

Engaging Digital Visitor Experiences

Younger audiences who use mobile technologies for nearly everything appreciate interactive digital experiences when relating to heritage and culture. But many organisations in this sector do not have the resources to develop engaging digital visitor experiences or the skills to maintain them.

Ben Bedwell and Laura Carletti, Research Fellows in Horizon, tell us about their research in the cultural and creative sectors.

What are your research interests?

Laura: I am interested in how technologies can be harnessed to enhance public engagement with cultural content and in what I call “participatory heritage”, for instance by working with Horizon on building platforms for crowdsourcing user-generated content, or by co-creating digital archives with local communities.

Ben: I am interested in building pieces of technology for the public to engage with – technology that is fun to use, with the element of surprise. I focus on museum environments – how to make these places interesting to a wider audience so they would want to visit, have fun while there, and take something away with them from the experience.

What are the main issues for your heritage and cultural partners when interacting with technologies?

Cultural institutions want to attract a wide range of visitors, so they have to appeal to traditional audiences as well as younger people who might be considered to be more comfortable with digital technologies. However, smaller organisations have low staff numbers and budgets, and do not necessarily have the skills, confidence or resources to deal with complex technologies, purchasing hardware, or hiring or outsourcing developers. They feel digital experiences can be outside their reach.

While in the past websites were just a window to view content, now people have an expectation of interacting, having their say, and exchanging information. This is participatory heritage – where the public is no longer just a spectating audience, but a community of participants actively involved in managing cultural heritage. This is impacting on the cultural organisations who have to respond to this – for example, by building a social media audience.

Many visitors bring their own digital devices with them, so it makes sense to develop experiences that use these devices. Our aims have been to provide a framework for the museums to harness simple web-based platforms and technologies that are already available or that we have built for them, and for them to be able to take these over once our project has finished.

Give an example of where you have introduced technologies to cultural partners

In 2012 we started a project called [ArtMaps](#) – an interdisciplinary collaboration with Horizon, the Centre for Intermedia at the University of Exeter, and Tate (Tate Learning, Tate Digital and Tate Research). The team was multi-disciplinary and included researchers, Tate’s staff and practitioners in computer science, learning sciences, and performing studies.

Tate wanted to visualise their digitised artworks on a map, and recognised that the general public had a large amount of information about the places, people or things in the paintings that was not

being captured. We developed the [ArtMaps crowdsourcing platform](#) that allowed people to contribute their knowledge about locations associated with artworks.

This improved the quality of the geographic data relating to these works, as well as helping gain new insights into how people use technology to generate novel location-based interactions with their environment through art, and with art through their personal associations. This included people who do not habitually visit museums by extending the gallery experience outside the museum and allowing for encounters with items not ordinarily on display.

Have you developed any other technologies for this sector?

We developed [Wander Anywhere](#), an active online platform which enables rapid prototyping of locative media. Authors create web content and associate it to geographic areas. Then, with the aid of a smart phone, mobile users can explore the outdoors to track down and reveal this content, experiencing it “on location”. The platform also reveals the GPS traces left by users. Our research has shown that these traces can provide valuable insight - revealing user behaviour and infrastructural issues - for authors to iterate and improve the design of the mobile experience. The platform can be given to organisations to use themselves.



We developed a partnership with the Theatre Royal in Nottingham, where we worked with them to design an interactive experience for the general public. This was an outreach event we organised within the Being Human Festival in 2015, and we used the Wander Anywhere platform to create an outdoor interactive trail. We observed a difference in visitor interaction with the experience – some immediately going out and enjoying it while others needed support to deal with the technology.

We collaborated with the State Tactile Museum Omero in Ancona, Italy. Using Wander Anywhere to play audio reproductions of travel journal entries and digitisations of sketches from the 19th century, the experience took walkers along the Ancona sea-front to sights that inspired William Turner and his contemporaries on their tour of the city and region. The walk was led by an expert tour guide and complemented by tactile representations of Turner’s sketches for partially-sighted participants. This enabled a range of people to enjoy the tour.

How have these tools helped the organisations?

We have found that it is not just about providing tools, but about exchanging knowledge and co-designing experiences with them. We help them identify which content works effectively with the technology, building their confidence in curating their own experiences so they can be implemented with the general public. This has to be a two-way exchange of information – we do not deliver the experiences by ourselves as the staff have a better understanding of their audiences than we do. We

always carry out user studies with prototypes; the feedback from these are valuable to us for improving the technology and experience, and to the institution for better understanding the public and their expectations.

So this is one way we have worked with our partners – on a one-to-one co-designing experiences in their own venue and context, they learn how to use it themselves, and we get insights into how visitors use technologies. But another way of working is to run training sessions for a group of organisations at the same time.

How does the training work?

Lack in familiarity in using technologies is one of the main issues that cultural organisations might have. We run the sessions with participants, making them practical and fun, and they have proved very popular for two reasons. Firstly they are about showing it is possible for a non-technical person to use the tools - by letting them play they realise it is not that hard. Secondly, by working together using the tools and building things, they recognise that all the individuals in the room have the same issues and they are not alone. This helps them build enough confidence to take the skills and their creations back into their own organisations, and by virtue of attending the workshop, they act as the “digital champions” who push the technology to their colleagues. They also make new connections in different organisations to exchange ideas.

We have received European Regional Development Funding to run two workshops per year for small and medium cultural organisations in the Midlands region: the first one we ran was about digital strategies for audience engagement, and the second one on delivering and implementing compelling visitor experiences. We also offer within this framework individual meetings with small cultural organisations who want bespoke advice.

We received an international collaboration fund from the University of Nottingham to collaborate with another external partner, the Qatar National Library, with whom we organised two workshops around digital heritage and how we can engage audiences in new ways.

<http://www.horizon.ac.uk/widening-audience-engagement-with-digital-content-21-january-2017/>

<http://www.horizon.ac.uk/horizon-and-qatar-national-library-workshop-on-digital-continuity-11th-february-2017/>



مكتبة قطر الوطنية
QATAR NATIONAL LIBRARY
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Member of Qatar Foundation

Workshop on 'Digital Continuity'

Qatar National Library cordially invites everyone to a workshop titled 'Digital Continuity: Securing Long Term Value of our Digital Assets and ICT Investment'. The workshop will be presented by Dr. Natasa Mlic-Frayling, Professor, Chair of Data Science, University of Nottingham.

The workshop will deal with managing data and digital technologies that can protect companies from risks of digital obsolescence. It will also encourage new conversations with technology providers that put forth digital continuity and long term access to computation as an important aspect of technology innovation and business continuity.

The workshop will be conducted in English.

11 February, 2017

Time: 10:00am – 01:00pm
Venue: Al-Khor Hall, Education City Clubhouse

Seats are limited! Please RSVP no later than 9 February, 2017 to Pavie Kosic at: pkosic@qf.org.qa

Interestingly the audiences were from varied backgrounds - for instance staff from private companies as well as public administrations participated (e.g. Qatar Airways; the Qatar Ministry of Transport, the US Embassy in Qatar) because they were interested in using our framework of engaging audiences with digital information to help re-think and re-purpose their websites and their relations with the public.

Any examples of organisations changing the way they work as a result of collaborating with you?

Ben: Dance 4 is an international centre for the development of extraordinary 21st century dance based in Nottingham who attended some of the training sessions we ran. They recently received funding to set up the International Centre for Choreography in a converted factory and they wanted to rethink the way they engaged with the public - both people who attended their shows, but also with local communities. I have scoped out the requirements for a new visitor experience for them, incorporating physical links in the public spaces around their buildings for members of the public to find and access their digital resources, and ideas to turn their website into something that is more engaging. They are starting to put the ideas into practice - building a modern, responsive website and developing ways of pulling in user-generated content.

<http://ingenuitygateway.com/dancing-their-way-to-digital-engagement-success/> I have also been engaged by Derbyshire County Council and [Buxton Museum and Art Gallery](#) as part of the Heritage Lottery Funding they received to refit the museum. I am developing mobile visitor experiences to run alongside their collections and events. These will be launched at the end of 2017 when the museum re-opens - the visitors will be able to physically visit the collections but also walk out into the surrounding landscape and find locations and objects that inspired the collections.

Has your activity led to different ways of working with other researchers?

Laura: Being involved in interdisciplinary projects, as well as inter-organisational projects with academic and non-academic partners, has led me to work in a different way – looking at research from a different perspective and being open to collaboration with people from completely different backgrounds and with very different objectives.

For instance when we collaborate with non-academic partners, while we aim to produce publications, their aims will be different. We need to accommodate everyone's needs and ensure the individuals benefit from participating in an interdisciplinary organisational team, even when working outside their comfort zone.

My research coincided timely with the introduction of the [University of Nottingham Global Research Themes Strategy](#) which identified a number of Research Priority Areas (RPAs) to support interdisciplinary groups and promote working across schools. I am involved with the [Heritage and Digital RPA](#), although the collaboration between Humanities, English and Computer Science has been a long-term one.

Within the [Digital Arts and Humanities Praxis project](#), funded by the University of Nottingham Disciplinary Bridging Award, we produced a [good practice guide](#) to support interdisciplinary teams. This is now being translated into action across the University, with a working group on inter-disciplinarity putting these recommendations into practice.

Ben: I co-lead the Heritage and Digital RPA and we have started badging the training using the RPA brand. This allows us to bring in more researchers from other disciplines to be trainers, and gives us a reach into a larger number of external organisations.

We have also released resources for trainers to use - the City Box website <http://citybox.org.uk/> is a place to bring together printable documents and digital tools that could be used by anyone to run a workshop. It's also the place to find out about events and out-reach activities we are running.

How are you measuring success of the collaborations?

Our research has reached a critical point now, where we are able to attract funds to actually translate this inter-organisational interdisciplinary research into practice. For example initially we received internal funds to work with the Theatre Royal to explore how the public would contribute to, and collaborate with, the theatre on creating a digital archive, and this has resulted in a project proposal leading to a successful [Heritage Lottery Fund \(HLF\) grant for a pilot initiative](#). So the research we did is now going to be translated through to external funding. We are also applying for more funding to support this longer term to make it a sustainable experience.



Other examples are Buxton Museum received an HLF grant to translate our ideas into practice, and the Workhouse at Southwell received National Trust funding to explore experiences based on our collaboration.



So this is how we are measuring our success - by the number of organisations that are receiving further funding to develop our ideas, and by the number of organisations that have benefited from our training.

The ArtMaps and Wander Anywhere platforms are freely available:

<http://artmaps.tate.org.uk/artmaps/tate/#zoom=15&lat=51.51&lng=-0.10&mapttype=hybrid>

<https://wanderanywhere.com/>