, whether to stay open late for a Big Screen evening event with the likelihood of picking up extra business (*Int02 – 8.30).* If Big Screen Officers work in close proximity to the Live Site then informal ad hoc conversations can occur between the Screen Officer and the people who work there (*Int02 – 12.36).* This regular and ongoing communication means that the people who work around the Live Site are clear about the division of responsibilities for the Big Screen and who to speak to in case of a query.

Screen Officers and Managers understand the Big Screen and Live Site from the perspective of their respective institutions. This perspective enables them to guide members of the community through the myriad regulations, guidelines and policies that surround Live Site

events and Big Screen programming. For example, a local authority Screen Officer described being approached by an organisation that wanted to run a paid event in the Live Site but hadn't thought through the health and safety, and crowd management implications so it was necessary for the Screen Officer to explain the council requirements for hosting such an event (*Int01 – 6.40)*.

BBC Screen Managers describe a large part of their work as editorial, helping people who want to show content on the screen negotiate the BBC's editorial and compliance policies. Screen Managers do their best to assist everyone who wants to show work on the Big Screen. If unsolicited content is submitted and is in line with BBC editorial and compliance policies then they will show it on the screen and promote it (*Int05 – 21.32)*. If the footage is not compliant then Screen Managers will suggest how to recut it in a suitable manner. Parental consent is a consideration when scheduling programmes for the Big Screen because content here is on higher rotation than content for TV or radio. Compliance with copyright is also a concern as music and audio used on the Big Screen are not cleared and paid for within the BBC so it is essential that everyone involved with proposed screen content has consented to its showing and that the copyright has been cleared (*Int04 – 10.36)*.

Screen Officers and Screen Managers act as Big Screen Network liaison points between local authorities and the BBC. Local authority Screen Officers are involved in negotiations with their councils about the budget for future Live Site events. As contact point between the BBC and the local authority it can fall to the Screen Officer to explain to their local authority colleagues why content may, or may not be used on the Big Screen (*Int01 – 20.12)*.

Screen Officers and Managers can help smooth the passage of a Live Site event; they can also block its progress. These gatekeepers act as a threshold enabling communities to access and create content while also protecting the security, reputation and efficiency of the institutions they represent. Gatekeepers perform similar roles to those carried out by the Big Screen compères in the interactive game observed by O'Hara, Glancy and Robertshaw (O'Hara et al. 2008). This analysis of the interaction around a Big Screen game only considered participants who were currently in the vicinity of the Big Screen. Considering Screen Officers and Managers as gatekeepers suggests that a participation threshold also exists between the local community and the institutions that control the content and events around the Big Screen. The points of exchange embodied by the gatekeepers highlight similarities and differences between the two groups they are trying to connect – the Big Screen Network and the local community. Local authority Screen Officers and BBC Screen Managers act as a social threshold linking these groups.

6.3 Renegotiating value

As a result of the BBC announcing they will withdraw from the Big Screen Network at the beginning of April 2013 the relationship between the local authorities is currently being renegotiated. The possibilities appear to be that a national Big Screen Network will continue; regional networks of Big Screens may be formed or each local authority may act independently. Big Screen Officers, Managers and collaborators anticipate that the restructuring of the Big Screen Network will have significant implications for the ambitions, purpose, funding models, editorial policy and management of the Big Screens. Until this point LOCOG, the BBC and the local authorities have each provided one third of the content for the Big Screen. Once LOCOG and the BBC leave the Big Screen Network local authorities will have to manage all of the Big Screen content.

The Big Screens have the potential to be financially valuable to local authorities. In looking to the future local authority Screen Officers talk about the need for the Big Screens to make money to cover their costs. It is clear that discussions are ongoing as to how this might happen (*Int01 – 18.04*). The original agreement stipulated that following the termination of the contract after the London Olympics the Big Screens cannot be used for commercial purposes. The Screen Managers and Officers told us that, despite this, local authorities are looking at some form of advertising or sponsorship for the screens (*Int01 – 18.04*) and that commercial advertising and media companies are keen to enter into a partnership with the local authorities and take charge of the Big Screens.

A partnership with commercial advertisers is considered likely to provide the finance that the local authorities hope the Big Screens will generate. The value of a partnership of this kind for local authorities would be two-fold; first, it would bring in enough money to keep the Big Screens running, second it would provide the technical support that will be lost when the BBC leaves the network. As one local authority Screen Officer stated *"we don't really have the staff allowance to have someone who can give 100% to the technical side of it" (Int06 – 31.22).*

BBC Screen Managers acknowledge the financial and technical challenges that the departure of the BBC will cause the Big Screen Network, yet they see establishing an editorial policy - deciding what is and isn't suitable to show - as a more significant issue. This challenge may take various forms depending on the renegotiated financial model of the Big Screen Network. If the local authorities want advertisers to help offset the costs of the Big Screen and provide technical support then questions arise over the choice of content; *"are you going to turn away thousands of pounds of advertising or are you going to put the content on the screen?" (Int05 – 27.03)* On the other hand, if local authorities decide to manage the screens themselves then there are concerns over how local authorities, as political bodies, can be seen to maintain impartiality, for example, how they will decide which local charities and campaigns to support. One Screen Manager felt that community groups would be the people to suffer if advertisers took over the screens: *"are they going to give up some of their screen time for free so dominoes can have some of it or will they say well, actually no, Quickquidmoney pay day loans are going to give us ten grand for every quarter to have their advert on ten times a day" (Int05 – 27.03).* These editorial challenges can be considered as the potential social costs of exploiting the financial value of the Big Screens.

Analysis of the interviews indicates how different types of participation with the Big Screen lead to different perceptions of its value. In particular, interviewees described the difference between social worth and financial worth and acknowledged the difficulty in assessing value when such differences exist. The BBC Screen Managers tell stories of building relationships with community groups across extended periods of time yet acknowledge that these stories, although powerful validation of the Big Screens at an individual level, do not satisfy institutions looking for a good return on investment (*Int05 – 19.29*). The Screen Managers also recognise how difficult it is to justify the community value of the Big Screen when local authorities are having to make painful decisions on council services: *"when you're trying to have those conversations about, yes, but think about the qualitative experience that people have, think about the platform that the local media students have, when you say that to somebody who's telling you how many people are losing their jobs that week it's very difficult it have that conversation but very understandable as well" (Int05 – 19.29).*

Interviewees have a sense that, for a variety of reasons, the Big Screen is a valuable community resource. Local authority Screen Officers appear confident that this resource will continue following the departure of the BBC, and perhaps even develop greater value as the editorial limitations are relaxed. However, BBC Screen Managers and collaborators seem

concerned that financial considerations – which they acknowledge are real and pressing, especially in the current economic climate – will take precedence over consideration of community and that, ultimately, local communities will lose out. Among the limited number of community members we spoke to there was a recognition that the Big Screen has value - as well as a feeling that programming and content selection could probably be improved. Only the collaborator talked about the possibility that the Big Screen might not exist in the future, comparing it to the demolition of a well-known building in the city a few years previously. The collaborator said: "*honestly, nobody wanted to go there especially at night but they miss seeing it and I think if the Big Screen went I think, whether people realise it or not, it will be one of those cases where, 'Oh, that's a shame' because it was actually quite useful.*" (Int07 – 29.00)

7 Conclusions and further work

The primary aim of this report is to investigate the potential of urban screens to form new audiences for heritage institutions. The case study described here is an example of how a heritage institution, in this case the BBC, uses urban screens to connect and engage with the local community. This report extends earlier explorations of engagement and participation with interactive content on large-scale and urban screens (Brignull & Rogers 2003, O'Hara et al. 2008).

An understanding of engagement between the Big Screens and communities was acquired through interviews with BBC Screen Managers, local authority Screen Officers and community collaborators. The interviews sought to discern how interviewees view the potential opportunities and limitations of Big Screen Live Sites to engage audiences. The approach was two-fold; to understand how institutions attempt to engage members of local communities with Big Screen events, and to identify types of participant. Analysis of the interviews suggests three types of participation with the Big Screens - onlooker, participant and collaborator. Capturing a deeper understanding of these three roles indicates the value the Big Screen offers to each.

The ability of heritage institutions to engage communities is vital if new audiences are to form. The interviews illustrate how the BBC and local authorities approach the task of engaging with each of the three types of participant. Marketing materials are used to address onlookers; live events around the Big Screen act as catalysts for participants and the relationship with collaborators is viewed as a long-term commitment that evolves over time. Two additional challenges to increasing participation and forming new audiences arose in the interviews. First, the temporal rhythms of the site were recognised to play a role in engagement. Daily, weekly and seasonal patterns were identified as influencing audience activity. Second, the weather was noted to have an effect on participation, engagement and audience numbers.

The final part of the study addresses the value that the Big Screens provide. Information on how value is currently measured indicates an emphasis on quantitative value at the expense of considering the qualitative benefits. Looking across the interviews suggests that each of the types of participants perceive the value of the Big Screens differently. Issues of financial and social worth of the Big Screens were raised. Financial costs of engagement with the Big Screen were identified. Potential social costs of commercialising the Big Screens were recognised.

This study demonstrates the potential benefits for heritage institutions in viewing urban screens in terms of participation and thresholds. This can increase the perceived value of the heritage institution to communities and increase potential for new audiences to form.

Further work

This study illustrates the complexity of the convergence of built environment, heritage, digital technologies and communities. Further questions that arise include:

Gatekeepers

> 1. To what extent can heritage institutions use digital technologies to mimic the role of gatekeeper and act as a point of exchange between content and community?

> 2. How can digital technologies extend the participatory, spatial and social threshold beyond the immediate vicinity of the heritage institution? How does this benefit institutions and participants?

> 3. To what extent is it possible for digital gatekeepers to understand and respond to the relationship between spatial characteristics, patterns of inhabitation and successful engagement?

Extended thresholds

> 1. What are the requirements of an extended threshold space that suggest successful engagement of communities? What benefit does inhabitation of this threshold bring to heritage institutions?

> 2. How can heritage institutions encourage engagement and exchange between subsets of participants? What role can digital technologies play in this?

> 3. To what extent can digital technologies encourage members of local communities to cross the participatory or spatial threshold of a heritage institution?

Value

> 1. To what extent do communities have influence over strategic or institutional decisions that impact on their access to heritage content? How might digital technologies increase this influence?

> 2. How can heritage institutions uncover any indirect value that they hold for members of local communities?

> 3. How might the value of a heritage institution for local communities be measured other than by footfall? Is there a role for digital technologies in this?

Partnerships between researchers and heritage institutions seem most likely to successfully further research in these areas. Working in collaboration would enable researchers to apply investigative techniques to the practices and processes of community engagement employed by the institution. This would lead to the identification of potential approaches by which the heritage institutions might form new audiences.

Acknowledgments

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