Talking Statues:

The user experience

A report for Sing London by the Research Centre for Museums and Galleries (RCMG)

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Jocelyn Dodd

David Hopes

Maria-Anna Tseliou

Ceri Jones

http://www.le.ac.uk/rcmg

Acknowledgments

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Key findings

Talking Statues is an innovative and novel project. Funded by the NESTA Digital R&D Fund for the Arts, it represents the growing use of mobile technology by the cultural sector to interpret, facilitate user engagement and encourage participation within cultural settings. Using NFC (Near Field Communication), *Talking Statues* sought to harness the fast, seamless interaction possibilities of NFC to provide 'spontaneous cultural experiences' in everyday spaces, at the same time attracting new and non-traditional audiences of cultural organisations.

In its first few months, *Talking Statues* attracted a significant number of 'hits' or 'scans', over 20,000 between August (when it was launched) and November 2014. Extensive media coverage generated excitement and enthusiasm for the statues, encouraging members of the public of a range of ages to seek out the statues in London and Manchester. Users, whether they had sought out the statue or encountered it spontaneously in their day-to-day activity, loved the novelty of the concept, the 'wow factor' of receiving a phone call directly from the statue!

> '[It was a] *moving experience… it took me out of myself… it took me out of my daily life.*'
> (Amanda, aged 36-45, English)

Users described their experience of *Talking Statues* as wonderful, interesting, brilliant, enjoyable and informative (Figure 1). It brought the statue to life, animating a previously silent, 'dusty old statue', or giving what seemed to be a 'random statue' new purpose and value. New connections were made with the character or person represented by the statue, it made people look more closely at something they passed everyday, usually without noticing. It helped users to understand the context of the statue, to look with fresh eyes at the aesthetics of the sculpture or understand its position within a certain location.
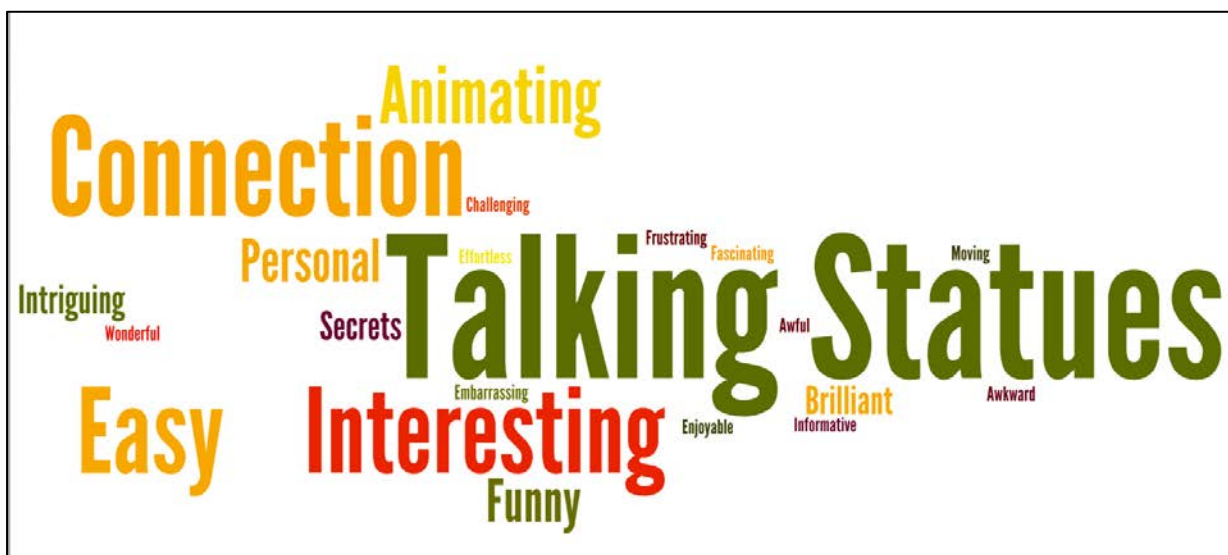
Fig 1: Words used to describe *Talking Statues* by users

The user experience of *Talking Statues* was very positive, with nearly 80 percent of users agreeing that 'using NFC/QR tags made the experience more enjoyable.' It created enthusiasm, with users

keen to find out more about the statue and its subject (62 percent), seek out more statues (53 percent) or visit related cultural organisations (54 percent). Most users were confident cultural consumers and were used to visiting cultural organisations such as museums, galleries, libraries and archives (85 per cent). *Talking Statues* attracted people to London and Manchester, travelling specifically to experience the statues; harnessing this enthusiasm for the statues through new avenues will be important for sustaining the popularity of *Talking Statues* over time.

There were some challenges to negotiating the technology used in *Talking Statues*, and the project could have benefited from additional user testing prior to the launch. Members of the public were unfamiliar with the symbols for NFC and QR that appeared on the plaque at each statue, and would have appreciated greater support or guidance on how to access the audio recording. Not everyone had a smartphone that is NFC-enabled, or access to free Wi-Fi or the mobile internet (3G, 4G) which is a prerequisite for this project. Despite these challenges, *Talking Statues* appealed to users of a wide range of ages and backgrounds. However, it did not attract the new and non-traditional audiences to culture, as was the project's intention. More could have been done to proactively engage and attract these audiences, in particular disabled people who were barely represented amongst users (less than 2 percent).

Talking Statues demonstrates that NFC is an effective technology for the cultural and heritage sector, having the potential to facilitate access to a range of contexts including rural landscapes, outdoors historic or heritage sites, including industrial heritage, architecture and built environments, sculpture parks and war memorials… indeed anywhere that physical forms of interpretation may not be possible or desirable. People loved the concept of *Talking Statues* and agreed that the use of NFC and QR made it an enjoyable experience, even if they had challenges negotiating the technology. The model of using NFC in *Talking Statues* also offers museums and cultural organisations cost effective and imaginative opportunities to develop novel interpretations for their collections and create new pathways to other cultural experiences.

1. Introduction

Talking Statues was a unique, innovative project that combined cutting-edge digital technology with lively, imaginative content to animate previously silent statues across London and Manchester. By simply swiping their smartphone, the public could be engaged in a spontaneous cultural encounter with a statue, able to find out more about its story and history.

Talking Statues was the creation of Sing London and developed in partnership with Antenna International (technology partner) and the Research Centre for Museums and Galleries, University of Leicester (research partner). It was supported by the Digital R&D Fund for the Arts - Nesta, Arts & Humanities Research Council and public funding by the National Lottery through Arts Council England.

The year-long project set out to explore how Near Field Communication (NFC) technology could be used imaginatively by the cultural sector to overcome barriers to culture and the arts by animating public spaces and forging new cultural links to engage new and non-traditional audiences, including younger and disabled audiences. The overarching aims of *Talking Statues* were:

- How can museums and arts organisations use emerging NFC technology to stretch beyond their physical walls, thereby reaching new and non-traditional audiences through their smartphones?

- How does NFC compare to other phone access such as QR codes?

This report outlines the findings from *Talking Statues'* audience research, carried out between August and October 2014. The over-arching question framing the research was:

> *How do people engage with and experience Talking Statues? To what extent does Talking Statues and its use of NFC enhance cultural encounters*?

The research was also guided by four sub-questions:

- How do people use *Talking Statues*?

- What factors affect engagement?

- What role does NFC play in the user experience?

- Does engagement with Talking Statues create pathways and connections to new, and other, cultural encounters?

In order to ensure a holistic understanding of users' and non-users' perspectives of *Talking Statues*, the audience research used a mixture of quantitative and qualitative research methods.

1.1 Background and context

Talking Statues was a year-long project that used cutting-edge digital technology, celebrated playwrights and actors to animate thirty-five statues in public spaces across London and Manchester. Launched on 19 August 2014, *Talking Statues* aimed to create public benefit by:

- Fostering interest, and overcoming potential barriers to arts and culture by fusing innovative technology with imaginative content in public locations;

- Widening audiences for the cultural sector by engaging with new audiences, including younger, more technically orientated audiences, and disabled people.

Statues were animated by the swipe of a smartphone (or, alternatively, scanning a QR code or typing a short URL address) across a sign located on each statue. Figure 2 shows the full 'user journey.' Selecting NFC, QR code or URL takes the user to the "Phone call screen" of the website, with the option to accept the phone call from the statue. At the end of the call, the user is taken to the *Talking Statues* main page and given three options; follow a web link to related content, access a map showing the location of more Talking Statues, or share the experience with a friend.

Fig 2: The user journey
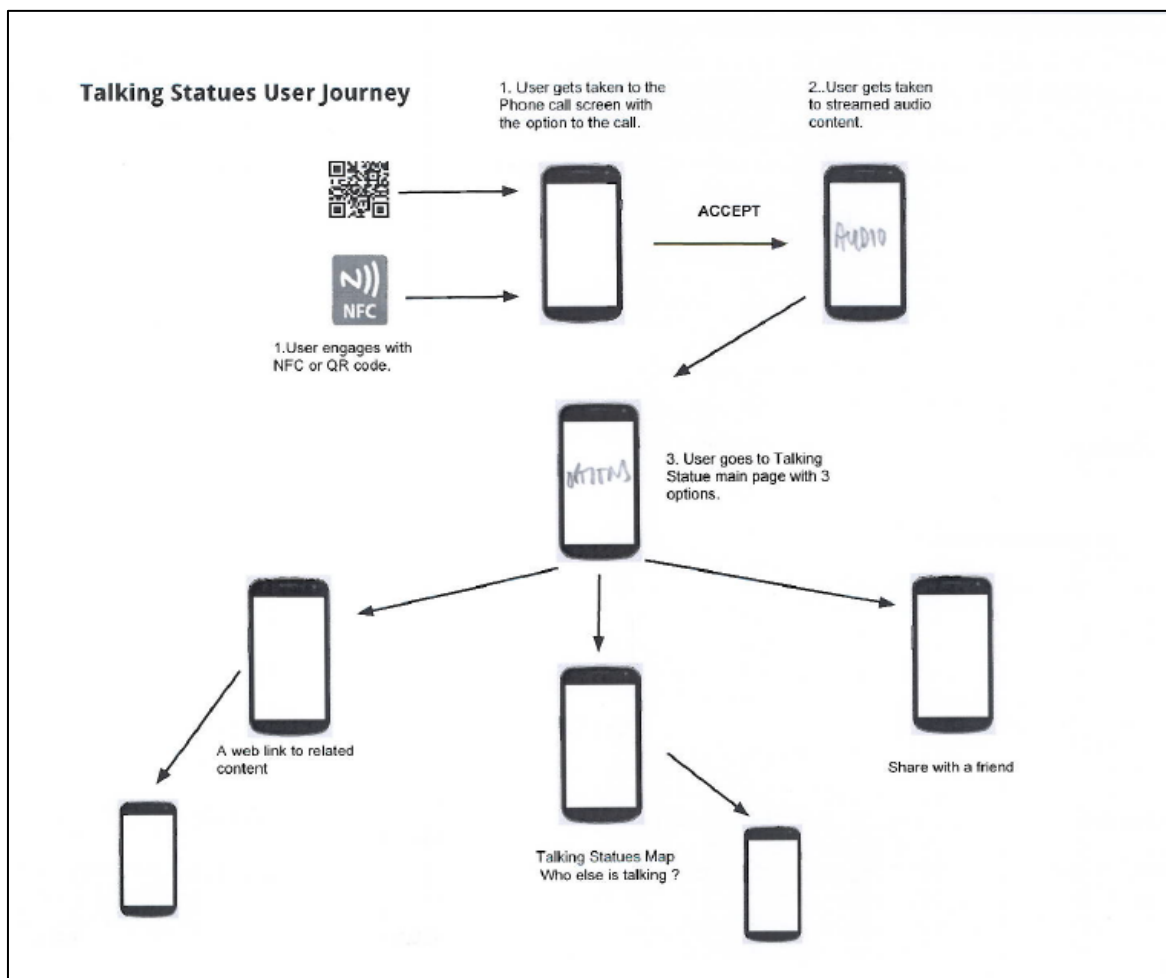
As well as a technology element, the project combined literature and performance elements within its content. Well-known UK-based playwrights - including children's author Anthony Horowitz, comedian Hugh Dennis and former *Newsnight* presenter Jeremy Paxman - were commissioned to write the content for the statues. Actors, which included film and theatre actor Ed Stoppard, comedian and writer Helen Lederer, and *Dr Who* and *Being Human* regular Russell Tovey, then recorded the content to animate the statue. Statues were located across London and Manchester, and included a mixture of well-known statues (Isaac Newton at the British Library, Sherlock Holmes in Baker Street) and more obscure statues (The Broad Family in Broadgate).[1]

Talking Statues was the creation of Sing London, developed in partnership with Antenna International (technology partner) and RCMG (research partner). It was one of 24 projects which together received £7 million over the period 2012-2015 as part of the Digital R&D Fund for the Arts.

Sing London is a UK-based not-for-profit arts organisation which develops projects that aim to lift the public's spirit by connecting them to each other and to the physical spaces around them. Previous projects have included singing groups, pianos and ping-pong tables, and the common aim is to make participation feel irresistible. Ultimately, Sing London's projects offer ways to create a sense of community and of belonging; by taking part in something, you feel a part of it. As Sing London describe on their website, 'Whether we're filling the streets with pianos, ping pong tables or talking statues, we believe that small interventions can invigorate the public spaces we all share.'[2]

Antenna International's role in the project was to develop and maintain the technology for *Talking Statues* and to generate and collect quantitative data from users. It is the world leader in handheld audio and multimedia interpretation in the global cultural arena. They take a tailored approach to projects and, where appropriate, work with additional partners to create the best technical solutions for their clients. For *Talking Statues,* Antennae International worked with Wooshping, who are specialist innovators in NFC enabled technology.

RCMG, based in the School of Museum Studies, University of Leicester, collected evidence of the user experience of *Talking Statues* through field and desk research. As part of the School of Museum Studies at the University of Leicester, RCMG combines academic rigour with practical experience of the museum sector. Research teams are brought together to meet the specific needs and requirements of each project and their work to date has enabled RCMG to develop a unique set of skills, experiences and perspectives in capturing, analysing and interpreting the perspectives, experiences and voices of users, and non-users, of cultural organisations.

To give voice to the statues, *Talking Statues* necessitated a wide range of partners and supporters. In London: Almeida Theatre; Broadgate, City of London; British Library; BBC; Canary Wharf; City of London Corporation; Islington; The Royal Parks; Old Spitalfields Market; SNK Studios; Transport for

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[1] Visit http://www.talkingstatues.co.uk/ [accessed 6/11/2014]
[2] http://www.talkingstatues.co.uk/#partners [accessed 7/11/2014]

London; and Network Rail. In Manchester: Manchester City Council; Sam's Chop House (Figure 3); The Bridgewater Hall; and University of Manchester / Manchester Museum.[3]

Fig 3: L S Lowry in Sam's Chop House, *Talking Statues* website

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2. Research Design and Methodology

The user experience of the statue's content, NFC technology and potential for further cultural encounters was critical to the impact of *Talking Statues.* As an R&D project, two phases of testing were carried out in order to ensure a high quality user experience. The first phase, Research and Development prior to the launch of *Talking Statues*, included a review of the ways in which mobile technology such as NFC has been used to facilitate engagement in cultural settings and an evaluation of the technology and content of the statues. The second phase, Research and Testing, involved research with users of *Talking Statues* following the launch in London and Manchester. As a research project taking place in the 'real world', the research design was flexible and evolved in response to a changing project timescale.

2.1 Research questions

The overarching research question shaped the structure and focus of the research design. It reflected the overall aim of *Talking Statues,* which was to capture the user experience and explore how the use of NFC technology might overcome barriers to culture and the arts for new and non-traditional audiences. The research question was:

> *How do people engage with, and experience, Talking Statues? To what extent does Talking Statues and its use of NFC enhance cultural encounters?*

Four sub-questions further focused the research:

- How do people use *Talking Statues*?
- What factors affect engagement?
- What role does NFC play in the user experience?
- Does engagement with Talking Statues create pathways and connections to new, and other, cultural encounters?

2.2 The research design

The methodology was designed to reflect a two-phase research and development project: Research and Development prior to the launch, and Research and Testing following the launch of *Talking Statues*. As a result of challenges for SING LONDON in getting permission for the use of statues the project launch was protracted. Initially planned to launch in April, then June the actual launch took please in August, as a consequence three research plans were produced; this section explains the final research design, changes to the initial research plan are outlined in section 2.3.

2.2.1 Research and Development phase

The Research and Development phase was supported by two areas of work and was designed to feed into the development of the Talking Statues prior to the launch:

- **Review** – an examination of the research literature concerning how mobile and digital technologies, particularly NFC, have been used in interpretation and to facilitate engagement in cultural settings.

- **Testing** – evaluating how technology and content are used prior to the launch of *Talking Statues*.

Desk and contextual research explored how digital mobile technologies, such as NFC, have been used to interpret and to facilitate engagement in cultural settings. Interviews with technology providers Sam Billington, Global Interactive Design Manager, Antenna International and Rupert Englander, Founder and Managing Director from Wooshping gained a better understanding of the concept of NFC technology and the technological context within which *Talking Statues* took place (Table 1).

Table 1: **Research and Development methods**

Area	Research method	Description
Desk and contextual research	Desk research	Examination of the literature on how digital and mobile technologies, particularly NFC, have been used to interpret and facilitate engagement in cultural settings
	Interviews with technology providers	To better understand the concept of NFC technology and the context within which Talking Statues took place: • Sam Billington, Antenna International, 17 June 2014 • Rupert Englander, Whooshping, 26 September 2014

The research plan produced by RCMG involved testing the technology of *Talking Statues* before the launch to the public. The testing of the technology was planned for July 2014 but because of continuous changes to the project timescale, it was not possible to carry this out. This had implications for the user experience; all those who were observed or interviewed using Talking Statues listened to the "phone call" audio and saw this as the end of their experience at that time. The three options to extend their experience were not accessed.

2.2.2 Research and Testing phase

In the second phase, multiple methods were used to collect data from users of the statues following the project launch and to ensure the robustness of the research outcomes. There were three distinct areas to the research design, Field Research, Data and Web Analytics and Testing the Findings of the research (Table 2).

Table 2: Research and Testing methods

Area	Research method	Description
Field research	Observation	To understand how the public engaged with selected *Talking Statues* and find out how the public used the space in these locations

Area	Research method	Description
	Quick surveys	Conducted with users and non-users to find out about their experience of *Talking Statues*
	Short interviews	Conducted with selected users of *Talking Statues* to explore their experiences further
Data and Web Analytics	Data analytics	Information from users' mobile and smartphones provided by Antennae International
	Web analytics	Information from usage of the *Talking Statues* website provided by Sing London
Testing the findings	Interviews	Interviews with academics and project partners to test RCMG's interpretation of the research data

Field research: research with users of *Talking Statues* was carried out at nine selected statues in London over four days in August (28 & 29) and September (3 & 4). Research was carried out at a further three statues in Manchester, including Abraham Lincoln in Lincoln Square (Figure 4), in September (10).

Fig 4: Abraham Lincoln, *Talking Statues* website
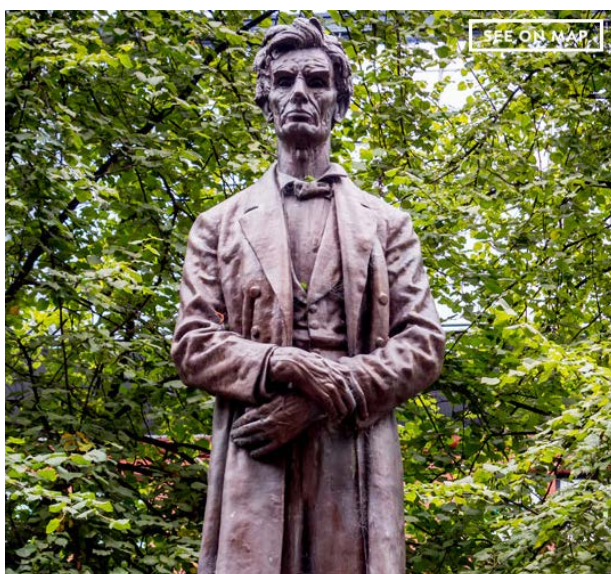
Statues were selected using a combination of site visits - which allowed observation of how the public used the space and the amount of footfall through the site - and Data Analytics from the first week following the launch of *Talking Statues* (Table 3).

Table 3: Statues selected for field research

City	Statue	Location
London	Goat	Spitalfields Market
	Hodge the Cat	Gough Square
	Isaac Newton	British Library
	John Wilkes	Fetter Lane
	Peter Pan	Hyde Park
	Sherlock Holmes	Baker Street

City	Statue	Location
	Unknown Soldier	Paddington Station
	Broad Family	Broadgate
	Eye-I	Broadgate
	L. S. Lowry	Sam's Chophouse
Manchester	Abraham Lincoln	Lincoln Square
	Queen Victoria	Piccadilly Gardens

Three methods were used to collect data from users (and non-users) of *Talking Statues.* **Observation** was used to collect contextual data on how the public accessed and engaged with the *Talking Statues* and the use of the location around the statues by the public.

A **quick survey** and **interview** was carried out with self-selecting users upon the completion of their 'user journey' (page 8). The **quick surveys** explored a number of themes including the initial encounter with a statue, response to the technology, concept and content, and collected basic demographic information from users and non-users. Researchers used the Quicktapsurvey app[4] on an iPad, a quick and convenient method. In total, 190 surveys were completed with users and 290 with non-users across the twelve *Talking Statues* (Table 4). The protocol for the survey is included in **Appendix 1**.

Short interviews were conducted with 27 users at eight statues (Isaac Newton, Peter Pan, Hodge the Cat, Goat, John Wilkes, Unknown Soldier and Sherlock Holmes in London and Queen Victoria in Manchester). Consisting of five questions, the interview captured users' views regarding the *Talking Statues* concept, content and technology in their own words and any new cultural connections stemming from their encounter with a Talking Statue. The protocol for the short interview is included in **Appendix 2**.

Table 4: Number of users and non-users participating in the research by statue

City	Statue	Users	Non - Users	Total
	Isaac Newton	75	96	171
	Goat	31	28	59
	Peter Pan	29	60	89
	Hodge the Cat	28	60	88
London	Sherlock Holmes	13	4	17
	John Wilkes	4	4	8
	Unknown Soldier	1	0	1
	Broad Family	0	7	7
	Eye-I	0	5	5
	Queen Victoria	5	22	27
Manchester	L. S. Lowry	2	0	2
	Abraham Lincoln	2	4	6
Total		**190**	**290**	**480**

RCMG researchers were assisted in the data collection by three paid interns who were recruited through an open advert, which generated substantial interest. They all had a Masters in Museum Studies - one was studying for a PhD in Museum Studies - and previous experience of audience

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[4] See http://www.quicktapsurvey.com/ [accessed 10/11/2014]

research. The short timescale in which to collect data from users of *Talking Statues* meant that researchers used purposeful sampling techniques, approaching as many members of the public as possible. Around a third of participants in the research heard about *Talking Statues* from the researchers, and nearly two-thirds encountered a specific statue because of a researcher's intervention.

Data Analytics, provided by Antennae International for 19 August to 9 October 2014 gave a breakdown of the number of 'scans' – each time the audio was activated by a user – of *Talking Statues*, the types of mobile handsets used to access the content, and the technology used to access the statue's content. **Web Analytics** from the use of the *Talking Statues* website would have further enriched this picture and contributed to the analysis and interpretation of the user experience, however, this data was not available at the time of writing.

Testing the findings: to ensure the validity, reliability and robustness of the research findings, these were tested with Kelly O'Reilly of Sing London, and Dr Giasemi Vavoula and Dr Ross Parry, of the School of Museum Studies, University of Leicester who specialise in digital technologies in the cultural sector.

2.3 An evolving research design

Taking place in a 'real world' setting, the research design for *Talking Statues* had to be flexible and adapt to rapidly, and continuously, changing circumstances. However significant delays to the launch date resulted in a very condensed period for data collection analysis, interpretation and reporting (see **Appendix 3**) and time being used unproductively on the development of three versions of the research design.

The implications for the research included streamlining the research sub-questions (Figure 5) and research methods (Table 5) whilst maintaining the robustness, validity and clarity of the research.

Fig 5: Initial sub-research questions
1. Experience, attitudes and value of *Talking Statues* to users
- How do users and non-traditional users of cultural organisations experience and engage with *Talking Statues*?
- Does Talking Statues make users think differently about culture and heritage in the city? E.g. a new, different or enhanced sense of place?

2. Use of technology
- Does this new form of technology (NFC) permit a seamless and immediate engagement with interpreted heritage?
- How might NFC empower the user?

3. Creating new cultural links
- Does engagement with *Talking Statues* create pathways and connections to new, and other, cultural encounters in the city?
- Do encounters with *Talking Statues* overcome barriers to culture, heritage and the arts?

Table 5: Initial research methodology for *Talking Statues*

Method	Focus	Description
Data Analytics	All statues	• Generated by each user interaction with a statue, data analytics provide contextual information about number of interactions, handset type and interaction type (NFC, QR, URL) • Data analytics following the launch in April would be used to select suitable statues for audience research
Web Analytics	All statues	Data from users visiting the *Talking Statues* website, including number of users, country of origin, mobile use, which websites users visited afterwards
Questionnaires	Selected statues	Short questionnaires of 5-10 minutes carried out with users of selected statues
Interviews	Selected statues	Short interviews carried out with users of selected statues to explore their experience in more depth
Group interviews	Selected statues	Accompanied visits to a statue and follow-up interviews carried out with two groups who experience barriers to culture, heritage and the arts to explore the value of *Talking Statues* to non-traditional audiences
Focus group	Invited experts	A focus group with invited digital heritage experts to test interpretation of the emerging findings

Due to the changes in timescale, the **Data Analytics** were not available to RCMG until October 2014. This affected the selection of the statues, which were to be chosen based on a comparison of areas of low and high footfall from the user statistics. Instead, decisions were made 'in the field' based on a survey of the statues in London and Manchester. Statues expecting high levels of footfall were prioritised in order to collect the required amount of data.

The **Web Analytics** would have provided evidence about who used the *Talking Statues* website and any further websites that they linked to following their experience, enriching our understanding of who used the statues over the project timescale and how *Talking Statues* may have encouraged further cultural encounters. Although it was planned that the Web Analytics would be made available in late September, the data was not delivered and could not be included in RCMG's analysis of *Talking Statues*.

The series of changes to the launch date meant that there was no initial testing of the technology and content, which had implications for the user experience. On occasion, researchers supported users' access to the statues, in some cases lending the public a smartphone so that they could access the "phone call," or explained how to use the NFC and QR technology.

2.4 RCMG research team

The research was designed, managed and led by RCMG. The original team of Jocelyn Dodd, Director of RCMG, and Ceri Jones, Research Associate was replaced initially by David Hopes (January - June 2014) and secondly by Maria-Anna Tseliou (July 2014 - October 2014) whilst the Research Associate was on maternity leave. Three interns were recruited to assist with the data collection in August and September; Natasha Logan, Sarah Plumb and Yrja Thorsdotti. All three had previous experience in

carrying out audience research in museums but were given specific training for *Talking Statues*, for example how to carry out research in a public place, and ensure that the University of Leicester's high standards of ethics and participant confidentiality were maintained. The interns assisted RCMG researchers in the field by carrying out questionnaires and short interviews with users and non-users, and took observation notes of how the public engaged with the selected states and used the locations more widely.

2.5 Research ethics

All research by RCMG is carried out within the University of Leicester's Research Code of Conduct and Data Protection Code of practice.[5] Informed consent was obtained from participants with the use of a written information sheet and consent form (**Appendix 4**), which explained to participants what the research was for and why they were involved. To protect their confidentiality, the names of participants have been changed in this report.

2.6 Conclusion

The research design evolved significantly over the timescale of *Talking Statues*. Adaptations were made to the research methods and questions to ensure that the clarity and robustness of the data would be maintained despite a significantly reduced timescale for the collection, analysis and reporting of user experiences.

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[5] See http://www2.le.ac.uk/institution/committees/research-ethics/code-of-practice [accessed 10/11/2014]

## 3. Encounters with, and experiences of, *Talking Statues*

Talking Statues aimed to encourage 'spontaneous cultural encounters' with statues in public spaces, particularly from new and non-traditional audiences of culture, museums and arts organisations, including younger, more technically orientated, people and disabled audiences.[6] How successful was it at achieving this aim?

3.1 An enthusiastic response to *Talking Statues*

The public responded enthusiastically to *Talking Statues*. Users were captivated by the novel and engaging concept that enabled statues to 'talk' to them via a smartphone. Giving a voice to statues across London and Manchester animated them, gave them new life, and raised the profile of statues in public spaces, enabling users to understand who or what the statue represented and why it was in its specific location. Most people walk past these statues and barely pay them any attention but *Talking Statues* made people think more about the heritage on their doorstep.

One measure of the project's popularity was the number of times each statue's 'voice' was activated, known as a scan. *Talking Statues* achieved nearly 14,000 scans (13,745) between the launch on 19 August and 9 October 2014, rising to almost 20,000 by mid-November (Figure 6). For a project using NFC this is an incredible result: as Rupert Englander of Whooshping notes, this number of scans is 'significantly higher' than other campaigns which have used NFC (email communication, 01/10/2014).

**Figure 6: Total interactions with Talking Statues, November 2014**
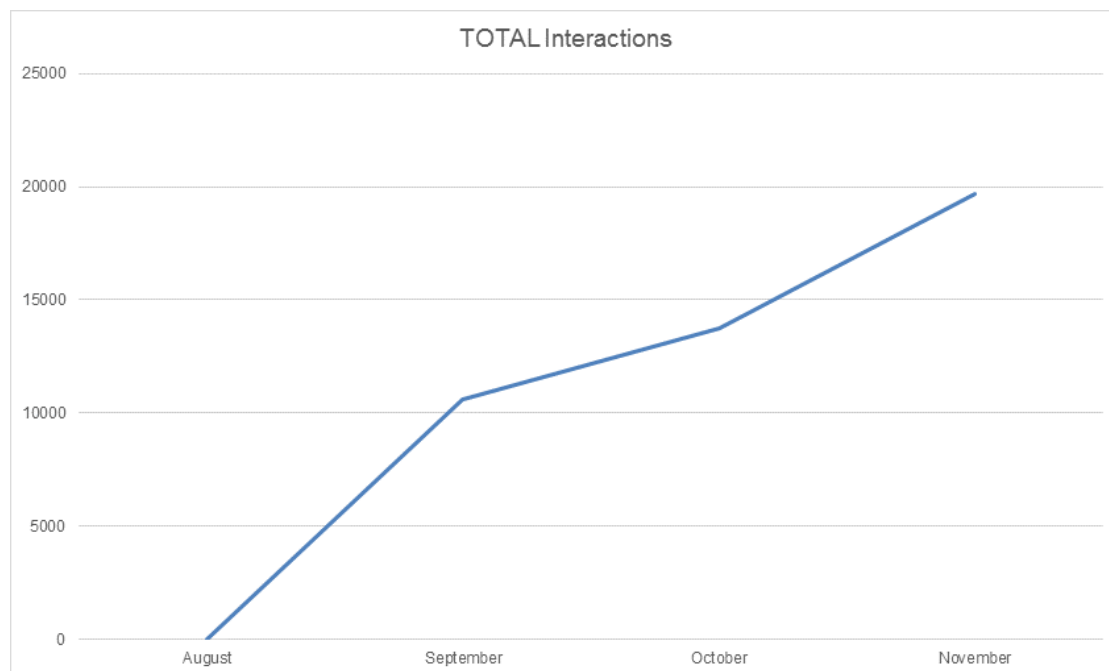
6 *Talking Statues* Digital R&D Fund for the Arts: Final Application 15/03/2013

A note of caution, it is not possible to estimate from this measure the number of *actual* users. One of the implications of not having the Web Analytics (page 16) is that we cannot estimate the number of actual users, as in order to do that we need more information about who used the statues, for example:

- The number of people listening to each audio recording;
- The number of attempts each user made to activate the audio content;[7]
- The exit point of users (at what point does the user stop using it);
- Length of engagement with audio recording;
- How much of the user journey was completed by each user for each statue.

What did users enjoy about *Talking Statues*? The novelty of the concept engaged users from the beginning. From the moment users received the "call" from the statue, many were observed smiling, including Raul, a Brazilian journalist who was interested to 'try to bring such a project in my country.' Some users were so engaged with the "phone call" that they were observed by researchers attempting to start a conversation with the statue. For 57 percent of users, *Talking Statues* told them something new (Figure 7).

Fig 7: Question 9, Which of the following describes your experience with *Talking Statues*?
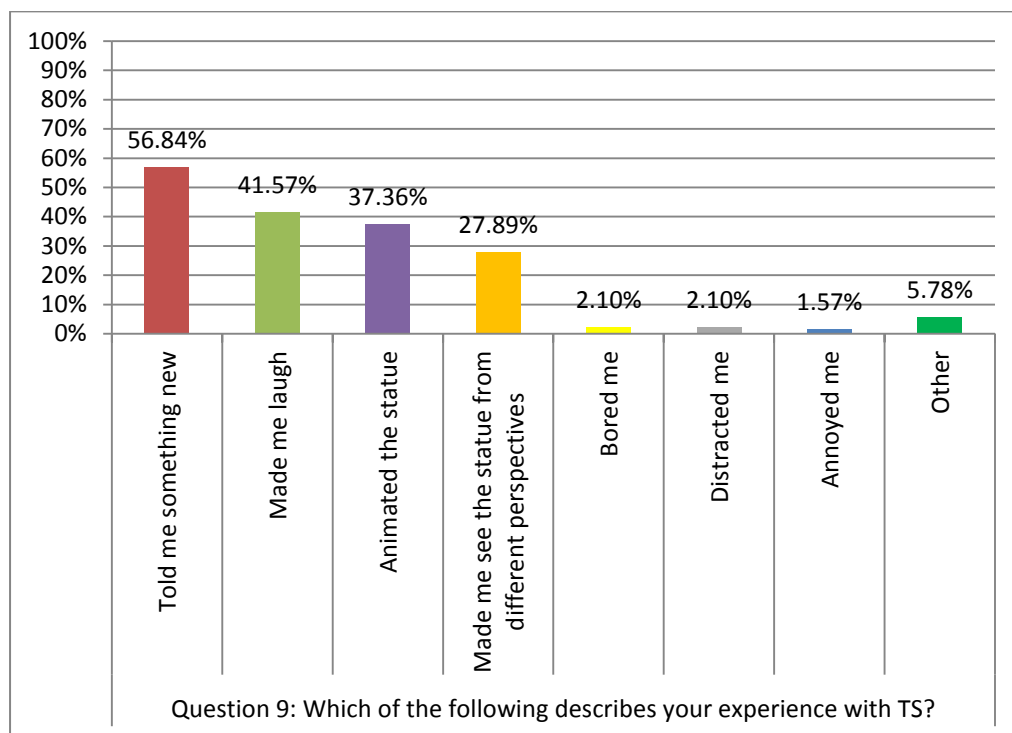
N=190

Anna (aged 56-65, English) thought the statue of John Wilkes gave her 'an interesting look at his life. You wouldn't get this kind of thing from a book.' Amanda (aged 36-45, English) had not known the

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[7] Observation by researchers showed that some users had to try the link to the audio file via NFC or QR code several times before it worked.

statue of Isaac Newton represented this famous scientist: 'Aesthetically I disliked it but now I feel more interested in it.' Maria (aged 46-55, Italian) learned more about a small detail on the statue of Hodge the Cat which had always puzzled her: 'I have seen the statue lots of times when I have visited Dr Johnson's House and often wondered about the shell fish. Now I have discovered [why]' (Figure 8).

Fig. 8: Hodge the Cat, *Talking Statues* website

Users gained new insights into the life or work of famous people of history, science or politics: 'It gave me different insights into Newton the man as well the scientist' (Carol, aged 56-65, British). The statue of Sherlock Holmes was interesting to Chloe (aged 16-25) who had not realised, 'how all the myths had grown up about Holmes. It was interesting.' For those who did know about the subject, *Talking Statues* was a useful learning experience for those who did not know: 'I knew almost everything about Queen Victoria but certainly for people who don't know a lot, it's really informative' (Susan, aged 56-65, English, Queen Victoria, Manchester – Figure 9).

Fig 9: Queen Victoria, Manchester, *Talking Statues* website

Just under half of users (42 percent) agreed that the audio content 'made me laugh', users such as Maria, who was very enthusiastic about encountering Hodge the Cat. Maria agreed that she 'really loved all of it, it made me laugh.'

For some users, the experience of *Talking Statues* helped to animate the statue (37 per cent) or enabled them to appreciate it from 'a different perspective' (30 percent). Jenny, a young English woman aged 16-25, enjoyed the variety of the characters involved in *Talking Statues*; 'I learnt something new, I had never heard of John Wilkes before.' Sam, a young woman encountering the Unknown Soldier was similarly impressed by the project: 'It is a great project, the variety of statues and the people chosen to record those voices is interesting.' She was keen to find out 'how it was decided which statues should be used and which actors should lend their voices to them.' James (aged 16-25) thought the project was a 'great idea – people tend to ignore statues but this draws them in and can inspire interest in history, literature and sculpture – among other things.'

The 'Wow Factor'
The wow factor experienced by some users was described by Amanda, a British woman aged 36-45. She described how, 'there was that little moment 'Oh, it's Isaac Newton calling'!' It made her think more about the statue as she had not realised it was Isaac Newton, describing it as a 'moving experience… it took me out of myself… it took me out of my daily life.'


3.2 Interest in the project generated by extensive media coverage

The aim of *Talking Statues* was to encourage 'spontaneous cultural encounters' between statues and the public. For just over a third of users (36 percent) their encounter with a Talking Statue was spontaneous; they were 'just passing by' or had a 'chance encounter' with a statue. But *Talking Statues* also received extensive local, national and international media coverage (including French Metro, Fox News, and CNN). A large proportion of users (41 percent) had their curiosity stimulated by this media coverage – they had seen the project on the television, heard about it on the radio or read about in the newspapers - and gone out to find one or more statues. Knowing about, and having an interest in the project, was a key factor in their decision to engage with a statue. This promotion of *Talking Statues* in the media following the launch was therefore critical to the public's engagement with the statues (Figure 10).

Carol: Inspired to visit London after seeing Talking Statues on TV
Carol, a British woman aged 56-65, was inspired to come to London for the day to explore the *Talking Statues*. She said that she 'loved the idea' – she had seen it on TV and 'wanted to try it out.' She made a special visit to London to see the statues, which included Isaac Newton at the British Library. Carol did not have a smartphone but she had come with friends who did; they wanted to 'see the unusual statues like Hodge the Cat, to find out… secrets, to get the whole experience.'

Fig 10: Question 4, How did you find out about *Talking Statues*?
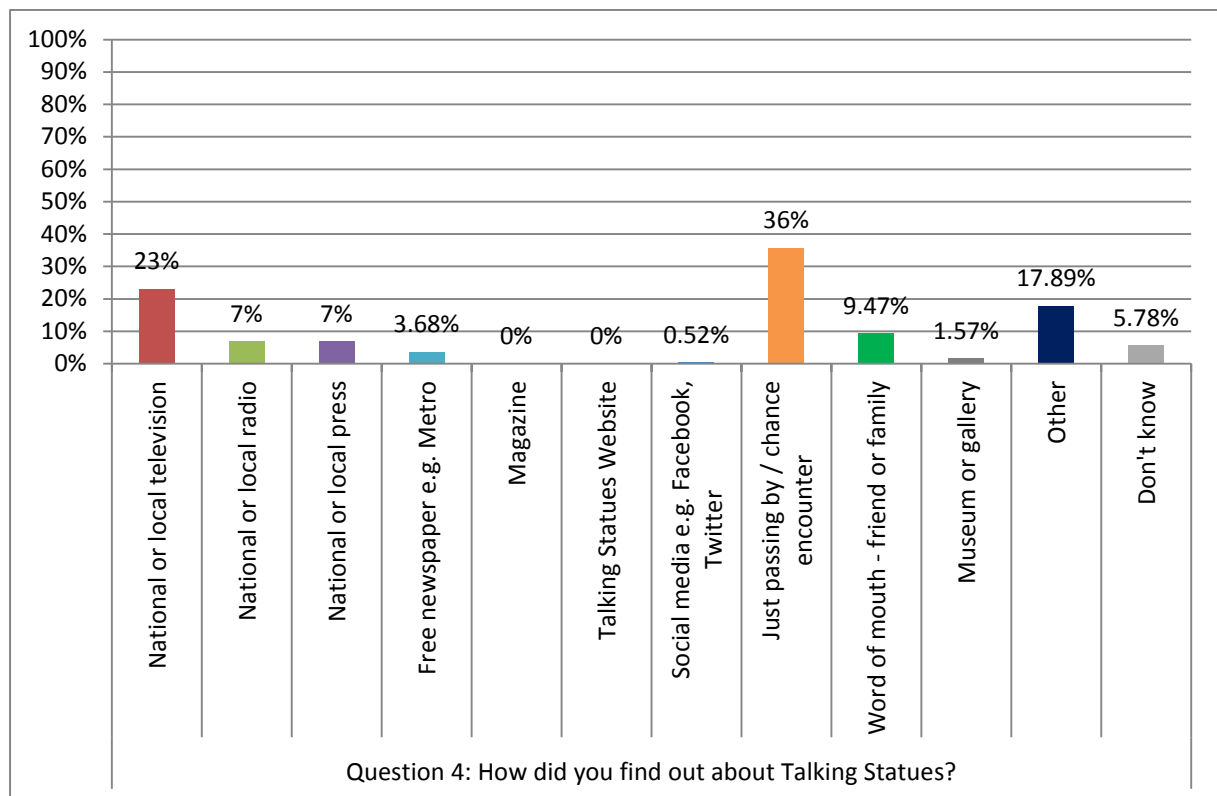
N= 190

A high number of 'scans' for the majority of the Talking Statues in the first few weeks following the launch of the project (and the subsequent fall in encounters after that date) supports the notion that the media coverage played a critical role in encouraging the public to seek out the statues. The highest levels of use were the first eight days after the launch date in August when 3,720 scans were documented, almost one third (27 percent) of total usage up until 9 October.

Eight statues recorded the highest number of scans on the launch date itself (19 August) including L. S. Lowry (Figure 11) and Queen Victoria in Piccadilly Gardens, Manchester (Figure 12).[8]

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[8] The others were Alan Turing (Manchester), John Barbirolli (Manchester), Queen Victoria (London), John Wilkes (London), Eye-I (London) and Hodge the Cat (London).

Fig 11: L. S. Lowry (Sam's Chop House, Manchester) usage
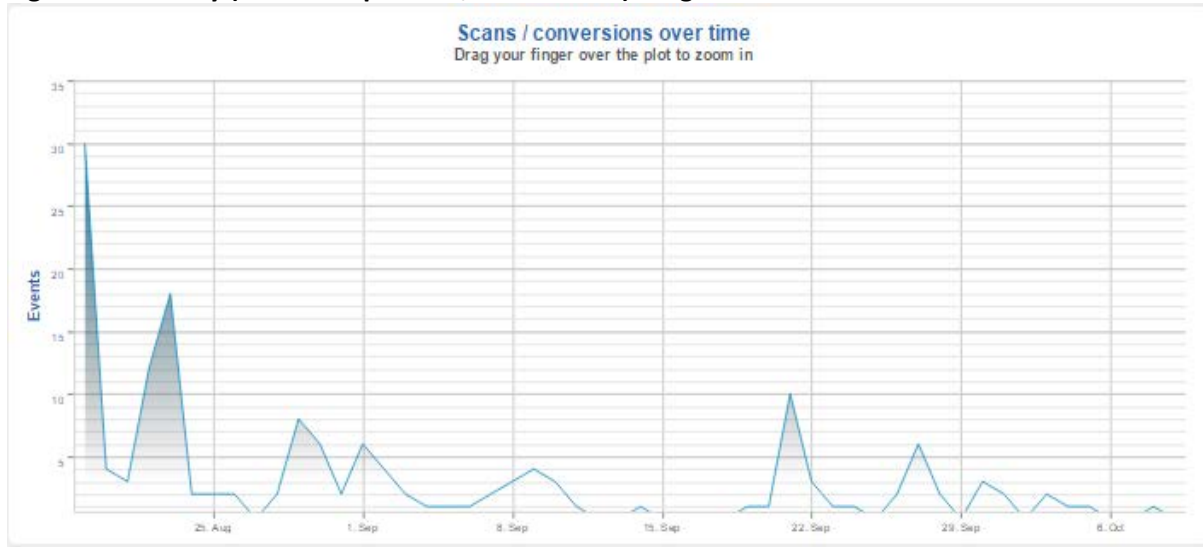
Fig 12: Queen Victoria (Piccadilly Gardens, Manchester) usage
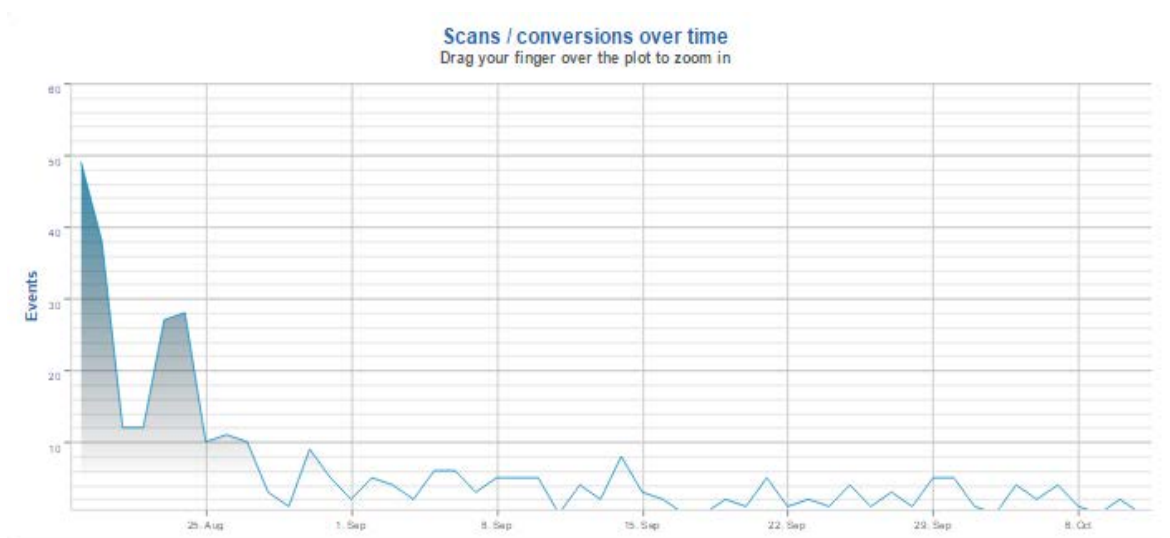
In contrast, the lack of engagement via social media (less than 1 per cent) is quite surprising for a project with a strong element of mobile technology. If public interest in the statues is to be sustained, new ways will need to be found in order to harness the public's interest and curiosity.

Why did users decide to visit a particular statue? The majority encountered the statue as they were 'passing by' (67 percent) and a further 20 per cent were interested in the project and looking for statues generally. Thirteen per cent made a conscious decision to visit a specific statue because of their interest in the character, theme, sculpture, actor or writer (Figure 13).

Fig 13: Question 3, Why did you visit this statue?

Fig 13: Question 3, Why did you visit this statue?
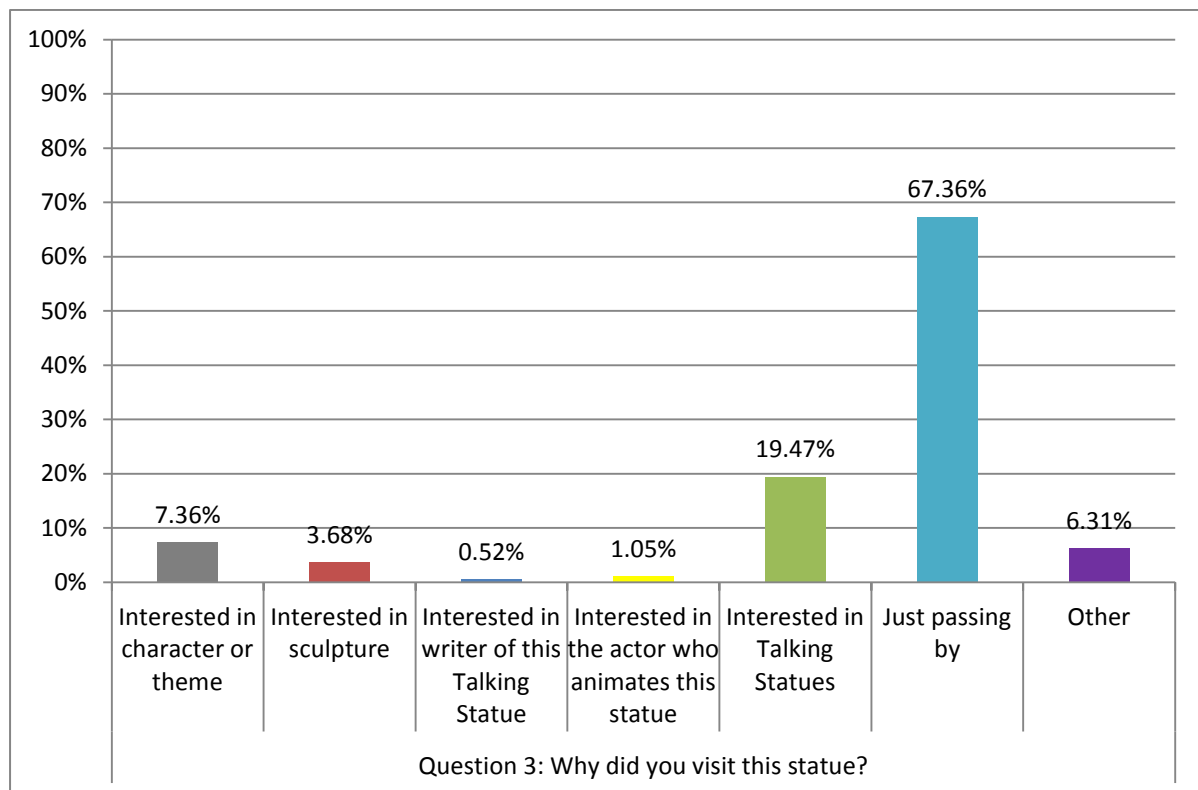
N=190

Whilst most encounters with a specific statue were 'spontaneous', observation across the eight statues selected for the research suggest that a number of interrelated factors to do with the environments around the statues played a role in the public's decision to engage with a statue. In particular, how people used the space – whether they were rushing through it to reach another destination or were taking a more leisurely pace– was critical. Locations such as Kensington Gardens in Hyde Park (Peter Pan) and the courtyard of the British Library (Isaac Newton) facilitated engagement with the statues. The calm and relaxed setting of Kensington Gardens, with seating close to the statue of Peter Pan, a space where people are walking through more slowly and enjoying the surroundings can be linked to the high number of scans for this statue (over 2000). Similarly, the relaxed setting in the British Library courtyard, with plenty of seating places available and a café shop close by, may have contributed to the high number of scans (900) for the statue of Isaac Newton. Conversely, the location of the Sherlock Holmes statue in a busy thoroughfare seemed to contribute to its popularity, although the surrounding noise and difficult location - traffic noise, a narrow pavement, a tube station exit and busy currency exchange store near to the statue – did not always make it easy for users to hear the audio recording. The environment of Paddington Station, on the other hand, was too busy for passengers to notice of the statue of the Unknown Soldier as they concentrated on catching their trains. The visibility of the Talking Statues plaque also played a role in initial encounters. One example is the statue of Rowland Hill in King Edward Street, London. The statue was located at the edge of the pavement, facing towards the road. The sign activating the audio was to the front of the statue, and its position may have prevented people from accessing it in large numbers.

Having the time to stop and engage with a statue was also important to users. Thirty-two per cent of non-users did not engage with a statue because they did not have the time (see 3.5). Statues that received more scans during the weekend included the Goat, Peter Pan and Him, Couple on a Seat (Figures 14, 15 and 16) suggesting that people may be more open to cultural experiences when they are relaxed and not in a hurry.

Fig 14: Goat (Spitalfields Market, London) usage 19 August- 9 October
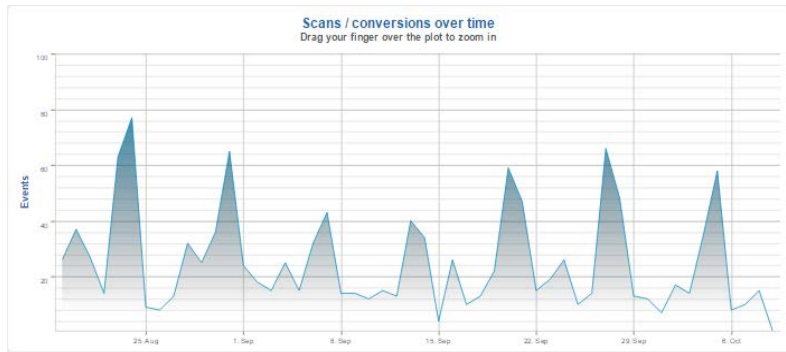
Fig 15: Peter Pan (Kensington Gardens, London) usage 19 August- 9 October
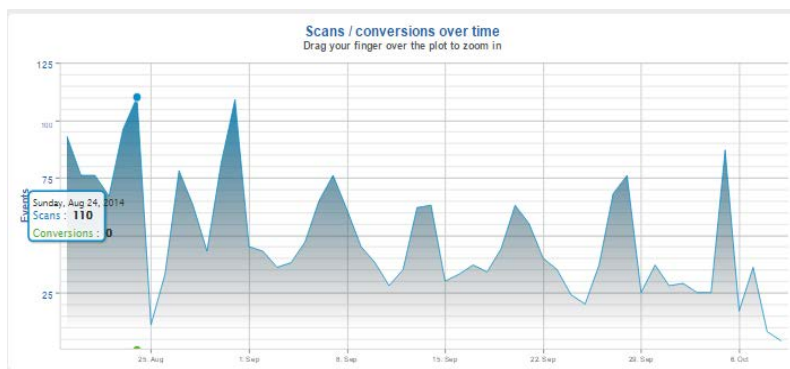
Fig 16: Him, Couple on a Seat (Canary Wharf, London) usage 19 August- 9 October

Whilst only 13 per cent of users were drawn to a specific statue because of its subject matter, the wider data suggests that some types of statues were more popular than others. Fictional characters such as Peter Pan in Kensington Gardens (2,535 scans, Figure 17) and Sherlock Holmes in Baker Street (2,036 scans) were the most popular statues, showing that these characters exert a popular fascination that makes people want to stop and find out more.

Fig 17: Peter Pan, *Talking Statues* website

Animal statues were also popular, in particular the Goat in Spitalfields Market (1,314 scans), Hodge the Cat (945 scans) and Dick Whittington's Cat (666 scans).

The Goat in Spitalfields Market (Figure 18)

The relevance of the Goat and its position in the market seemed to invite curiosity from the public, mainly because they wanted to know why the Goat statue was there. As two users, Kate and Emily explained, the statue seemed somewhat 'random'. Kate, aged 56-65 and disabled, enjoyed listening to the Goat audio because 'it told me something about the area I did not know.' Although she had taken part in several walking tours in the area, 'they never explain the goat'. Engaging with *Talking Statues* showed that 'someone really put some thought into this statue.' After her encounter with the Goat, Kate wanted to 'listen to more statues.'

Similarly, Emily, aged 16-25, thought the project was a 'great idea' which 'really explained what I had always taken to be just a really random statue.' Emily realised through the audio that she had been 'mis-seeing' the statue previously – what she thought was an 'abstract mountain side' was in fact the Goat 'standing on packing cases.' Because of her encounter, Kate thought she 'might notice more details in statues or in the local area.'

Fig 18: The Goat, *Talking Statues* website

Famous 'great men' such as Isaac Newton (900 scans) and Abraham Lincoln (515 scans) also attracted a substantial number of scans (Table 6).

Table 6: Interactions by statue, 19 August-9 October 2014

City	Statue	Number of scans 19 Aug – 9 October 2014
London	Peter Pan	2,535
London	Sherlock Holmes	2,036
London	Goat	1,314
London	Hodge the Cat	945
London	Isaac Newton	900
London	Dick Whittington's Cat	666
Manchester	Abraham Lincoln	515
London	Queen Victoria, Kensington Palace	453
London	Couple on seat (Her)	431
London	Rowland Hill	381
London	The Unknown Soldier	375
London	Broad Family	365
London	Couple on seat (Him)	343
London	John Wilkes	336
Manchester	Queen Victoria	322
London	Queen Victoria, City of London	315
London	Eye-I	300
London	Brunel	245
London	Hugh Myddlelton	238
Manchester	Reading Girl	205
London	Ariel and Prospero	183
Manchester	L. S. Lowry	157
Manchester	John Barbirolli	99
Manchester	Alan Turing	86
Total		**13,745**

The factors that influence an individual's initial encounter with a statue are complex and reveal the challenges of siting cultural opportunities within the 'everyday.' Even for those statues that are located within cultural venues, it is not always possible to see a connection between the levels of footfall and number of scans obtained by a statue. For example, during August and September, the British Library received 117,633 and 89,583 visitors respectively (Paul Werb, email communication, 21/10/2014). Isaac Newton's statue received 900 scans in August, September and October, around 1 per cent of monthly visitors to the Library.

3.3 Appealing and entertaining content

The audio content of the Talking Statues was greatly appreciated by users - an impressive 91 percent agreed that the content was interesting (Figure 19).

Fig 19: Question 8, 'Do you agree or disagree with the following statement: The content of the audio was interesting?'
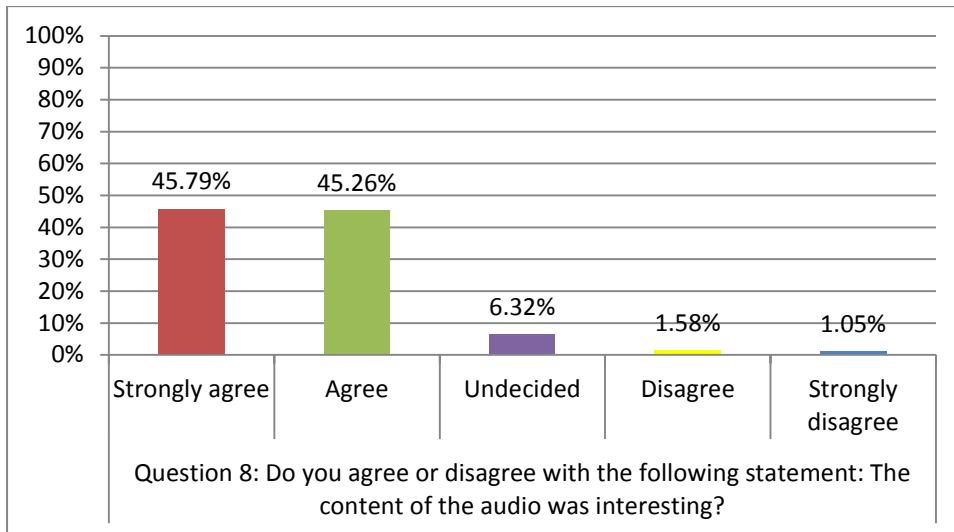
Julie (aged 56-65, British) praised the content for Isaac Newton, saying that it was a 'brilliant idea', presenting 'Newton in a nutshell.' She thought that it was good for users of all ages, 'it explains concisely what he does, even right for kids.' Rob (aged 36-45, British) enjoyed learning facts about Newton and gravity. Peter (aged 66-75, British) praised the simplicity of the content for Newton which talked clearly about his achievement and 'enhances knowledge.' Other statues provided a 'snapshot of historical information' (Hodge the Cat, Melanie aged 26-35, English) or gave context to the surrounding area: '[*The Goat*] gave me more association with the people in this area, their history, the symbolism of the area, its history and traditions' (Maninder, Indian, lives in London). Linda in Manchester (aged 56-65, English, Retired) considered that the statues were a good idea because 'It teaches people history. Not a lot of people know about Queen Victoria or Alan Turing' (Figure 20). Engaging with the statues was in her opinion, 'a way to teach them about such personalities.'

Fig 20: Alan Turing, *Talking Statues* website

For some users the nature of the content – a phone call direct from the statue -created a personal connection. People enjoyed the novelty of receiving a "phone call" directly from the statues. Raul, visiting London from Brazil, commented that he felt closer to the character of Isaac Newton, 'He is not a modest person but he can be a proud person.' Another visitor to Isaac Newton, Tom (aged 36-45, visiting from Europe), said it was nice to hear 'a statue actually talking to you' and compared it to thinking it was 'someone you already know.' Several users commented that the phone call enabled them to make a greater connection with the statue, making it more 'personable' (Catherine, aged 46-55, English).

A personal or a shared experience?

For many participants, the experience of *Talking Statues* was an intensely personal one; only 36 percent of users 'listened with others.' Most of the users described how the experience affected them personally, e.g. Maria explained after listening to Hodge the Cat, 'it gives me secrets, insights and information.' Daniel (aged 26-35) felt 'a personal and immediate connection with the statue.' However, for Carol, the experience was shared, as she explained: 'Interacting with other people in the concourse at the British Library feels like a shared experience, makes you feel like you are part of something bigger.'

The idea that a statue is expected to be inert and inanimate - and *Talking Statues* subverts this expectation - was appealing to Catherine who found it intriguing 'how someone gives voice to something or someone dead. How something dead is being animated.' For users, this very personal, even intimate, experience with the statue helped to breathe life into otherwise silent sculpture. It gave it a name, background, gave it meaning, as Carol explained after her encounter with the statue of Isaac Newton.

Hello, Isaac Newton calling….

Carol (aged 56-65, British) had a very meaningful encounter with the statue of Isaac Newton (Figure 21), as she explained: 'I was intrigued to hear new things about Newton from Newton – I liked it being him as a person. *Talking Statues* brings the statue to life, it makes it not just a block of carved stone.' As she went on to explain, it made Newton 'more than a figure in a text book, he was much more real, more interesting.' It promoted a deeper level of engagement with the man Newton for Carol because the phone call came from Newton himself: 'Talking as Newton feels very personal, about his background and context not just his ideas. His feelings, his life, his humanity.'

Sam (aged 16-25), encountering the Unknown Soldier, said in a similar vein that giving the statue a voice, 'made the statue much more real. Gave him a life and a family history that can move people. You stop looking at a dusty old statue.'

**Fig 21: Isaac Newton, *Talking Statues* website**

The scripts and actor's performances were an important part of the statues' appeal. Amanda (36-45 years, British, Isaac Newton) praised the high quality and profile of the writers and actors involved in *Talking Statues*: 'There are decent writers, good performers, with a certain level of excellence in their field.' Emily (aged 16-25) thought that using comedian Hugh Dennis to 'give a voice' to the Goat was a critical part of its appeal to the public; 'If people knew Hugh Dennis was the voice [of the Goat], that would encourage them to listen. I love him.' After experiencing Isaac Newton and Sherlock Holmes, Chloe (aged 16-25) preferred what she considered a more natural delivery from the actor animating Holmes; '[Holmes] felt like the statue was really talking to you. The Newton one was like an actor reading a script….really slowly.' Other users had more mixed reactions to the content: the script for the statue of John Wilkes was according to Jenny, 'a little crude' and Anna (aged 56-54, English) felt that there should be a warning that the recording was not suitable for children. Some users at the Isaac Newton statue would have liked more information about the sculpture itself including Clare (aged 56-65, lives in London) who thought that the content should refer to William Blake: 'it doesn't talk about the state from an aesthetic view.' Despite being the most popular statue, Peter Pan attracted some negative comments. James (aged 16-25, English) thought the voice of the actor was unsuitable for the character and he was unsure at who the recording was aimed at. In his opinion, the language was 'too complex for most children who would love a phone call from Peter but not right for many adults either.' Veronica (aged 56-65, English) criticised the script and the voice of the actor, which she considered was 'at odds with the statue.' It damaged her engagement with the statue, she wanted 'something on Peter Pan that was magical.'

3.4 Attracting confident cultural consumers

Talking Statues attracted mainly confident cultural consumers, who visited museums and cultural organisations at least 3 or 4 times a year or more (85 percent). A typical user was visiting their first Talking Statue (92 percent), was aged between 26-65 years old (74 percent), female (63 percent), British (62 percent), lives in the UK (91 percent), in employment (64 percent) and non-disabled (98 percent).

The largest proportion of users (39 percent) was captured at the statue of Isaac Newton, British Library (Figure 22). Most users (92 percent) were visiting their first statue.

Fig 22: Users, breakdown by statue
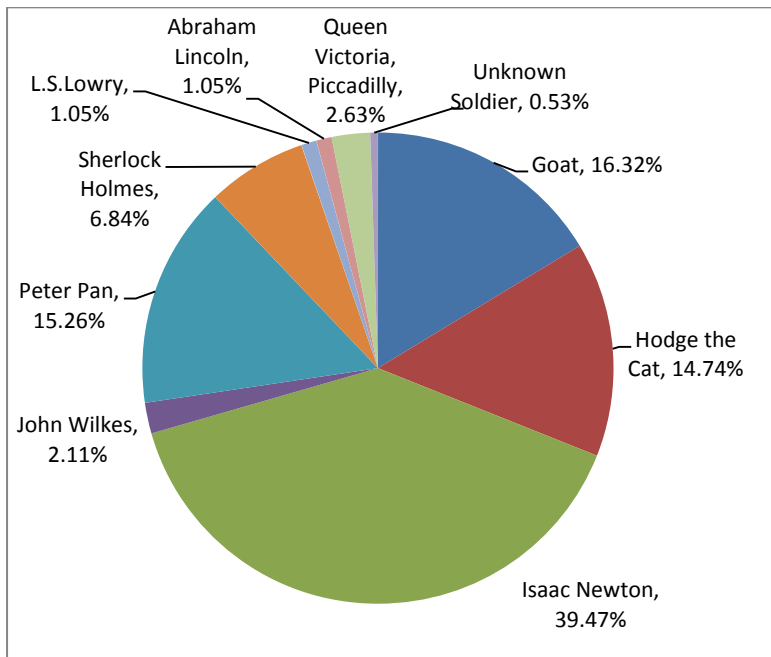
N=190

The majority of users were confident cultural consumers, used to visiting cultural organisations such as museums, galleries, archives and libraries. Eighty-five (85 percent) said that they visited cultural organisations at least 3 or 4 times a year or more (Figure 23).

Fig 23: Question 14: How often do you visit cultural organisations, like museums, galleries, archives, libraries?
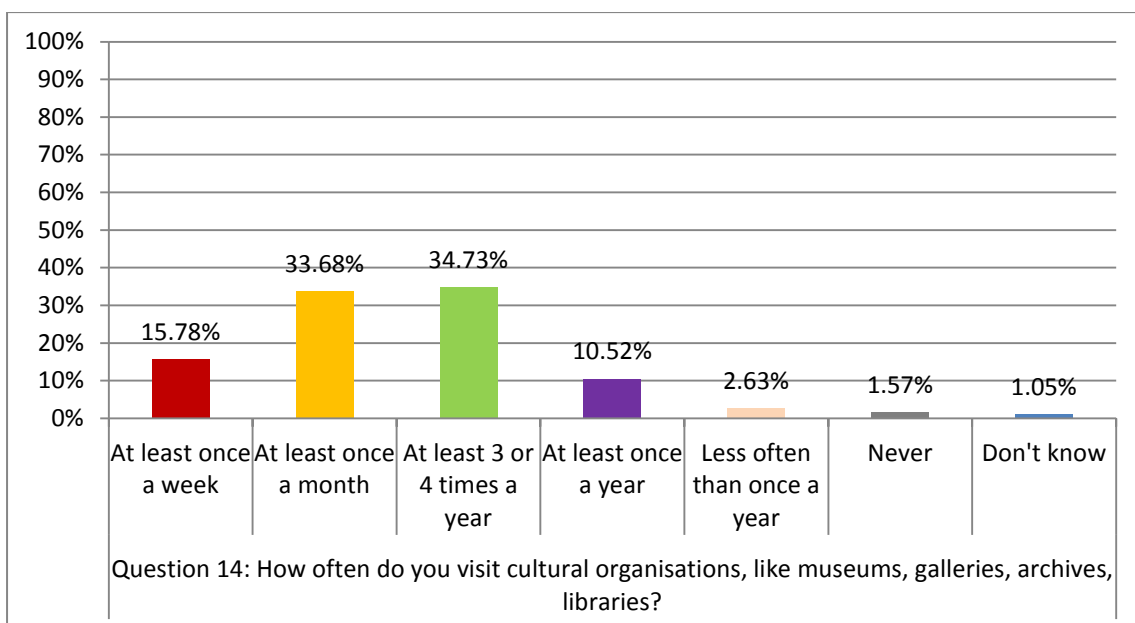
N=190

Encouragingly, *Talking Statues* attracted users of a wide range of ages suggesting that interest and confidence in using cutting-edge mobile technology is not related to age. The only age group not to engage with a Talking Statue were the over 75s. Figure 24 shows the breakdown of users by age; the largest proportion of users was 26-35 years (25 percent), followed by 55-65 (20 percent).

Fig 24: Users, breakdown by age
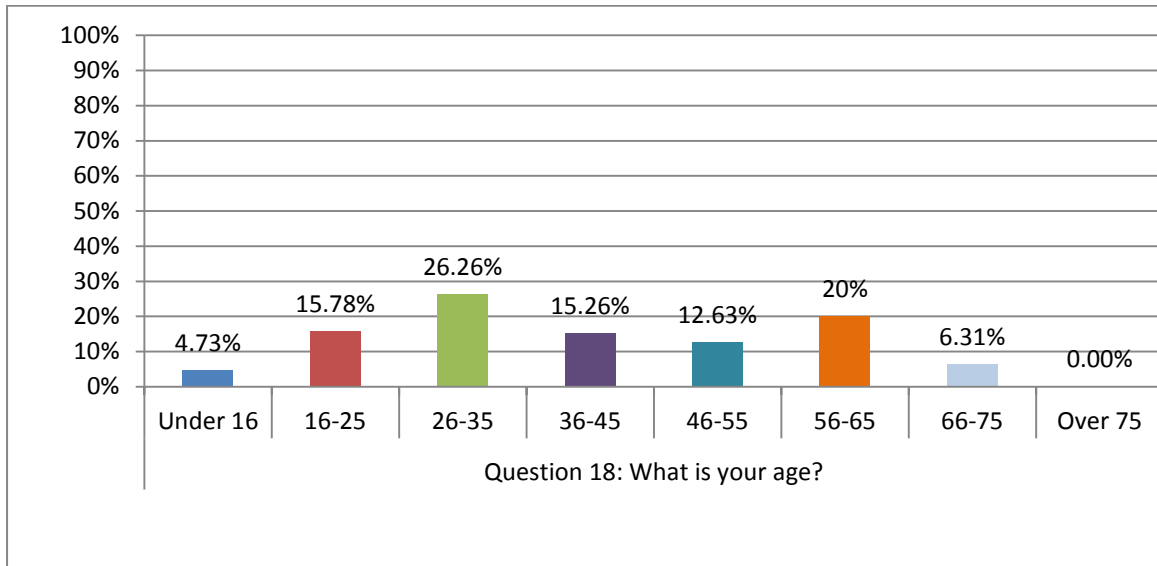
N=190

Interestingly, the project did not attract large numbers of younger, more technically orientated, people as may have been expected. Around 20 percent of users were aged from under 16 to 25 years, which is the same proportion as the 56-65 age group. This challenges the assumption that technology projects are only relevant, and of interest, to young people. Users also tended to be female (Figure 25).

Fig 25: Users, breakdown by gender
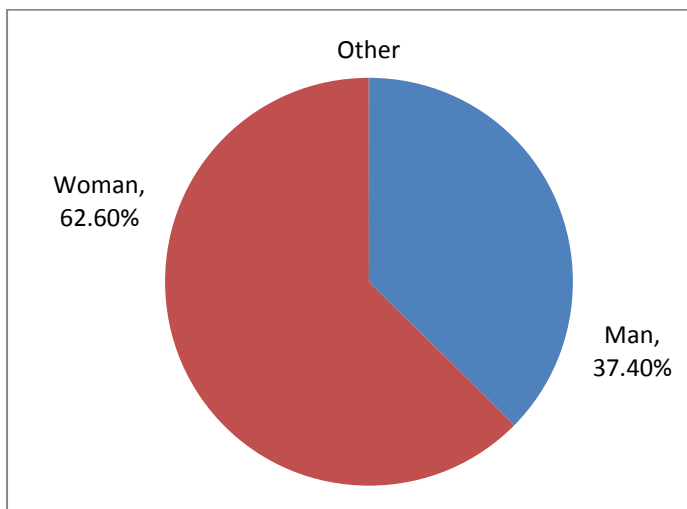
N=190

Most users were from a British background (62 percent) followed by 'any other White background' (23 percent). *Talking Statues* also attracted people from Black and minority ethnic populations, the diverse groups reflecting the cosmopolitan nature of London and Manchester (Figure 26).

Fig 26: Users, breakdown by ethnicity and nationality
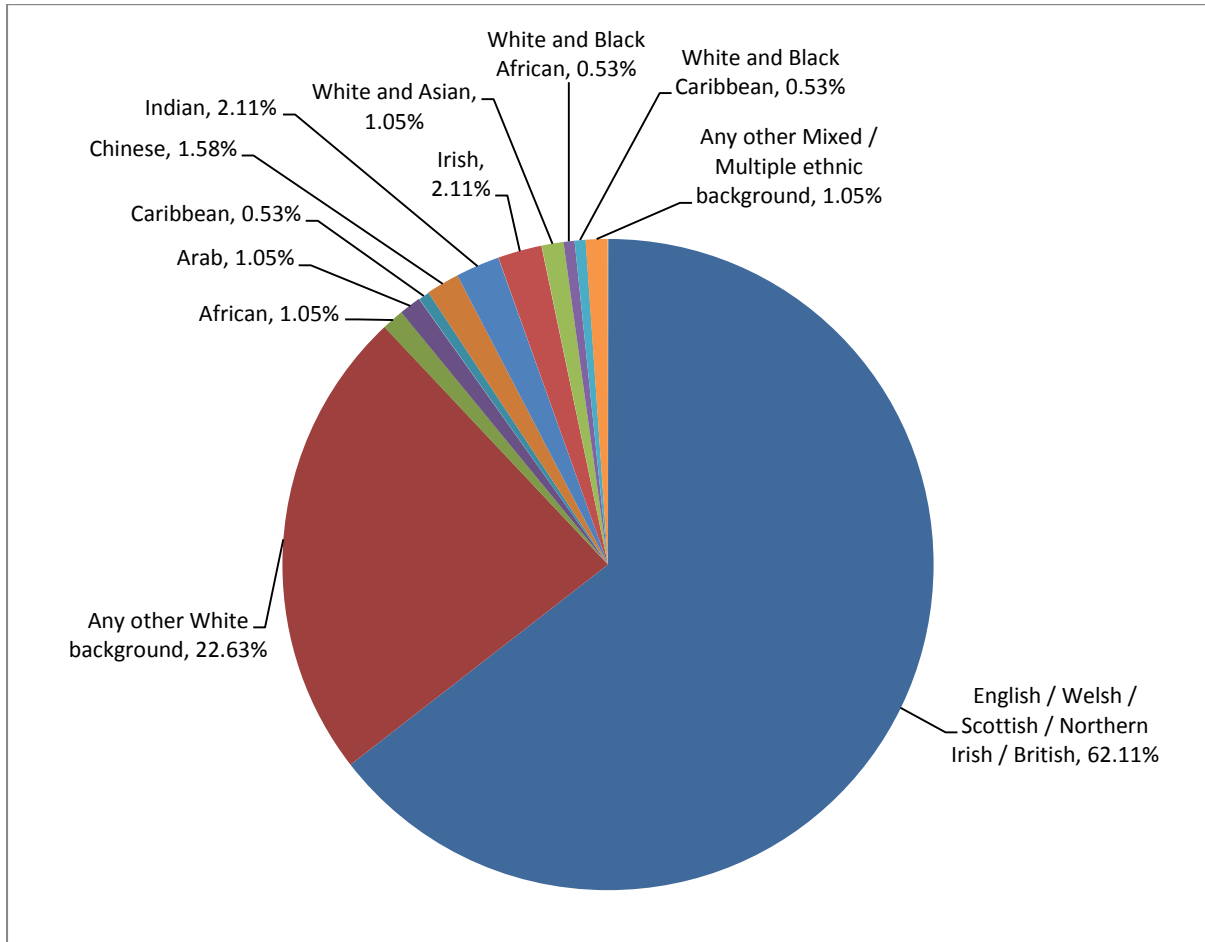
N=190

Most users were UK residents (83 percent). Seventeen percent were visiting from outside of the UK (Figure 27).

Fig 27: Users, breakdown by place of residence
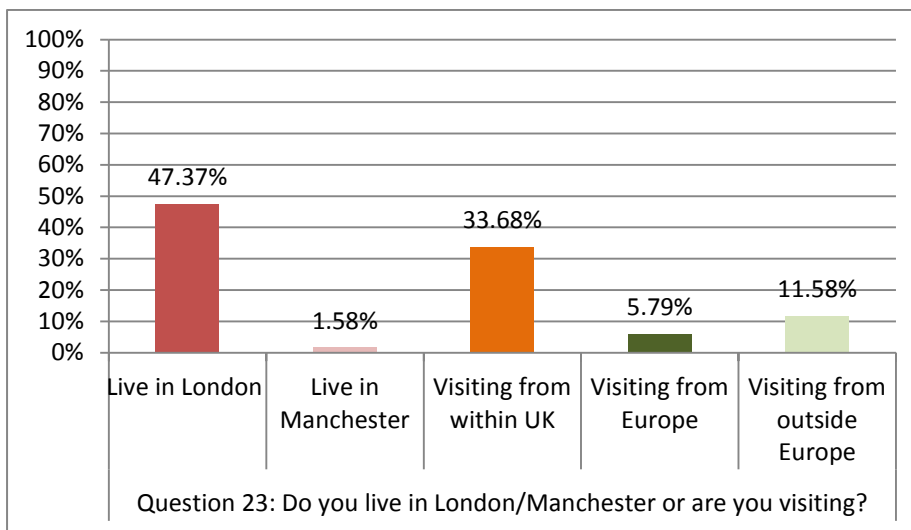
N=190

Most users were in full or part time employment or self-employed (64 percent). A small percentage of users were homemakers (3 percent), unable to work (1 percent) or carers (1 percent).

Fig 28: Users, breakdown by employment status
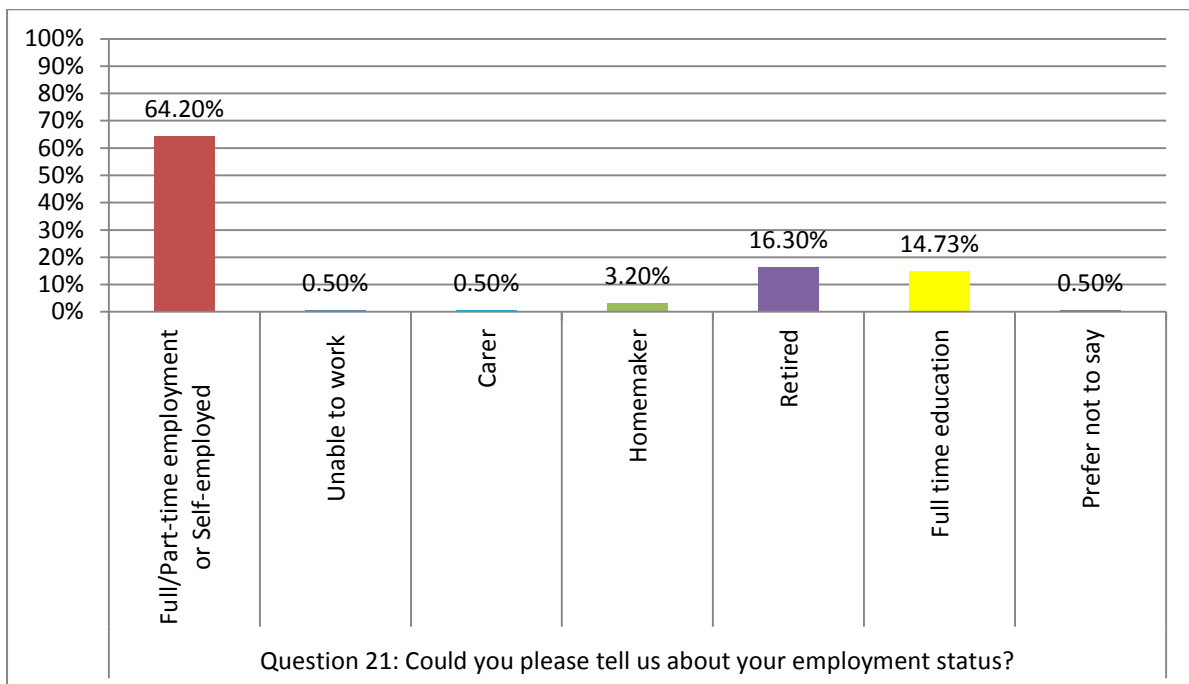
N=190

A very small number of users reported that they were disabled – less than 2 percent (Figure 29). There are over 11 million people living in the UK who are disabled, with a limiting long term illness or impairment; 16 percent of working age adults and 45 percent of adults over State Pension Age are disabled (Department for Work and Pensions 2014). In comparison with these figures, this seems a disproportionately small number.

Fig 29: Users, breakdown by disability

Don't know, 0.50%
Yes, 1.60%
No, 97.90%
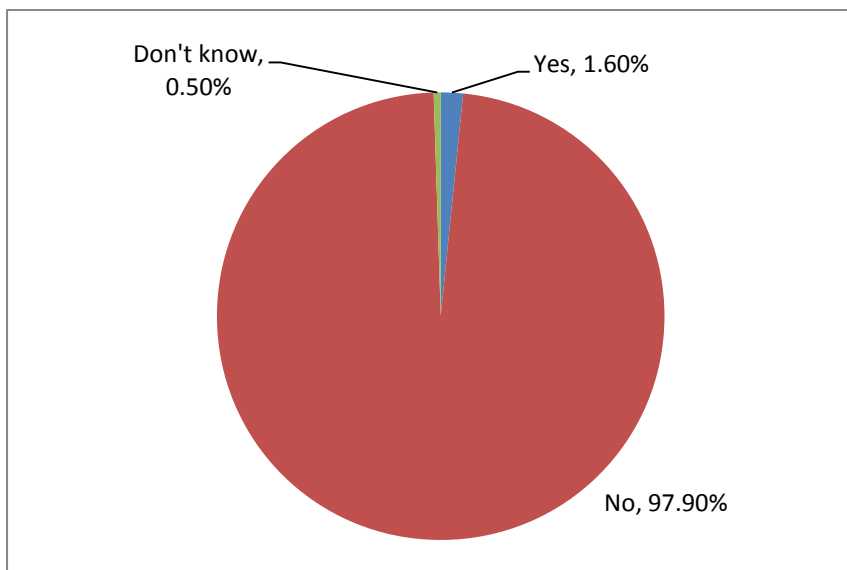
N=190

Non-users of *Talking Statues* tended to be aged 16-35 years (56 percent), male (51 percent) and British or other White background (81 percent). When asked why they did not use *Talking Statues*, many non-users reported that they were 'not interested in that kind of thing' (38 percent) or were 'too busy' to take part (32 percent) – Figure 30.

Fig 30: Question 2 'Why didn't you use *Talking Statues*?

	Hadn't heard of it	Not interested in that kind of thing	Don't have a smartphone	Don't know how NFC works	Don't have a QR reader	Too busy	Other
Question 2: Why didn't you use Talking Statues?	0.34%	37.58%	12.41%	0.68%	2.75%	32.41%	16.20%
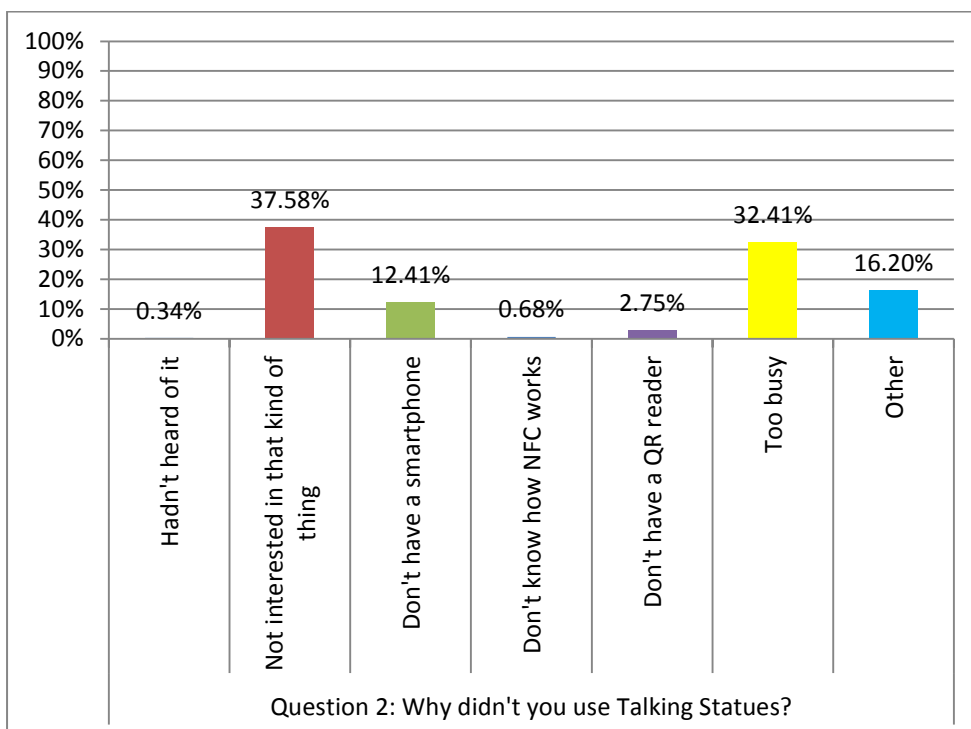
N=290

Combined with the data on disabled people, the non-user data shows that *Talking Statues* did not reach the new and non-traditional audiences for cultural organisations it aimed for. Could more have been done to encourage these audiences to engage with *Talking Statues*?

3.5 Raising the profile of statues in public spaces

An exciting outcome of *Talking Statues* was raising the profile of statues in public spaces. According to participants, statues are mostly ignored in everyday life despite having a prominent position in our cities. *Talking Statues* was essential to drawing attention to their existence:

> 'I see statues everywhere and I don't really think about it' (Anna, aged 56-54, English, John Wilkes)
>
> 'I've seen it many times. I didn't think much about it until now' (Julie, aged 56-65, British, Isaac Newton)
>
> 'The statues are up for a reason but the reason only recognisable by people who put it up… [*Talking Statues*] engages people and draws eyes to face of sculpture which is often too high to be studied' (Sean, aged 26-35, Irish, Isaac Newton)
>
> 'I would have walked past it without glancing up. I would have ignored it so it helped get my attention' (Jenny, aged 16-25, English, John Wilkes)

Users commented how the recording helped them to look at the statue more carefully, to notice how it had been constructed or understand tiny details. Listening to the audio recording actually focused users' attention on the statue; 72 percent said that they were looking at the statue whilst listening to the audio. Chloe (aged 16-25, English) described how she 'spent more time studying' the statue of Sherlock Holmes than she normally would. The area around the statue is 'so busy that I would normally steam right past it.' However, the recording made her 'stop and pay attention.' Several visitors to the Isaac Newton statue noted how the recording made them take notice of the statue's construction and put it into context. For Sean it was no longer a 'piece of abstract sculpture' but he understood it was connected to Isaac Newton. Rob (aged 36-45, British) described how engaging with the statue made him look more carefully at its construction:

> 'Made me look at the statue to see how geometry was used to construct the statue. … *Talking Statues* made me look carefully, to look at the bold scale, the impressive size and the technology.'

Rob was fascinated by the use of scientific principles used in the statue's construction, 'It is all about measurement and mirrors, I love that and the scientific approach, even to the hinges.' Looking more closely gave users a new perspective on, and understanding of statues. Sam, visiting the Unknown Soldier (Figure 31), commented that the recording 'made me look much more closely at it' and altered her perception:

'It made me realise the soldier was older than I thought. At first I thought the voice was too old for the young looking soldier but then I realised that I had never really looked at his face, so high up, and saw that the man was older than I had ever really thought.'

Fig 31: Unknown Soldier, *Talking Statues* website

By giving the Unknown Soldier a background and history, Sam commented how 'You stop looking at a dusty old statue or the dead in terms of statistics and hear an awful waste of life that was ended brutally and far too early.' Not only did the statue therefore come to life but it also linked into wider thoughts and feelings about war – very timely considering the centenary of World War I in 2014 (as Sam herself noted).

Participants talked about how *Talking Statues* gave them a better understanding of the place or location in which the statue stood, helping them to understand its context. This was particularly the case for the Goat in Spitalfields Market. Providing an overview of how the space was used in the past and explaining the symbolism of the goat, the audio content helped Maninder (Indian, living in London) to 'understand why it was a goat. It gave a context to this. I would not have had any idea otherwise.' Kate (aged 56-65) appreciated how the recording explained 'why it was here in an amusing way… I feel someone really put some thought into this statue now. Before I just thought they had bought a random statue. I did not realise it had been made especially for this space.' Other statues which were placed into context for users included Isaac Newton, John Wilkes (Figure 32) and Hodge the Cat. For Carol, engaging with the statue of Isaac Newton gave her a new appreciation for its surroundings: 'Also gives a new view of the area – the fantastic skyline of St Pancras – make you look at the environment for longer, dwelling in the area, slowing down, looking carefully.'

Fig 32: John Wilkes, *Talking Statues* website

3.6 Conclusion

Talking Statues was a popular project, focused around a novel and engaging concept. Users enjoying taking a phone call from a statue, which animated it and brought it to life. Talking privately with the user created a personal connection and helped to focus attention on the statue. Furnishing a statue with a life, history, context and story made people more interested as shown by the number of users who said they were prompted to look more closely at the statue, to appreciate its construction, even look at it properly for the first time.

Users of the statues tended to be confident cultural consumers of a range of ages, who had become interested in the statues by the extensive media coverage. Over a third of encounters happened spontaneously and having time as well as interest was an important factor in making the decision to engage with a statue. A range of factors, including the ambience of the environment, use of the space and accessibility of the statue, played a part in encouraging encounters with specific statues. Whilst the project did not attract the non-traditional audiences it hoped for, those who did engage with the statues were overwhelmingly positive about their experience. Users enjoyed learning about the statues and appreciated the humour in the scripts.

4. To what extent does *Talking Statues* and NFC enhance cultural encounters?

Understanding the role of Near Field Communication (NFC) in the user experience was important for *Talking Statues*. As a cutting-edge technology, how it compares to other forms of technology (QR, URL) and how it facilitated access to the content of Talking Statues was critical to understanding its role in the user experience. What was successful about the technology and what challenges did users encounter? Did engagement with a statue motivate users to extend their experience? Were they encouraged to visit a cultural institution or find out more about the statues they encountered?

4.1 NFC and the cultural sector

NFC is familiar as a means of making contactless payments (e.g. Oyster Travelcard), enabling peer-to-peer sharing, or launching content such as triggering a barrier at a festival than being used to encourage cultural encounters with statues (Sam Billington interview, 17/06/2014). It is now, however, beginning to take its place alongside other forms of mobile digital technology, including QR codes, as a means of interpretation or enabling visitors to cultural organisations to engage with something – be it sculpture, statues, objects - within a setting. How is the cultural sector embracing technology such as NFC and how has mobile technology been used to enhance audience reach and facilitate engagement?

Digital and mobile technology has been increasingly used in the cultural sector to enhance visitor experiences, both in the UK and internationally, by improving user engagement, enabling users to participate in the 'life' of the museum, and acting as an effective interpretive tool (Museums & Mobile Survey, 2013; Mobile Survey, 2013; Arts Organizations and Digital Technologies, 2013). The Big Difference Company, a Leicester-based comedy and performance group, are typical of this growing approach; '[*Digital technology is*] simply "integrated wholesale" into how we plan for, deliver, promote and evaluate all of our activity' (NESTA 2013:33). Recent surveys undertaken (mainly) in the US, UK, and Canada provide compelling evidence that cultural organisations are increasingly adopting digital and mobile technology into their day to day practices (Pocket-Proof 2013; Museums Association 2013; Pew Research Center 2013). In the UK, for example, the Museums Association (2013) found that 50 percent of 175 museums and related sites offered a mobile experience and a further 19 percent were developing a mobile project in the next twelve months. Examples of digital projects include:

- Providing visitors with more detailed images and information on exhibitions, such as the *Love Art* app developed by Antenna Audio and Apple Inc for the National Gallery which featured 250 paintings from the collections and 200 minutes of video and audio content (National Gallery 2009);
- Enabling users to interact with the museum outside its walls, including the Museum of London who worked with Nokia to enable visitors with NFC enabled devices to book exhibition tickets, access vouchers for the shop and café, check in on Facebook and more (Museum of London, undated);

- Allowing visitors to take an active role within the museum such as the QRator project developed by UCL, which enabled visitors to type in their thoughts and interpretations of museum objects. Their interpretation became part of the object's history and ultimately the display itself via an interactive label system (QRator undated).

The potential of NFC for the cultural sector is still being explored; it is a rapidly growing technology, delivering geo-specific content to 3G and 4G mobile devices. It is predicted that by 2016, NFC technology will be supported by 46 percent of mobile phones (Interactive Europe: Engaging Audiences, 2013). It offers a 'fast and seamless way' to deliver content to a user's smartphone in three ways: through 'pushing' information to the phone; sharing information through peer-to-peer networks; and enabling users to 'pull' information to their phone (Sam Billington interview, 17/06/2014). This third capacity to 'pull' information to a smartphone is the most exciting for the cultural sector as it gives users the choice to engage with content. The potential for NFC lies in its ease of use; unlike QR codes, which require users to download a reader to their smartphone and then scan a 2D barcode, NFC enables content to be streamed directly from the web via a wireless network. NFC therefore provides 'spontaneous and natural interaction' according to Rupert Englander of Wooshping (Englander 2013). Examples of how NFC has been used in the cultural sector include providing access to additional content alongside an existing cultural experience, such as New York's Webster Hall, which in collaboration with Wooshping and Nokia Music, offered the option to access music content by tapping an NFC tag (Englander 2013). In Paris, the Smart Muse pilot tour at Centre Pompidou's Teen Gallery enabled younger audiences to access information on exhibits, watch films or listen to audios and communicate their experiences to others during their gallery visit (Clark 2010). One of the challenges for NFC is how long it takes the public to adopt new technology; as Sam Billington of Antenna International explained, it can take time to trust new technology and the public need to be aware of NFC 'and… what to do… People are more conditioned to see QR codes and know exactly what to do with that' (interview 17/06/2014).

Talking Statues can also be placed amongst projects which have used mobile technology to interpret statues or sculptures. In the UK, the *Ghosts in the Garden* project in Bath, UK used GPS location-based media to create an amusing and playful narrative across Sydney Gardens, a vanished Georgian pleasure gardens (Poole, S., Holburne Museum and Splash and Ripple 2012). The gardens were populated with Georgian 'ghosts' telling their story to visitors through first-person interpretation, designed to immerse visitors in the garden's past. The technology was designed to look aged to fit the historical theme. A second example from the UK at Rufford Abbey sculpture garden in Nottinghamshire used the HCI (human-computer interaction) concept of *trajectories* to develop a deeply personal and engaging experience for visitors (Fosh *et al*, 2013). The notion of trajectories considers the visitor experience in terms of a series of stages e.g. approach, engage, experience, disengage and reflect, which helped to plan the user experience both globally through the garden and at individual sculptures. Music was used to set the mood at each sculpture, where visitors were asked to perform particular actions in response to audio instructions, a carefully choreographed experience which encouraged openness, involvement and multiple interpretations. A similarly named project, *Talking Statues*, in Copenhagen, Denmark, used QR codes to bring ten statues to life around the city including H. C. Anderson, Søren Kierkegaard and King Frederik V (TrueStories.dk 2013). Each statue was provided with an animation that focused on telling the story of the person represented by the statue, its relationship with place and humour. The focus for this project was

'revitalizing history' and all the statues represent figures in Danish history. By downloading the app, users could access a list and map of the statues, a page for each statue including the animation, and information about the developers and partners of the project.

Talking Statues can be therefore be situated both *among* and *outside* cultural initiatives seeking to facilitate visitor engagement through digital and mobile technology. The novelty of its model lies in embedding the use of NFC in everyday non-technological things, to animate statues located in public spaces and allowing for spontaneous access to heritage that exists in the 'everyday'. Rather than using apps through which to facilitate the engagement, NFC allows for direct access. The *Talking Statues* model therefore contributes to discussions of what approaches could be adopted by non-commercial institutions, such as the cultural or heritage sector, to enhance visitor engagement.

4.2 NFC is still a very new technology

As a new and cutting-edge mobile technology, NFC was not immediately familiar to the public, which presented some challenges to its use. As NFC becomes more familiar, more widespread and accessible from all makes of smartphone, this is likely to be less of a challenge.

From the three options provided to access the audio content of the statues (NFC, QR, URL), NFC tended to be used the least when looking across all the statues (Figure 33). Six percent of users accessed a statue's audio content via NFC compared to 56 percent for QR and 39 percent via URL.

Fig 33: Data Analytics, breakdown of the use of NFC, QR, URL

NFC, 5.83%

URL, 38.63%

QR, 55.54%
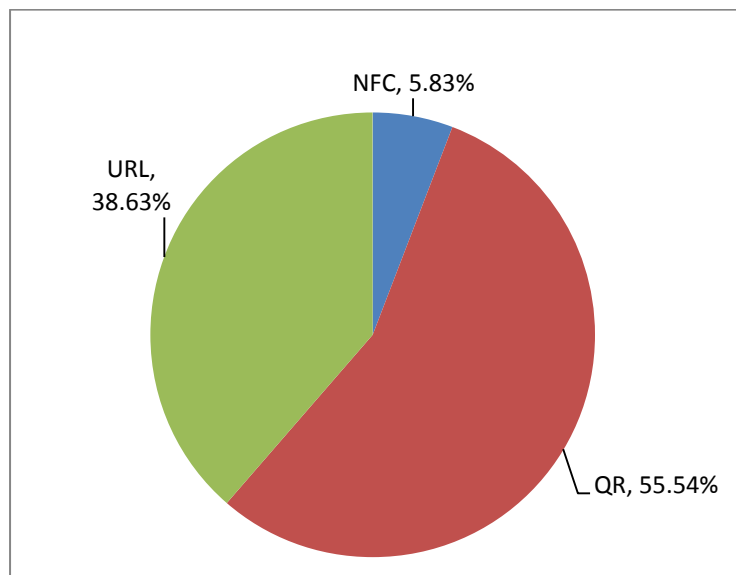
N=13,545

The picture is quite different for the statues selected for inclusion in the user research, where far more users were able to access the recorded content using NFC, 41 percent (Figure 34). One reason for this may be the support given by RCMG researchers and interns, who facilitated users' engagement with the selected Talking Statues, including showing users how to access NFC on their smartphones and lending smartphones with NFC-enabled when necessary.

Fig 34: Question 5, How did you access *Talking Statues*?
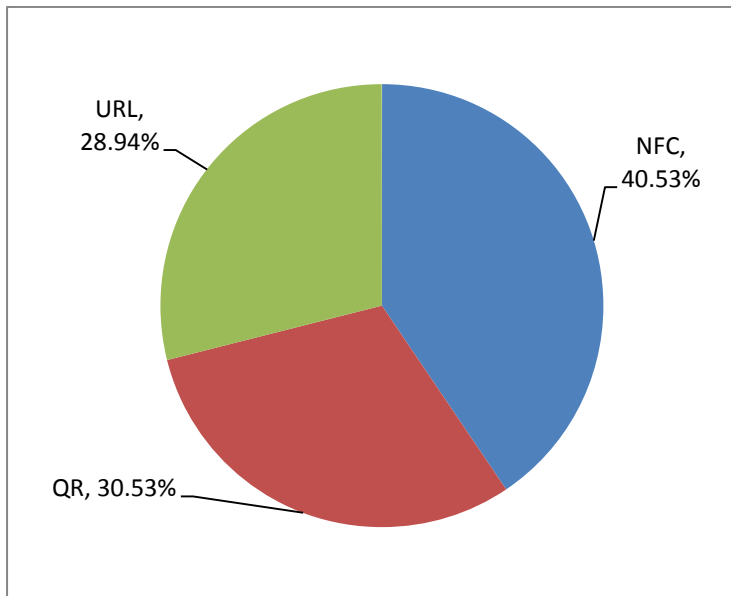
N=190

Users were pragmatic when faced with technological challenges and made use of the alternative ways given to access the content. As Amanda (aged 36-45, Isaac Newton) explained, 'I couldn't get NFC to work. When I realised I could put URL, it went really smoothly, very quick to get the call.'

The popularity of iOS smartphones amongst users, which are not currently NFC enabled, provides another reason as to why NFC was not always the chosen route to accessing the audio content (Figures 35 & 36). In both sets of data (Quick survey, Data Analytics) 46-47 percent of users had an iOS smartphone.

Fig 35: Question 15, Which type of mobile handset did you use?
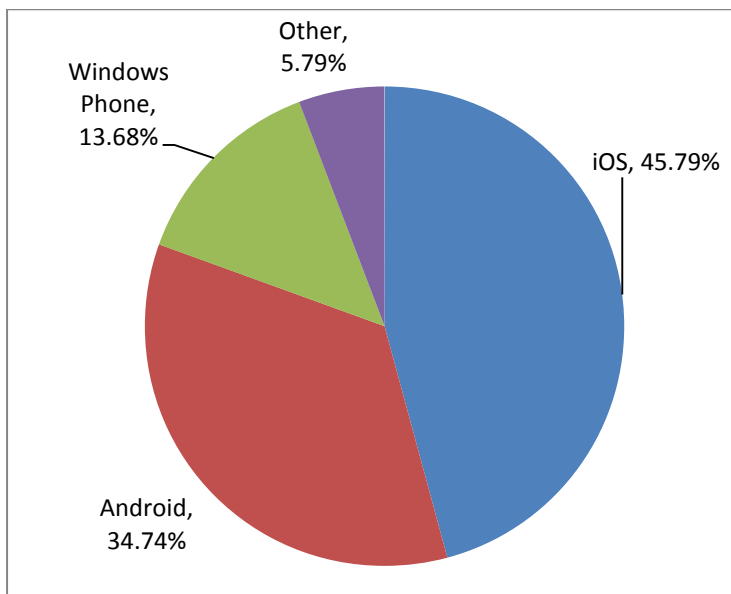
N=190

Fig 36: Data Analytics, breakdown of mobile handsets
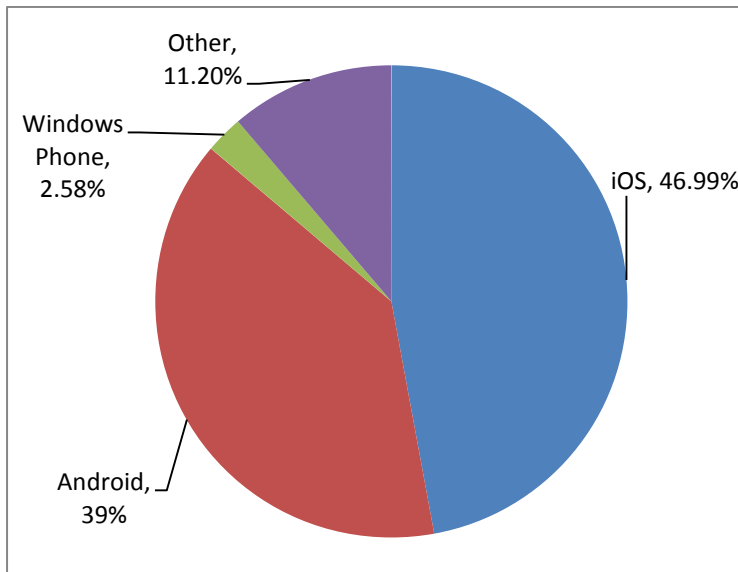
N=13,545

The use of smartphones is itself a potential barrier to accessing *Talking Statues*. Ofcoms' Communications Market Report (2013) suggests that 49 percent of adults in the UK do not have a smartphone, which potentially excludes over half the UK population from engaging with a Talking Statue. However, the number of people who declined to experience a statue because they did not have a smartphone was only 12 percent. Some users without a smartphone were pragmatic, borrowing one from their friends, family, or companion (e.g. Catherine, Maninder, Maria, Rob, Sam, Carol and Debbie). RCMG researchers and interns also lent their smartphones when needed.

It was not only NFC that provided a challenge for users, QR codes are also unfamiliar to some members of the public. Some did not recognise the symbols on the Talking Statues plaque (Figure 37) which provided the instructions on how to access the audio content. Peggy (46-55 year old, English) did not have a QR reader or smartphone and 'didn't instantly understand the signage.'

Fig 37: Talking Statues plaque

For others, the instructions were too basic. James commented that, 'The technology was easy to use once you knew what to do. The signs should have an explanation on them.' Anna (aged 56-65, John Wilkes) and Rob (aged 36-45, Isaac Newton) agreed that detailed guidelines on how to access a Talking Statue would have been helpful. Some people misunderstood the instructions, for example, rather than using their phone to 'tap' the sign, members of the public were observed tapping the sign with their fingers or, when the sign was placed on the ground, tapped it with their foot.

Despite the proliferation of mobile phones in society, using them outdoors can be frustrating. Phones have a finite battery and it is difficult to recharge phones on the street. Access to the Internet can fluctuate depending on the user's access to free Wi-Fi and the conditions of their phone tariff; Ofcom (2013) suggest that 49 percent of UK adults do not have access to the mobile internet (3G, 4G). A lack of free Wi-Fi prevented some people from experiencing a Talking Statue; sixteen percent of non-users cited the lack of mobile internet, the unavailability of free Wi-Fi or the cost of international roaming charges (for those from outside the UK) as the reason for not being able to engage with a Talking Statue. Users also had to be persistent as the technology did not always work immediately. Carol (aged 56-65) noted that, 'Newton did not speak for some time after we answered the phone.' The connection to the Internet could be slow or the smartphone did not work, making the technology 'awkward to use' (Kate).

Should more support have been provided alongside the Talking Statues for less confident users of mobile technology? Members of the public who were unfamiliar with the technology appreciated assistance. Debbie (aged 36-45, Goat) found the technology 'frustrating' and acknowledged that 'It was really hard to use and we would not have managed without [*the researcher's*] help.' Maria (aged 46-55) said she could not have accessed the audio of Hodge the Cat 'without the researchers… my phone is very old, it is not a smartphone so I could not have accessed it at all, which would have been a real shame.' Rob (aged 36-45, Isaac Newton) also noted the importance of the researcher as a facilitator, 'I would not have accessed this without the researcher.' For Clare aged 56-65, the difficulty she experienced confirmed her assumption that technology-related projects are for the younger generations: 'It is a very good idea particularly for young people… It is not very easy [*for*] people of my age. I don't use apps.'

4.3 The use of NFC and QR enhanced the experience for most users

The use of mobile technology enhanced the experience of most users because it created a direct and immediate connection with the statue. Nearly 80 percent of users agreed that using NFC or QR tags 'made the experience [of *Talking Statues*] more enjoyable' (Figure 38).

Fig 38: Question 17, How far do you agree with this statement: Using NFC/QR tags made the experience more enjoyable?
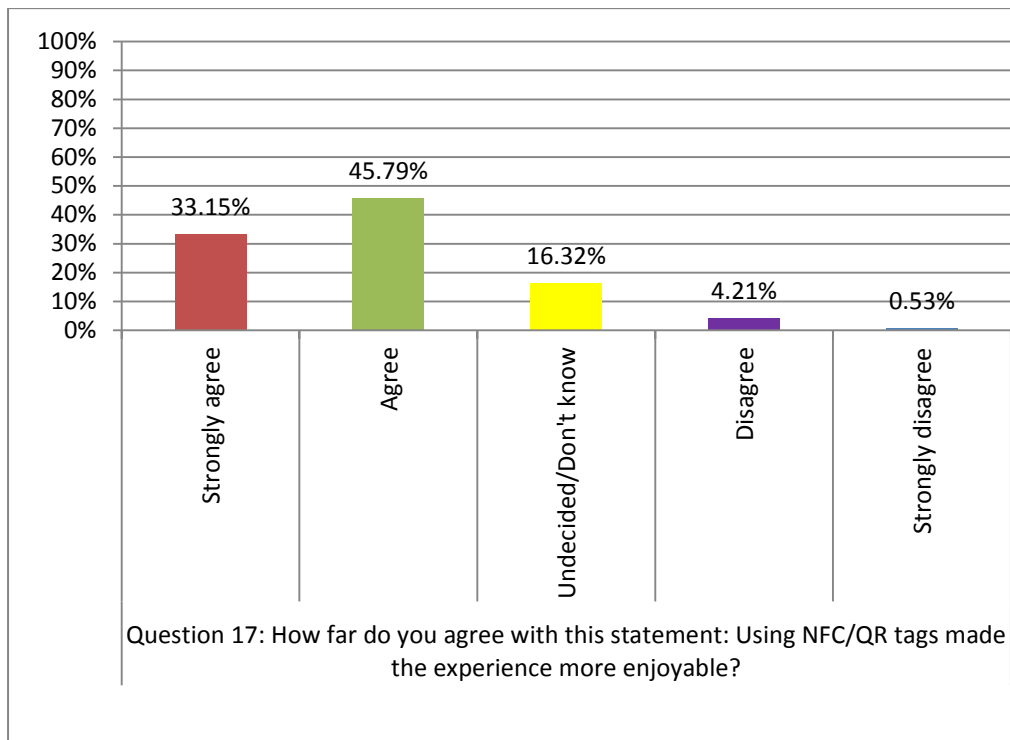
N=190

How the NFC or QR tag made the experience more enjoyable for users is evident from their enthusiasm about the concept of *Talking Statues*. The novelty of the experience, the statue 'talking' to them through the phone call, is only made possible because of the technology. For David (aged 36-45), the phone call was the most important aspect of the experience, 'It's nice to hear a statue actually talking to you.' He suggested the experience would have been very different 'if there was no call from the statue.' Carol (aged 56-65, British, Isaac Newton) was intrigued by the use of technology which enabled the statue to talk, 'I am not a technological person so find this amazing.' Sean (aged 26-35) had no trouble accessing the statue of Isaac Newton using the QR tag, he found the project 'engaging and interesting,' and wanted to visit more. Peter (aged 66-75, British, Isaac Newton) struggled to use the technology with his 'old and limited' Blackberry but he still thought it was 'a wonderful idea.' Whilst Clare (aged 56-65, English) did not think the project was aimed at people of her age, she thought it was 'a very good idea, particularly for young people' because 'it shows us the stories behind the statue.'

Despite the challenges experienced by users getting the technology to work (section 4.2), the majority, nearly 65 percent, agreed that the technology was 'easy to use' (Figure 39). This included Daniel (aged 26-35), who said that 'the whole experience [was] effortless', Veronica (aged 56-65) who described herself as 'technologically savvy' and Chloe (aged 16-25, English) who found it easy to use because 'I had used it before' but added that 'someone had to explain to me what to do the first time.' James (aged 16-25) also conditioned his response saying that the 'technology was easy to use once you knew what to do.'

Fig 39: Question 16, How far do you agree with this statement: I found the technology easy to use?
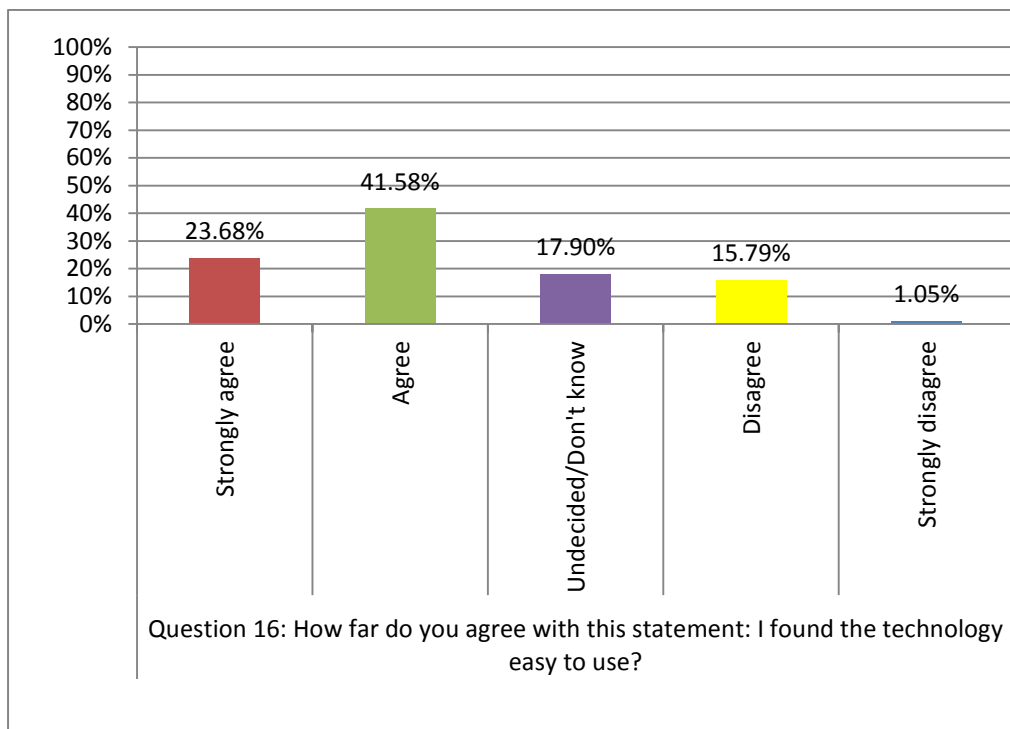
N=190

Reasons why the technology was not easy to use included NFC not working (Anna, Amanda), and NFC and URL taking 'ages' to connect (Catherine, Julie, Carol, Janine). Some users needed to have the technology explained to them by the researchers before they could use it, including Rob and Debbie. Clare (aged 56-65) said it would have been even more difficult to access the statue of Isaac Newton 'if there is nobody there [to help].' Emily (aged 16-25) acknowledged that she could only access the statue 'because I had heard an explanation of how to use it. If I hadn't I would not have known what to do.'

Even for those users who did not find the technology easy to use (16 per cent), the majority agreed that their engagement with the statues was enjoyable because of NFC/QR tags (60 per cent). How do we interpret this finding? Does it mean that people expect some challenges to using new technology and these do not affect their enjoyment of the process? More research would be needed to understand this result.

Most users listened to the full audio recording (63 percent) and just over half (51 per cent) agreed it was 'just the right length' (Figure 40). Julie enjoyed the short burst of information the audio provided about Isaac Newton, which she enthused 'explains concisely what he does.' Linda enjoyed learning about Queen Victoria (Manchester), whom she did not know much about: 'Listening to [something] is always easier to me than reading… I think it explains a lot.' Anna (aged 56-65) would have liked some information about the length of the recording on the statue itself. Around 40 percent of users considered that the audio recording was 'too long' – observation found that some users' body language suggested a gradual disengagement with the audio recording, they became visibly uncomfortable and started to lose concentration towards the end of the phone call. James (aged 16-25, English) openly stated that the Peter Pan audio was 'too long. It rambled and told you

nothing about the statue itself, Barrie, [or] the character at all.' Because the audio recordings varied in length across the statues, it is not possible to suggest an 'optimal' amount of time that users will spend listening to recorded content.

Fig 40: Question 7, Was the recording…?
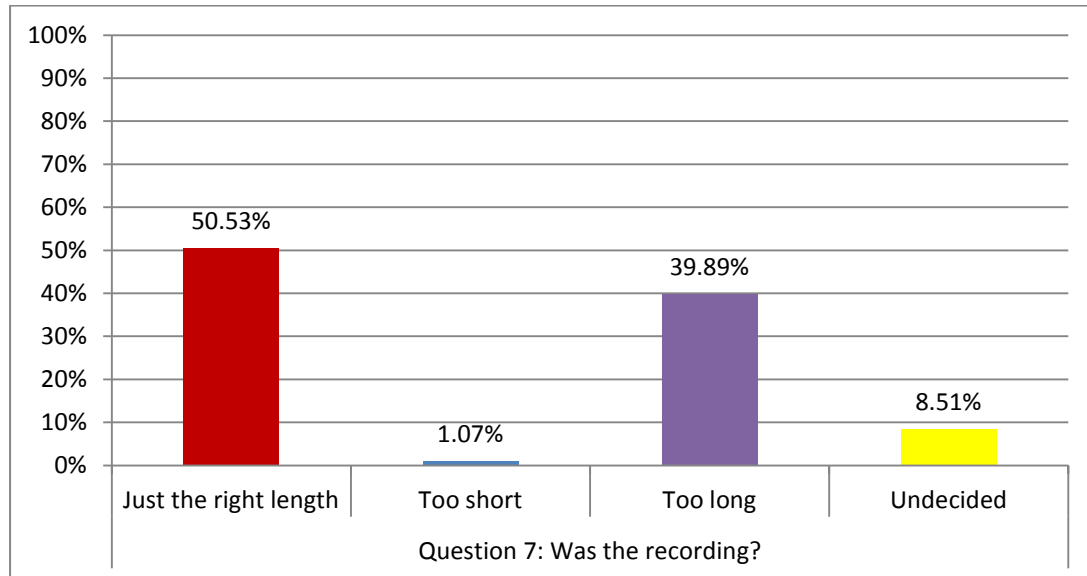
N=190

4.4 Creating enthusiasm for further encounters with culture

Experiencing a Talking Statue encouraged users to seek out new cultural encounters, whether this was to seek out more Talking Statues, find out more about a statue or its subject, or visit a related cultural organisation. Over half of users (53 percent) were motivated to 'look for another Talking Statue', including Kate who was enthusiastic about looking for more statues following her experience with the Goat. Forty-two (42) percent of users also said that they would visit the *Talking Statues* website (Figure 41).

Fig 41: Question 11: What will you do after this?

Question 11: What will you do after this?
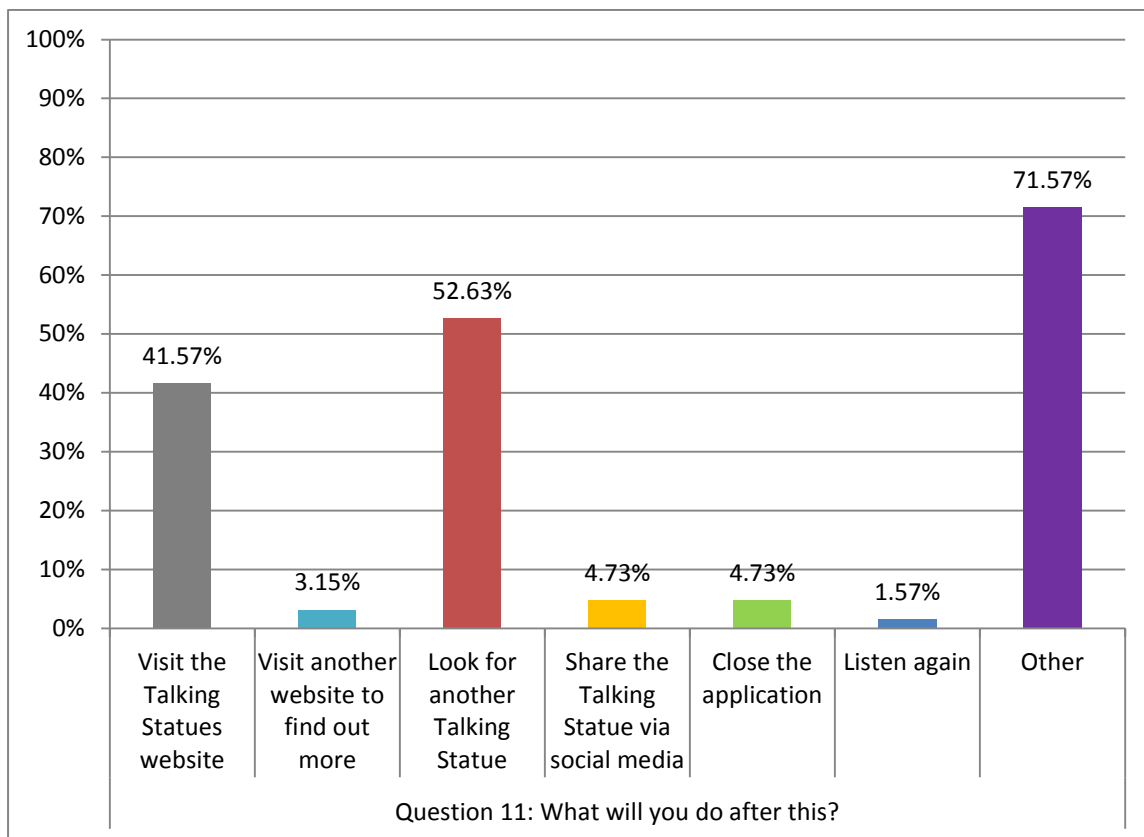
N=190

Sixty-two (62) per cent of users were interested in finding out more about the statue or its subject following their experience (Figure 42). Sean (aged 26-35) wanted to find out more about the origins of the Isaac Newton statue, to 'see what the sculptor had in mind when he placed it here.' Catherine (aged 46-55, Isaac Newton) would 'probably visit the [*Talking Statues*] website or google Newton.' Jenny was keen to find out more about John Wilkes and was interested to find out why Jeremy Paxman 'wanted to record this statue.'

Fig 42: Question 12. 'As a result of using *Talking Statues*, are you more or less likely to want to find out more about the statue or the subject?'
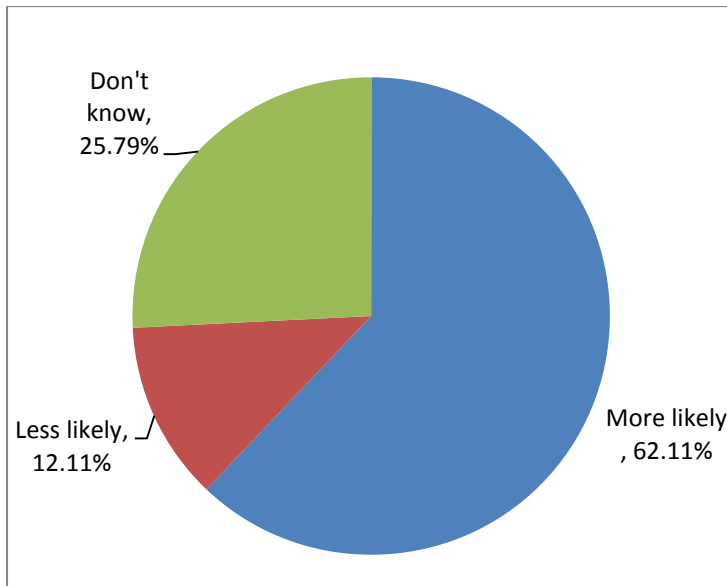
N=290

Fifty-four (54) percent of users agreed that as a result of *Talking Statues* they would be more likely to visit a cultural institution related to the statue (Figure 43). This included Daniel (aged 26-35) and Chloe (aged 16-25) who planned to visit the Sherlock Holmes museum. Chloe also made the connection between the statues and another famous cultural landmark, Madame Tussaud's:

> 'It made me think it could be fun to go to Madame Tussaud's though. Then I remembered that those wouldn't talk...'

Fig 43: Question 13. 'As a result of using *Talking Statues*, are you more or less likely to want to visit a cultural institution related to the statue?'
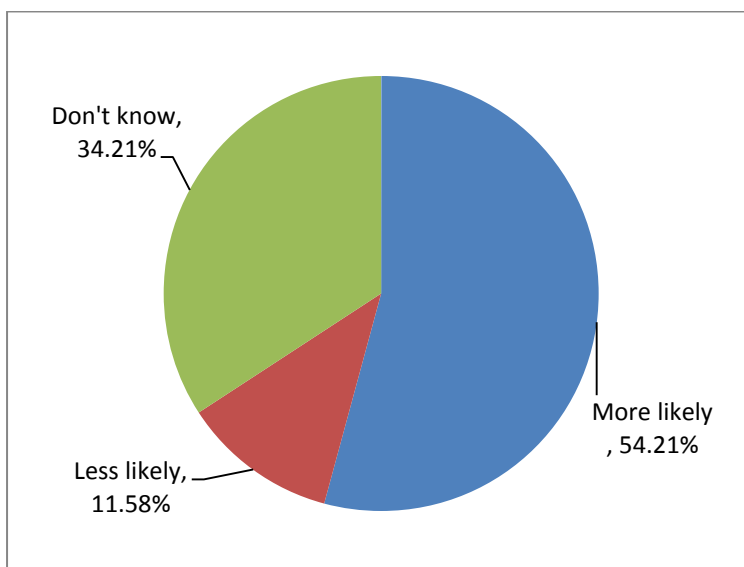
N=290

Despite this positive response from users, it is not possible to detect a noticeable impact on the visiting figures of cultural organisations related to the *Talking Statues* during the months of August, September and October. For example, Hodge the Cat, located near Dr Johnson's House, received 945 scans between 19 August – 9 October 2014. In the week after the launch of *Talking Statues* there was a slight increase in visitors, just under 10 percent compared to the previous week. A larger increase in footfall in September (2219 visitors compared to 1072 visitors in August) is linked to the *Open House London* event when entrance to the museum is free.[9] Organisations such as the British Library have high visitor figures (for example it received 117,633 visitors to the public programme in August and 89,583 visitors in September) against which it is difficult to see an impact from the Isaac Newton statue (see 3.3).[10]

4.5 Conclusion

The exciting potential for NFC to enable the interpretation and facilitation of encounters with heritage, the arts and culture was realised through *Talking Statues*. Users agreed that the use of NFC and QR made their experience of *Talking Statues* more enjoyable. Users described the experience as 'effortless' , 'easy', connecting them directly to the core content of the audio recording in a fun and novel way. Users were keen to follow up their experience with the statue by seeking out more statues, visiting the *Talking Statues* website (Figure 44) to find out more, or visit a cultural organisation that was related to the statue or its subject. As a means of generating interest and excitement about statues, and encouraging users to seek out more cultural encounters as a result of their experience, *Talking Statues* was very effective.

Fig 44: *Talking Statues* website home page

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[9] Visitor figures supplied by Morwenna Rae, email communication, 17/10/2014
[10] Visitor figures supplied by Paul Werb, email communication, 21/10/2014

As a new and cutting-edge technology, there were some challenges to using NFC which are useful learning points for future projects:

- Providing an alternative route to accessing the audio content was essential – QR and URL – as not all users had access to NFC or knew how to access it on their phone;

- Considering the local provision of free Wi-Fi as some members of the public will not have access to the mobile internet (3G, 4G);

- Providing detailed guidance and support for those members of the public who are less confident users of smartphones and mobile technology – some users of *Talking Statues* had to be very persistent to get the technology to work.

- User-testing NFC and other technology to ensure that as many issues and challenges to its use as possible are identified and resolved prior to the launch.

As NFC becomes more familiar and more widespread, the challenges which faced users of *Talking Statues* are likely to become less prominent.

5. Conclusions and possibilities for future development

Talking Statues is an innovative and novel project exploring the potential for using cutting-edge NFC technology to enable the public to engage with otherwise inanimate and silent statues. The concept of the "phone call" breathed life into the statue, creating a personal, even intimate connection for many users, and the high-quality content written and animated by celebrated UK-based playwrights and actors gave new meaning to 'blocks of stone' and 'dusty old statues.' Users came to understand who or what a statue represented, why it had been placed in a particular location, and helped them to see their surroundings in new ways.

However, the research showed there were challenges to engaging with a Talking Statue, a combination of factors including location, ambience, accessibility, and the technology. Whilst users were very positive about their experiences, far more members of the public did not engage with a statue, nor did the project have much impact on the visiting figures of related cultural institutions. The aim to encourage new and non-traditional audiences of culture, heritage and the arts was not realised. What can be learned from the project and feed into future uses for NFC in cultural settings?

5.1 People loved *Talking Statues*

Users described their experiences with a Talking Statue as meaningful, amusing, informative and intimate. The enthusiasm generated by the project was real - people loved their involvement with *Talking Statues*. It captured people's imagination and attracted the interest of diverse age groups. People were impressed by the technology and excited by the concept. They also found the novelty of the simulated phone call compelling. Having a phone call from a character created a fun, intriguing, entertaining and moving experience for users. This combination of innovative technology with a concept that excited people was a key element in *Talking Statues'* success. As Rupert Englander (email communication 01/10/2014) explained:

> 'People have to want to do something first. If they don't want to do it they won't and then it doesn't matter how good the technology is. Once people try it and enjoy the experience they may well share it – and that could then allow some conclusion that the technology is complementary to driving the usage, but ultimately it has to be something people want to do in the first place.'

5.2 A new understanding of statues and place

Users were motivated to look more closely at the statues – at their construction, story, character - and engage with them in new ways. Users were also motivated to take a greater interest in the statue's context, to better understand its location, observe it in more detail and see how the statue fitted in with its surroundings. The research provided a snapshot of an immediate experience, but some users implied that the experience gave them a new appreciation for their environment – rather than rushing through to get somewhere else they slowed down and took the time to look more carefully.

The project's aim to forge new cultural connections between the statues and related cultural organisations, however, failed to be realised, with very few participants making the link between the statue and new cultural encounters. This suggests that for most users, the experience was confined to the duration of the audio recording and the *Talking Statues* project itself. It was the novelty of the concept which interested them, not the links to other cultural experiences, which they, as cultural consumers, were already used to.

5.3 Many factors affected user engagement

Usage of the *Talking Statues* and public engagement with the statues was affected by a series of interrelated factors which reveal the complexity of occasional heritage and spontaneous access to culture. The most critical factor in engaging with the statue was the knowledge and interest of the user, which had largely been piqued by the impressive local, national and international media (but not social media) coverage that the project received. Following this, initial engagement was affected by:

- Location, ambience and use of public space around the statue
- Visibility and accessibility of the signage
- Understanding of the signage and how well the technology worked
- Time

Testing of the user experience prior to the launch in August could potentially have removed some of the frustrations with the technology e.g. the lack of explanation on how to access the audio content and it taking several times to 'tap' NFC or scan the QR code before the audio content would work.

Considering that the initial media coverage was instrumental in encouraging the public to seek out the statues, two issues are raised for the continuing success of *Talking Statues*:

- How can engagement be sustained through time?
- How can new audiences be engaged?

5.4 Embedding technology in everyday things – an opportunity and a challenge

Talking Statues revealed the public enjoys technology which is embedded in everyday things, to animate these things and provide new insights into place, story and context. *Talking Statues* appealed to a range of age groups; competence and confidence in using mobile technology did not seem to be related to the younger generations, with only the over 75 age group unrepresented in the user profile. Users of all ages seemed to appreciate the use of technology, with NFC and QR tags making their experience more enjoyable. Even when users struggled to access the content, the majority of them enjoyed their experience suggesting that frustrations with technology can be forgotten in the face of an enjoyable outcome.

Fortunately, there were multiple ways to access the content of the statues, otherwise user 'scans' might have been far lower. Although *Talking Statues* was testing the potential of NFC for the cultural sector, in reality this was the least popular method for users who preferred to use QR tags or URL. It reinforces the 'new-ness' of the technology – many users did not have a mobile phone that supported NFC and even if they did some users did not know how to access it – and suggests that at least in these early stages, the public need more support on how to use NFC.

Despite the limitations of the technology, *Talking Statues* confirms that NFC does have a valuable role to play in cultural experiences. The inclusion of NFC and QR tags made the experience enjoyable for many users, and once initial difficulties were overcome, the technology was seamless. As the pace of digital technology moves on, in time more people will 'know' what to do when confronted by the command to 'tap', as *Interactive Europe: Engaging Audiences* (Exterion Media 2013) suggests:

> 'The hard part is done. People now have the technology to interact, if not necessarily the understanding and the awareness. It is only a matter of time until NFC technology underpins a mainstream interactive behaviour to make interacting with advertising via a smart device an everyday norm and a very real consumer expectation. '

5.5 *Talking Statues* opens up huge possibilities for future development

The concept at the heart of *Talking Statues* – to animate an otherwise silent object - opens up huge possibilities for future development, with the potential to be reframed to fit a number of contexts. Evidence from users participating in the current research study showed that it was welcomed enthusiastically by the public, despite some challenges with the technology. At the moment NFC technology is still very new, but by 2016 NFC technology will be supported by 46 percent of mobile phones (Exterion Media, 2013) and in the near future around 81 percent of the UK population will own a smartphone (We are apps, 2013), making more projects like *Talking Statues* a reality for the cultural sector. Furthermore, according to Sam Billington of Antennae International (interview 17/06/2014) compared to other types of mobile technology, the relatively low cost of using NFC could make it attractive to cultural organisations:

> 'There is great potential for using [NFC technology] to deliver content and also to explore the possibilities of showcasing really cost effective solutions for museums and galleries… NFC definitely does have a certain price point. So, that would be incredibly attractive to some museums which are on extremely low budgets.'

As the museum and cultural sectors face significant economic challenges in current times, the advantages of NFC as a cost effective technology become more critical. Certainly, museums and galleries could benefit from this model in different ways. The *Talking Statues* model could enhance user engagement and user experience by offering innovative interpretive devices, such as the animation of a painting, a sculpture or any other exhibit in their collection. Further possible contexts where the *Talking Statues* model could be used might include those where it is more challenging to provide signage or tangible forms of interpretation, including:

- Rural landscapes

- Outdoors historic or heritage sites, including industrial heritage
- Architecture and built environments
- Sculpture parks
- War memorials
- Community spaces

However, to ensure that such projects are accessible to all, limitations exposed by this research need to be addressed, such as the dependence on specific mobile handsets, the issues around access to the Internet, and the design, visibility and positioning of signage.

5.6 What more could be done to reach new and non-traditional audiences?

Talking Statues aimed to reach new and non-traditional audiences for arts and culture, including younger and disabled audiences, and encourage new pathways to engaging with cultural institutions. However, there were barriers which created limitations, excluding some people from these experiences.

The majority of users were confident cultural consumers. There was little evidence showing that *Talking Statues* appealed to new and non-traditional audiences: for example, the tiny percentage of disabled people - 1.60 percent compared to 16 percent of working age adults and 45 percent of those over State Pension age in the UK - involved in the research suggests that *Talking Statues* has failed to reach this community. To engage non-traditional audiences, a much more proactive approach based on a real understanding of social, economic, cultural and physical barriers needs to be developed, in addition to the technology-specific barriers. Partnerships with key organisations such as Shape (https://www.shapearts.org.uk/) and disability arts could ensure that disabled people are properly represented in audiences.

Talking Statues is not the only project to experience these limitations. The findings raise similar questions to those the Digital Heritage sector is currently facing, including the following issues:

- Digital literacy in audiences;
- Dependence on a particular mobile technology;
- Access to the Internet;
- Accessible technology, in particular for disabled people.

Appendix 1: Quick survey protocols

User quick survey protocol

Question	Options
Question 1. Which statue? (LONDON)	Achilles, Hyde Park Ariel and Prospero, BBC Broadcast House Broad Family, Broadgate Brunel, Paddington station Couple on a Seat, Canary Wharf Dick Whittington's Cat, Highgate Hill Eye – I, Broadgate Goat, Spitalfield Market Hodge the Cat, Gough Square Hugh Myddleton, Islington Green Park Isaac Newton, British Library Isis, Hyde Park John Wilkes, Fetter Lane Leaping Hare, Broadgate Peter Pan, Hyde Park Queen Victoria, Blackfriar Bridge Rowland Hill, King Edward Street Rush Hour, Broadgate Sherlock Holmes, Baker Street Unknown Soldier, Paddington station
Question 1. Which statue? (MANCHESTER)	Alan Turing, Fairfield Street Barbirolli, Bridgewater Hall L.S.Lowry, Sam's Chophouse Queen Victoria, Piccadilly Gardens The Reading Girl, Manchester Central Library
Question 2. What other statues have you visited? (LONDON)	None Achilles, Hyde Park Ariel and Prospero, BBC Broadcast House Broad Family, Broadgate Brunel, Paddington station Couple on a Seat, Canary Wharf Dick Whittington's Cat, Highgate Hill Eye – I, Broadgate Goat, Spitalfield Market Hodge the Cat, Gough Square Hugh Myddleton, Islington Green Park Isaac Newton, British Library Isis, Hyde Park John Wilkes, Fetter Lane Leaping Hare, Broadgate Peter Pan, Hyde Park Queen Victoria, Blackfriar Bridge Rowland Hill, King Edward Street Rush Hour, Broadgate Sherlock Holmes, Baker Street Unknown Soldier, Paddington station
Question 2. What other statues have you visited? (MANCHESTER)	None Alan Turing, Fairfield Street Barbirolli, Bridgewater Hall L.S.Lowry, Sam's Chophouse Queen Victoria, Piccadilly Gardens

Question	Options
	The Reading Girl, Manchester Central Library
Question 3. Why did you visit this statue?	Interested in character or theme Interested in sculpture Interested in writer of this Talking Statue Interested in the actor who animates this statue Interested in Talking Statues Just passing by Other
Question 4. How did you find out about Talking Statues?	National or local television National or local radio National or local press Free newspaper e.g. Metro Magazine Talking Statues Website Social media e.g. Facebook, Twitter Just passing by / chance encounter Word of mouth – friend or family Museum or gallery Other Don't know
Question 5. How did you access Talking Statues?	NFC QR tag URL Other
Question 6. Was the recording?	Just the right length Too short Too long Undecided
Question 7. Did you listen to the whole audio recording?	Yes No Don't know
Question 8. Do you agree or disagree with the following statement: *the content of the audio was interesting?*	Strongly agree Agree Undecided Disagree Strongly disagree
Question 9. Which of the following describes your experience with Talking Statues?	Told me something new Made me laugh Animated the statue Made me see the statue from different perspectives Bored me Distracted me Annoyed me Other
Question 10. What did you do while listening to the audio?	Looked at the statue Looked at my phone Closed my eyes Walked around the statue Sat down Listened with others Shared the Talking Statue via social media Put on earphones Touched statue Other
Question 11. What will you do after this?	Visit the Talking Statues website

Question	Options
	Visit another website to find out more Look for another Talking Statue Share the Talking Statue via social media Close the application Listen again Other
Question 12. As a result of using Talking Statues are you more or less likely to want to find out more about the statue or the subject?	More likely Less likely Don't know
Question 13. As a result of using Talking Statues are you more or less likely to a visit a cultural institution (e.g. museum, gallery, archive, library)?	More likely Less likely Don't know
Question 14. How often do you visit museums, galleries, archives, libraries or other cultural organisations?	At least once a week At least once a month At least 3 or 4 times a year At least once a year Less often than once a year Never Don't know
Question 15. Which type of mobile handset did you use?	iOS Android Windows Phone Other
Question 16. How far do you agree with this statement: *I found the technology easy to use?*	Strongly agree Agree Undecided Disagree Strongly disagree Don't know
Question 17. How far do you agree with this statement: *using NFC / QR tags made the experience more enjoyable?*	Strongly agree Agree Undecided Disagree Strongly disagree Don't know
Question 18. What is your age?	Under 16 16-25 26-35 36-45 46-55 56-65 66-75 Over 75
Question 19. How do you identify your gender?	Man Woman Transgender Other
Question 20. What is your ethnic group?	English / Welsh / Scottish / Northern Irish / British Irish Gypsy or Irish Traveller Any other White background White and Black Caribbean White and Black African White and Asian Any other Mixed / Multiple ethnic background

Question	Options
	Indian Pakistani Bangladeshi Chinese Any other Asian background African Caribbean Any other Black / African / Caribbean Arab Any other ethnic group
Question 21. Could you please tell us about your employment status?	Full time employment Part time employment Self-employed Unemployed / seeking work Unable to work Carer Homemaker Retired Full time education Prefer not to say
Question 22. Do you have a disability?	Yes No Don't know
Question 23. Do you live in London or are you visiting? (LONDON)	Live in London Visiting from within UK (England, Wales, Scotland, Channel Islands, Northern Ireland, Isle of Man) Visiting from Europe Visiting from outside Europe
Question 23. Do you live in Manchester or are you visiting? (MANCHESTER)	Live in Manchester Visiting from within UK (England, Wales, Scotland, Channel Islands, Northern Ireland, Isle of Man) Visiting from Europe Visiting from outside Europe

Non-User quick survey protocol

Question	Options
Question 1. Which statue? (LONDON)	Achilles, Hyde Park Ariel and Prospero, BBC Broadcast House Broad Family, Broadgate Brunel, Paddington station Couple on a Seat, Canary Wharf Dick Whittington's Cat, Highgate Hill Eye – I, Broadgate Goat, Spitalfield Market Hodge the Cat, Gough Square Hugh Myddleton, Islington Green Park Isaac Newton, British Library Isis, Hyde Park John Wilkes, Fetter Lane Leaping Hare, Broadgate Peter Pan, Hyde Park Queen Victoria, Blackfriar Bridge

Question	Options
	Rowland Hill, King Edward Street Rush Hour, Broadgate Sherlock Holmes, Baker Street Unknown Soldier, Paddington station
Question 1. Which statue? (MANCHESTER)	Alan Turing, Fairfield Street Barbirolli, Bridgewater Hall L.S.Lowry, Sam's Chophouse Queen Victoria, Piccadilly Gardens The Reading Girl, Manchester Central Library
Question 2. Why didn't you use Talking Statues?	Hadn't heard of it Didn't notice the sign Not interested in that kind of thing Don't have a smartphone Don't know how NFC works Don't have a QR reader Too busy Other
Question 3. What is your age?	Under 16 16-25 26-35 36-45 46-55 56-65 66-75 Over 75
Question 4. How do you identify your gender?	Man Woman Transgender Other
Question 5. What is your ethnic group?	English / Welsh / Scottish / Northern Irish / British Irish Gypsy or Irish Traveller Any other White background White and Black Caribbean White and Black African White and Asian Any other Mixed / Multiple ethnic background Indian Pakistani Bangladeshi Chinese Any other Asian background African Caribbean Any other Black / African / Caribbean Arab Any other ethnic group
Question 6. Could you please tell us about your employment status?	Full time employment Part time employment Self-employed Unemployed / seeking work Unable to work Carer Homemaker Retired

Question	Options
	Full time education Prefer not to say
Question 7. Do you have a disability?	Yes No Don't know
Question 8. Do you live in London or are you visiting? (LONDON)	Live in London Visiting from within UK (England, Wales, Scotland, Channel Islands, Northern Ireland, Isle of Man) Visiting from Europe Visiting from outside Europe
Question 8. Do you live in Manchester or are you visiting? (MANCHESTER)	Live in Manchester Visiting from within UK (England, Wales, Scotland, Channel Islands, Northern Ireland, Isle of Man) Visiting from Europe Visiting from outside Europe

Appendix 2: Short interview protocol

Talking Statues
Short Interview
[Ref. no.]

1. What did you find most intriguing or least interesting about Talking Statues?

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2. How does Talking Statues help you interpret the statue?

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3. Did using Talking Statues make you think differently about the statue or character?

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4. How you might explore this further?

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5. Tell us about your experience of using the technology. You responded to question about technology as easy/not easy to use. What made it easy/not easy? Did the technology affect your experience with Talking Statues?

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Appendix 3: Changes to the research timescale

Initial research timescale

	2013		2014										
	N	D	J	F	M	A	M	J	J	A	S	O	N
Talking Statues project start date – 1 November 2013	X												
RCMG Research Plan		X											
Ethics Review			X										
Volunteer recruitment			X	X	X	X							
Talking Statues launched – 15 April						X							
Volunteer training						X	X						
1st set Data analytics							X						
Selection of five statues							X						
Pilot of research methods								X					
Data collection									X	X			
2nd set Data analytics										X			
Analysis, interpretation and report writing										X	X	X	
Focus Group for testing findings											X		
Talking Statues project end date – 31 October 2014												X	
RCMG dissemination event													X

Adjusted research timescale

	2013		2014										
	N	D	J	F	M	A	M	J	J	A	S	O	N
Talking Statues project start date – 1 November 2013	X												
RCMG Research Plan				X	X	X	X						
Ethics Review				X									
Intern recruitment and training								X	X				
Talking Statues launched – 19 August											X		
Data analytics											X	X	X
Criteria created for the selection of statues								X	X				
Pilot of research methods											X		
Data collection											X	X	
Analysis, interpretation and report writing											X	X	X
Focus Group for testing findings												X	
Talking Statues project end date – 31 October 2014												X	
RCMG dissemination event													X

Appendix 4: Consent form and information sheet

Consent form

Talking Statues: consent form

Material gathered as part of this study will be treated as confidential and securely stored.

I have read and I understand the information sheet	Yes ☐	No ☐
I have been given the opportunity to ask questions about the project and they were answered to my satisfaction	Yes ☐	No ☐
I understand that I can withdraw from the study at any time	Yes ☐	No ☐
I agree to the interview being recorded and my words being used for research purposes[11]	Yes ☐	No ☐
I agree that any information I give to RCMG can be in any subsequent academic or professional publications, including publication on the World Wide Web (Internet). I understand that my real name will not be used or attributed to any words that I have said	Yes ☐	No ☐
I would like my name to be acknowledged in the report without being linked to my words	Yes ☐	No ☐

Name (PRINT) _____

Signed _____

Date _____

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[11] This is applicable only to the group interview as the questionnaires and interviews undertaken with users of Talking Statues will not be recorded

Information sheet

Thank you very much for taking part in our research study which is being carried out by the Research Centre for Museums and Galleries (RCMG), based in the School of Museum Studies at the University of Leicester. In this leaflet we want to tell you about why we are carrying out our research and what your rights are as a participant in the study.

Talking Statues
Talking Statues uses playwrights, actors and mobile technology to put words into the mouths of 40 public statues for 12 months. Pass a Talking Statue, swipe your smartphone on a nearby tag and – hey presto - your phone rings: Joan of Arc is on the line! This project sets out to explore how mobile technology can be used to overcome barriers to culture and the arts by enabling spontaneous interaction, animating public spaces and creating new cultural links to engage audiences.

Talking Statues has been developed by Sing London, a not-for-profits arts organisation. RCMG is Sing London's research partner, carrying out questionnaires and interviews with users of *Talking Statues* like you to find out about your experiences of the content and the technology. We will also collect some personal information about you if you are happy to share it, for example your age and how often you visit museums and galleries, so that we can understand who is the main audience for *Talking Statues*. There are no right or wrong answers to the questions that we ask you and if you do not want to answer some of the questions then that is fine.

Your rights as a participant in research
Any details you give to us will be kept private to external organisations except for RCMG and destroyed after 5 years. In this way we are following the Data Protection Act of 1998 which ensures that any details you provide for us will be kept safe and protected.

[**Interview with developer only**] We would like to have your permission to be able to record the session so that we can use your words to formulate and illustrate our findings, which we will be reporting on to Sing London.

We would like to use the information that you give to us in all subsequent academic or professional publications that result from the study but only with your permission.

If you change your mind about taking part, it is within your rights to withdraw your permission. If you no longer wish to be involved in the research, please contact us by Friday 26 September and we will withdraw any information that you have provided to us from the study.

If you wish to withdraw from the study or have any further questions about the way in which we carry out our research, please contact Jocelyn Dodd, Director of RCMG; email jad25@le.ac.uk or telephone +44 (0)116 252 3757.

You can also contact, Giasemi Vavoula, who is the Ethics Officer for the School of Museum Studies. Her email address is gv18@le.ac.uk and telephone +44 (0)116 252 3966

Appendix 5: *Talking Statues* maps

London map
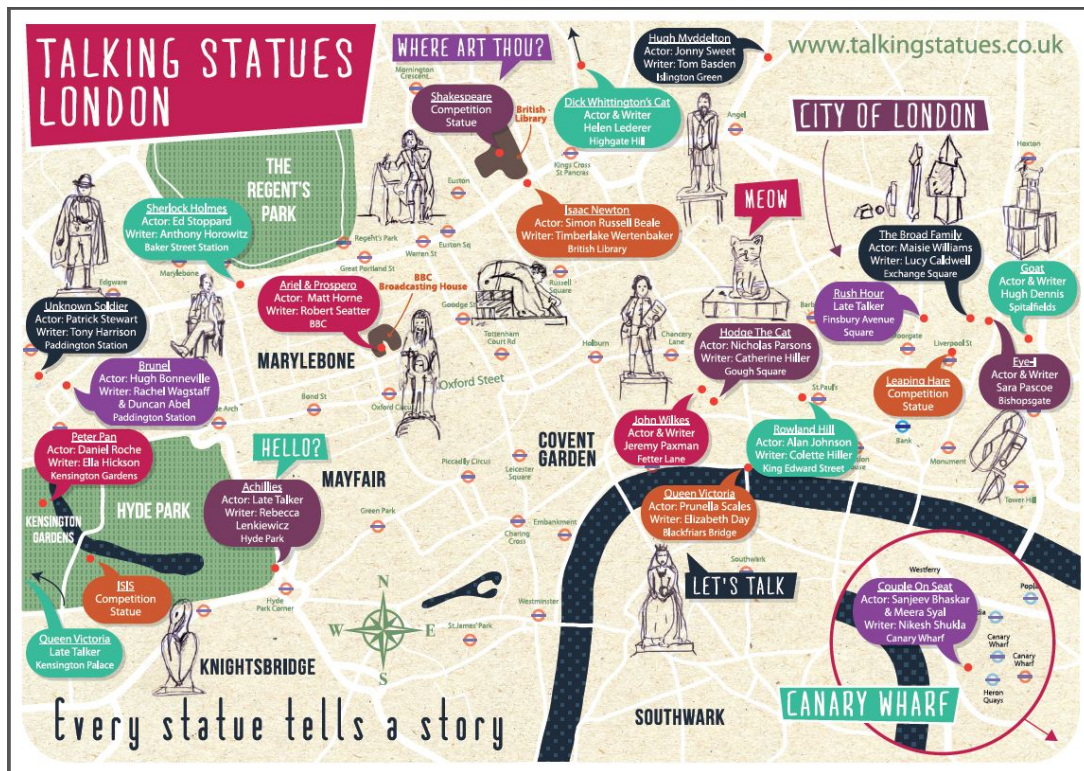
Manchester map

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