D3.4 – User Workshop #1

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Abstract
This document reports on the first User Workshop of the Emotive project, a two-day invited event hosted in Glasgow on 22-23 February 2017. Here we reflect on the workshop's planning, execution and outcomes in relation to its two primary aims: to develop concepts for user experiences for Emotive's cultural partner sites (Hunterian Museum, Scotland and Çatalhöyük, Turkey) and to evaluate draft experience design tools for heritage professionals.

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[1]YORK	1
[2]UGLA	1
[3]ATHENA	1
[4]NOHO	0.45
[5]EXUS	0.2

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LIST OF ABBREVIATIONS

UGLA: University of Glasgow
York: University of York
WP: Work Package
AW: Antonine Wall

1 Executive summary

Held at the University of Glasgow from 22-23 February 2017, the Emotive project's first User Workshop brought together leading international specialists in the fields of user design, gaming, curation, digital engagement and interpretation with the intent of achieving two major aims:

- To develop initial prototype emotive experiences for visitors to Emotive's two principal cultural partner sites, the Hunterian Museum in Glasgow, Scotland (specifically its Antonine Wall display) and the archaeological site of Çatalhöyük in Turkey

- To begin early-stage evaluation of Emotive experience design tools intended for use by cultural heritage professionals (namely a deck of 94 design cards)

Çatalhöyük and the Hunterian Museum formed the subjects of Day 1 and 2 of the workshop respectively. Introductory lectures on each day preceded hands-on group design sessions, leading to the conceptualisation of 10 skeleton user experiences in total (five per site).

An extended lecture by the renowned game designer Jesse Schell at the end of Day 1, and debriefing/semi-structured feedback sessions on both days complemented the programme. Emotive's draft design cards were deployed on Day 1 to structure the group work, with the debriefing sessions offering extensive critical input on their future development, notably:

- Better explaining the goal and mechanics of use of card-based design tools.

- Testing cards with users who are less expert in the relevant knowledge domain

Overall, the workshop was well-received, although its evaluation – conducted through analysis both of written, video and audio records collected across Days 1 and 2, as well as of post-event survey of participants – revealed a series of lessons learned for future user-centred activities:

- be as descriptive as possible about the goals and objectives of future events and provide detailed introductory information to familiarise participants in advance with the nature and intent of activities

- ensure a moderator is present in group-based work to guide progress, and provide more time to fully develop experiences, and less time for lectures and formal presentations

- offer greater clarity around user, institutional, technological, budgetary and emotional requirements for experience design activities to better target outcomes

Results of the experience designs and further background on the design cards, their rationale and development are forthcoming in Deliverables D3.1: User Requirements and Scenarios – Alpha, and D5.1: Conceptual Framework and Guide – First Release.

2 Introduction

Emotive's User Workshop #1 was the first official event organised by the consortium to explore and communicate the aims and activities of the Emotive project. Held at the University of Glasgow across two days in late February 2017, the workshop brought together leading international specialists in the fields of user design, gaming, curation, digital engagement and interpretation with the intent of achieving two major aims:

- To develop concepts for prototype emotive experiences for visitors to Emotive's two principal cultural partner sites, the Hunterian Museum in Glasgow, Scotland (hence, The Hunterian) and the archaeological site of Çatalhöyük in Turkey

- To begin early-stage evaluation of Emotive experience design tools intended for use by cultural heritage professionals

These aims directly connect to Emotive's larger project goals of:

(i) developing dramatic, emotionally engaging experiences for different individuals and groups to partake in while at a cultural site, remotely, or in hybrid scenarios (with some users on site while others participate remotely)

(ii) developing a powerful storytelling engine and a set of rich digital media assets that can be used to create detailed characters and experiences featuring archaeological sites or collections of artefacts

Figure 1: Participants in Emotive's Workshop #1 on Day 2 of the event in the Hunterian Museum, Glasgow

The workshop combined a mixture of lectures and hands-on, structured, small group breakout activities with semi-structured full-group feedback sessions. The two days of the event were designed to attend to each cultural partner in turn, beginning with Çatalhöyük and deploying a previously-tested model for experience development at the site (see Katifori et al. 2016, Roussou et al. 2015); and, from there, moving on the second day into a different approach without use of the design cards for developing experiences for The Hunterian. Contributors to these activities represented the end users

in our user-centred design and development process, and their participation has enabled the collection of data to inform initial prototypes of digital experiences for both cultural partner sites, as well as data to refine experience design resources for the professional cultural heritage community.

This document presents in detail the workshop's organisation, its participants and their significance to Emotive's broader project objectives, the specific goals for each of the two days of the event, evaluation of the workshop itself, as well as reflections on next steps. The results of the prototyping activities related to workshop aim #1, and results of evaluation activities related to aim #2 are described here in passing, however they are not the focus of the document. These results will be outlined in more depth in D3.1: User Requirements and Scenarios – Alpha, and D5.1: Conceptual Framework and Guide – First Release.

Figure 2: Participants look on as groups dramatise prototype Emotive experiences in the Hunterian Museum

3   Workshop Preparation

User Workshop #1 is the first of three user-focused events corresponding to important milestones in the development of Emotive. Each of these three workshops functions to help the Consortium refine Emotive's requirements and specifications, evaluate its experience design system (in terms of both usability and user experience), but also collect valuable information for both the dissemination and the future exploitation of the system.

Workshop #1 centred upon initial user requirements and early scenario and experience design work. The original intention was to host it at the University of York. At Emotive's project kick-off meeting in November 2016, however, it was noted that while York had hosted previous initiatives related to preliminary planning for Emotive (in relation to the site of Çatalhöyük; see Katifori et al. 2016, Roussou et al. 2015), the Consortium's familiarity with our second partner site of the Hunterian was less developed. Given the proximity of York to Glasgow, and the potential of building on previous work with Çatalhöyük while simultaneously allowing participants to explore the Antonine Wall collections in situ in the physical space of the exhibition at The Hunterian, it was agreed to switch venues.

Primary organizational responsibility was then assumed by UGLA, with administrative and logistical support provided by EXUS. Members of Emotive's Work Package 3 (User-Centred Design and Production) decided upon a two-day format (detailed in sections 5 and 6 below), followed by a WP3-exclusive meeting on the third day. Participants included an international delegation of cultural and creative experts, plus a selection of Emotive's consortium, totalling 30 people altogether (see description of participants, their relevance to Emotive's goals, and the process for inviting them in section 4 below).

Figure 3: Participants are familiarised with Emotive's cultural partners through lectures by site experts

The Workshop was held on Wednesday and Thursday, 22 and 23 February, primarily on the 5th floor of the University of Glasgow's Sir Alwyn Williams Building and the Hunterian Museum. A tight programme was circulated in advance of the workshop (see Annex 1), which saw presentation of information about the Emotive project, followed by expert discussion of the cultural sites (Çatalhöyük as the focus for Day 1, The Hunterian's Antonine Wall display the focus for Day 2), and defined participatory tasks related to experience development and resource/process evaluation for each of these sites. In particular, the workshop aimed to (1) develop concepts for prototype Emotive experiences for visitors to Emotive's cultural sites, and (2) begin early-stage evaluation of Emotive experience design tools (specifically a set of 94 'design cards') intended for use by cultural heritage professionals. Interspersed in the programme were multiple expert lectures on topics pertaining to Emotive's interests, including game design (by Professor Jesse Schell), emotional design (by Dr Edgar Bresó), and affective computing (by Professor Ruth Aylett) (see sections 5 and 6 below for more detail).

The workshop was recorded through note-taking, video, photography, audio-recording, and in the case of Jesse Schell's lecture, screen-recording of the Skype call. These records have been collated and archived by UGLA, and form the evidence base for the current report.

Travel and subsistence expenses for external participants were covered by the consortium, as EXUS has budget allocated for user group participation in Emotive's events.

4   Participant Profiles

Workshop #1 aimed at bringing together a small group of cultural and creative experts working at the top of their fields for two days of intensive, hands-on prototyping and preliminary evaluation work. Based on previous experience, it was decided that the workshop would function ideally with 30 participants, split into groups of about 5 to 6 people each, the majority of whom would represent external (to Emotive) organisations and interest groups. As the first outward-facing event in Emotive's programme of work, the workshop's intent was to go beyond our already-established User Group to draw in as many ideas and points of inspiration as possible in this formative phase of the project.

The User Group itself, formed at the proposal stage of Emotive, is comprised of an international body of cultural organisations and creative companies who have expressed willingness to provide the project with access to diverse collections and users, and hence the possibility to test and apply designs, tools, and results in different contexts. At this earliest stage of Emotive, however, as the Consortium is conceiving of the most high-level features of the project, we took the position that the workshop would be particularly well-served by inclusion of an even greater diversity of contributors.

As such, WP3 members were asked to compile a wish list of international invitees whose specialties spanned the range of interests of the project, and whose knowledge might come to shape the very foundations of Emotive's design and evaluation processes. Nearly 30 professionals from the cultural and creative industries, based primarily in Europe and North America, were identified and a rationale for their invitation to the workshop was provided by the nominating WP3 member. From there, a shortlist of participants was created, with attention given to achieving gender balance and breadth in terms of expertise, and an initial email was then sent to the invitee by the nominator (see invitation email in Annex 2). In the case of non-response, invitations were sent to alternatives on the shortlist, and EXUS then followed up directly, in the first instance to confirm next steps with all participants and circulate the workshop programme (Annex 1), associated cover letter and site information (see participant resources in Annex 3), and then after the workshop to circulate an evaluation questionnaire (see section 7 below). In total, 21 external experts participated in some capacity in part or all of the workshop (alongside 11 members of the Emotive Consortium):

External participants in Emotive Workshop #1		
Name	**Institution**	**Speciality**
Professor Ruth Aylett	Heriot-Watt University, Scotland	Artificial intelligence, emotive agents, narrative
Dr Edgar Bresó	Jaume I University and CEO of Emotional Apps, Spain	Emotional Intelligence, UX design
Sheila Dooley	Dublinia, Experience Viking & Medieval Dublin, Ireland	Curator and Education Officer
Tasia Duske	Museum Hack, USA	Organizational development, leadership, psychology, engagement, client satisfaction
Ruth Fletcher	The Hunterian, Scotland	Student Engagement Officer
Professor David Gaimster	The Hunterian, Scotland	Director of museum, responsible for redisplay of Antonine Wall display
Dr Areti Galani	University of Newcastle, England	Digital heritage, museology, evaluation, heritage studies
Katrina Gargett	Çatalhöyük Research Project	Student volunteer, visitor engagement, heritage interpretation
Sandra Heise	National Museum of Ireland	Curator of Historical Collections

Andrew Henderson	Çatalhöyük Research Project	Student volunteer, visitor engagement, heritage interpretation
Prof. Lawrence Keppie	The Hunterian , Scotland	Emeritus Professor of Roman History and Archaeology
Steven McNamara	Roji Design, Ireland	Exhibition design, curation
Sophia Mirashrafi	University of York	MSc in Digital Heritage student
Anne Roche	University of Glasgow	Hunterian Museum University Student Educator, Museum Studies MSc Student
Jamie Rooney	University of Glasgow	Hunterian Museum University Student Educator, History & Archaeology honours student
Professor Jesse Schell (Skype lecture only)	Schell Games & Carnegie Mellon University	Entertainment technology, games and experience designer
Katy Swainston	Imperial War Museums, England	Digital heritage, digital media, curation, evaluation
Dr James Taylor	Çatalhöyük Research Project	Archaeologist, field excavation director
Andrew Todd	Tandem Design, Northern Ireland	Interpretation designer, creative director
Angeliki Tzouganatou	University of York	MSc in Digital Heritage student
Patricia Weeks	Historic Environment Scotland	Antonine Wall World Heritage Site Co-ordinator

Additionally, several individuals invited to the workshop were not able to attend, but acknowledged their interest in Emotive and their willingness to contribute to future user group activities. These individuals included:

Potential future contributors to Emotive User Events		
Name	**Institution**	**Position**
Dr Giacomo Del Chiappa	University of Sassari, Italy	Associate Professor in Marketing
Dr Halina Gottlieb	Digital Heritage Center, Sweden AB & Interactive Insitute	Diretor & Researcher
Kati Price	Victoria and Albert Museum, England	Head of Digital Media and Publishing
Alyson Webb	Frankly, Green & Webb, England	Founding Member and Partner

The Emotive Consortium was represented by the following individuals: Maria Economou (UGLA), Hilary Young (UGLA), Manos Karvounis (ATHENA), Maria Roussou (ATHENA), Akrivi Katifori (ATHENA), Vassilis Kourtis (ATHENA), Hara Stefanou (EXUS), Niall O'Hoisin (NOHO), Breffni O'Malley (NOHO), Laia Pujol (YORK & UGLA), and Sara Perry (YORK). It was agreed that Manos Karvounis, as the Technical Manager for the project, would stand in for other members of the technical team.

5　Workshop Day 1 (Çatalhöyük)

5.1　Organisation & Goals

The goal of Day 1's workshop activities was to create interactive Emotive experiences for Building 52, a well-documented architectural structure at the urban Neolithic settlement of Çatalhöyük (see more about the site below). We also attempted to test a new design methodology: the use of design cards as a means to structure and guide the creative process in multidisciplinary teams of professionals who may not have previously known one another.

Design Cards are a common tool in Human-Computer Interaction and Coaching (e.g. Bekker and Antle 2011; Hornecker 2010; Lalioti 2016; Lucero and Arrasvuori 2012; Schell 2008; Seventhinkers 2016; Wetzel et al. 2016). They can be used for different purposes (e.g. to define groups, inform a knowledge domain, support creative design, foster collaboration); in different design phases (front-end, idea generation, idea development, documentation, and evaluation); and with different "play" rules (e.g. randomly, by turn-taking). The scholarship on these cards stresses several advantages of using such a tangible, playful approach to design: cards help kick off and structure discussions; support focus shifts; constitute physical props for conversation; provide a common vocabulary; allow an open-ended rather than prescriptive approach; bridge gaps between theoretical frameworks and design; facilitate equal participation; encourage risk-taking; enhance motivation; and reduce awkwardness in groups of unrelated people.
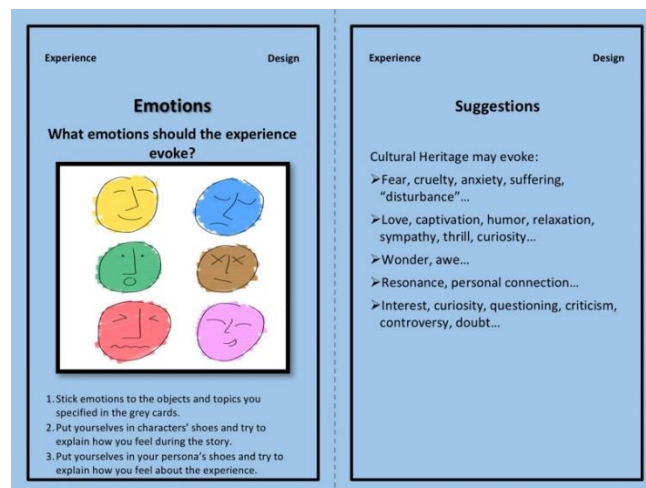
Figure 4: Examples of two of 94 draft design cards evaluated
during Day 1 of the workshop

Given the above, Emotive started the elaboration of a card-based methodology to support creative processes in cultural heritage institutions. A set of 94 cards divided into 4 suits and 7 categories was designed and printed by Emotive's WP3 partners (York and UGLA) to be tested during the meeting in Glasgow. The cards themselves will be further detailed in D5.1: Conceptual Framework and Guide.

To introduce the task and the cards themselves, Day 1 of the Workshop followed a specific programme of orientating presentations (about the project, the site of Çatalhöyük and Çatalhöyük's visitor offerings), followed by a card-led experience design group activity, and a quick evaluation-oriented debriefing session, ending in a live-streamed Skype lecture and question period with the world-renowned game designer Professor Jesse Schell. Each of these components of the day is outlined below.

5.2   Presentations

Following a brief welcome to the workshop by Maria Economou (UGLA), and a 10-minute overview of Emotive's origins (in the CHESS project) and goals by Maria Roussou (ATHENA), all attendees at the workshop introduced themselves. From here, James Taylor provided a 30-minute lecture on the site of Çatalhöyük in Turkey, outlining its excavation history, its historical importance as a locus of development of early urban living in the Levantine Neolithic, and some of its key archaeological features: its burials and exceptional preservation of human remains, its wall and sculptural art, its unique homes whose footprints were maintained over 1000s of years. A short discussion period following Taylor's lecture allowed some of Çatalhöyük's other remarkable characteristics (including is egalitarian social structure and non-blood-related household organisation) to be introduced. Sara Perry (York) then discussed the extensive challenges associated with catering to the site's 20,000+ annual visitors, and two of Çatalhöyük's Visualisation Team members, Katrina Gargett and Andrew Henderson, then detailed visitor demographics and visitor experiences respectively.

Figure 5: Sara Perry (York) introduces Çatalhöyük's field director, Dr James Taylor, prior to his lecture about the site

Subsequently, Laia Pujol (York & UGLA) introduced workshop participants to their prototyping activity groups, and instructed them to complete certain introductory tasks during the lunch hour.

5.3   Experience Design: Çatalhöyük

The Çatalhöyük prototyping activity was divided into several parts. Immediately before lunch, participants were informed of the goal and structure of the activity, the materials that would be made available to them, and the group they were assigned to. Groups (5 in total, composed of 5 to 6 people) were allocated based on diversity in terms of gender and expert speciality, including at least one Emotive member per group, including one technical team member, as well as one Çatalhöyük site specialist. Each was randomly assigned a package of information about Çatalhöyük which included

imagery and a specific persona representing a known visiting group demographic for the site (the personas themselves will be described in detail in D3.1: User Requirements and Scenarios – Alpha).

Group Name	Ozan Family
Picture	https://www.flickr.com/photos/77967821@N00/5736726108/
Group Type	Family unit within a larger tourist group
Total Number	18 tourists in all; our family is 3
Relationship	The tourist group is made of several family groups: strangers to each other. Our group is grandfather, his daughter, and her son (hence grandson)
Ages	67, 40, 10
Gender and Name	Kemal Reis (male - grandfather), his grandson Adem Ozan (male), and his daughter Seda Ozan (female - mother to Adem)
Country of Origin	Turkey - Ankara - 4 hour drive to Çatalhöyük
Occupation	Kemal is retired, Seda is a middle school teacher, and Adem is a young student
Language	Turkish
Hobbies/ Interests	(1) **Kemal** enjoys gardening and woodworking. He is an avid reader, and a bit of a luddite. He particularly enjoys doing research into local history and family ancestry. (2) **Seda** teaches middle school science and is very physically active. Enjoys running and swimming on the weekends. She uses technology often but doesn't really understand how it works. She prefers using her digital camera rather than taking photos on her smartphone. She is a fairly social person and is keen to

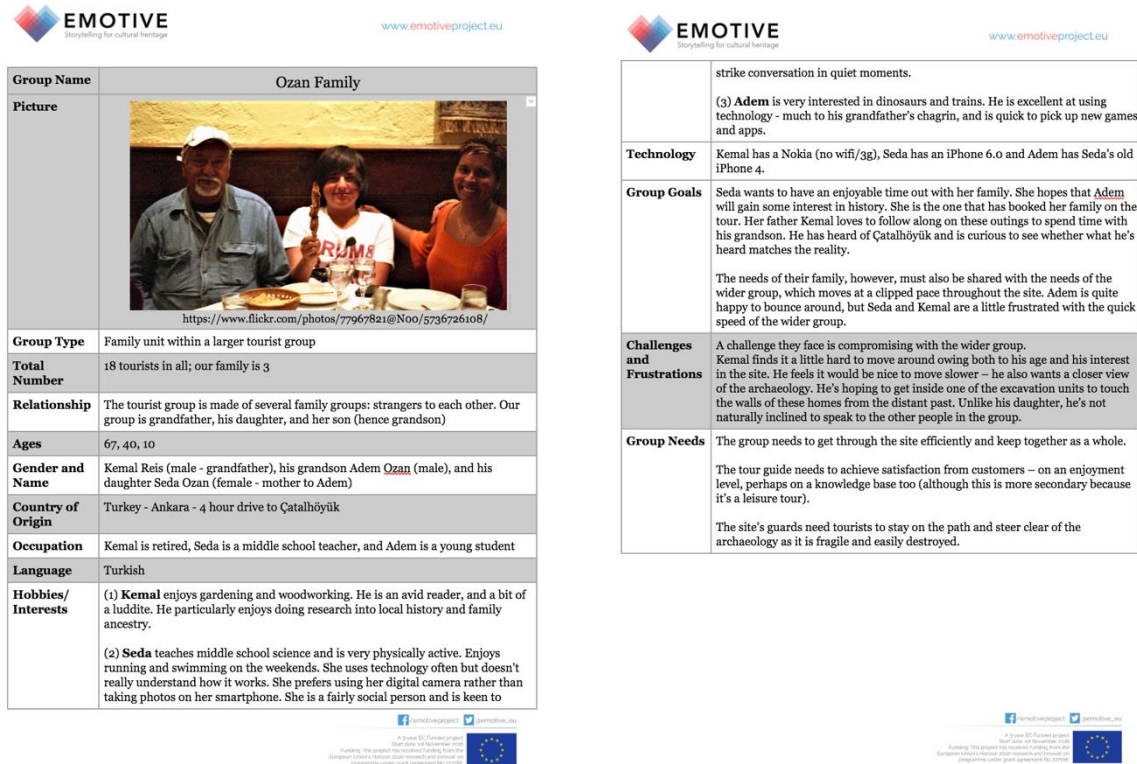|	strike conversation in quiet moments. (3) **Adem** is very interested in dinosaurs and trains. He is excellent at using technology - much to his grandfather's chagrin, and is quick to pick up new games and apps.
Technology	Kemal has a Nokia (no wifi/3g), Seda has an iPhone 6.0 and Adem has Seda's old iPhone 4.
Group Goals	Seda wants to have an enjoyable time out with her family. She hopes that Adem will gain some interest in history. She is the one that has booked her family on the tour. Her father Kemal loves to follow along on these outings to spend time with his grandson. He has heard of Çatalhöyük and is curious to see whether what he's heard matches the reality. The needs of their family, however, must also be shared with the needs of the wider group, which moves at a clipped pace throughout the site. Adem is quite happy to bounce around, but Seda and Kemal are a little frustrated with the quick speed of the wider group.
Challenges and Frustrations	A challenge they face is compromising with the wider group. Kemal finds it a little hard to move around owing both to his age and his interest in the site. He feels it would be nice to move slower – he also wants a closer view of the archaeology. He's hoping to get inside one of the excavation units to touch the walls of these homes from the distant past. Unlike his daughter, he's not naturally inclined to speak to the other people in the group.
Group Needs	The group needs to get through the site efficiently and keep together as a whole. The tour guide needs to achieve satisfaction from customers – on an enjoyment level, perhaps on a knowledge base too (although this is more secondary because it's a leisure tour). The site's guards need tourists to stay on the path and steer clear of the archaeology as it is fragile and easily destroyed.

Figure 6: Example of one group persona developed for Çatalhöyük and used to structure experience design during Day 1 of the workshop

During lunch, groups were asked to conduct an exercise used often in coaching to get to know the rest of their team members. After lunch, groups sat at different tables, where a set of resources had been placed. The set included: two decks of cards (design-oriented and Çatalhöyük Building 52-oriented); persona files; and office material (paper, pens, markers, post-its). From there, leaders of the session (York) reminded participants of the goals of the session and recommended a structure for the development of the activity: (1) getting familiar with the assigned personas, (2) reading the basic information about Çatalhöyük provided in the site-specific cards and the imagery, (3) playing with the design card deck, and (4) engaging in the design activity with the help of the aforementioned materials. The session lasted 1 hour and 30 minutes. Coffee break (15 minutes) was used to prepare for reporting. Following this, participants presented in turns their designed experience and then together reported on the design process (e.g. choices, challenges) and the different tools/materials available to them (personas, subject information, cards) (45 minutes). Their reports are discussed below in section 5.5. The experiences themselves will be documented in depth in D3.1: User Requirements and Scenarios – Alpha, but were highly varied in their nature, ranging from an all-knowing 'wizard' who could be engaged to answer questions about the site, to a role-playing adventure with archaeologists and a ghost from Neolithic times, to a treasure hunt and a tour guide-based voting game.

Figure 7: Groups report on their emotive experience designs on Day 1 of the workshop

5.4   Jesse Schell Presentation & Questions

The end of Day 1 was reserved for a special session, a presentation by the very well-known game designer and professor at Carnegie Mellon University's Entertainment Technology Center, Dr. Jesse Schell[1]. The presentation focused on "Theming" and three themed entertainment principles: 1. Know your story, 2. Tell your story using every means possible, and 3. Assume your guest's point of view.

Figure 8: Screenshots of Dr Jesse Schell during his hour-long expert lecture to Emotive workshop participants

The question and answer session kicked off with a "critical" question concerning the stereotyped gender roles assumed by the designs that Schell presented. Other questions related to a range of topics, including:

- Storytelling that is "right for the time".

- Are personas a useful tool for understanding and knowing one's guests? Schell's response was that any tool that lets you think concretely about who your guests is good, and that the best

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[1] https://www.etc.cmu.edu/blog/author/jschell/

use is when you hand craft a set of personas that more or less encapsulate the span of guests you are likely to get.

- Layering experiences so that they cater to different types of visitors, e.g. family groups? Schell explained that location-based situations are special because people do not approach them alone so the appeal should be universal.

- Strategies in dealing with situations where the designers need to make their audiences feel uncomfortable with themselves (such as migration, holocaust, racism, etc.).

- 3D-printed artifacts as souvenirs, are they meaningful? Schell believes that souvenirs are important because they make people remember, have a continuation of their experience, and create a loop of return.

- Can a solely VR experience include all of the elements discussed or is it limited? Schell responded that it works when you use the VR world to leverage the power of the physical world.

The full video recording of Jesse Schell's presentation has been uploaded on YouTube in Unlisted mode so that members of the Emotive project who could not attend the workshop can watch it: https://youtu.be/mYqI06tv44w.

5.5   Feedback on Experience Design & Day 1

Information about the usefulness of the Emotive cards as a design methodology was obtained in two ways: through direct observation of group dynamics during the activity, and as feedback provided during debriefing sessions at the end of Day 1 and Day 2. We provide here a very condensed summary of findings (also see section 6.4 below), but note that these will be discussed in detail in D5.1: Conceptual framework and Guide. Both the activity session and the debriefings were video and audio-recorded for more in-depth analysis.

5.5.1   Conclusions about the Use of Cards as a Design Tool

Observations during the design session suggested the following conclusions:

- Participants spent most of their initial time familiarising themselves with Çatalhöyük's personas and basic information about the site. This was to the detriment of the exploration of the design cards.

- The cards provided a tangible referent to basic information (about the knowledge domain) and the specific issue under discussion.

- Cards helped structure some of the design process and/or focus on the issue at hand in variable ways.

- "Players" (group members) mostly used the cards' title and inspiring question to guide their work.

The final debriefing on Days 1 and 2 provided the following feedback on the cards (note that this feedback is presented here in only the most general of ways, as it will be discussed in depth in D5.1):

- During the workshop the cards helped: (1) Structure discussion in an easy manner, especially given the fact that team members did not previously know each other, (2) start conversation and/ or resume it when there was silence, (3) focus on specific things and remember them during the design process.

- Given the timeframe, the cards were considered overwhelming because there were too many.

- Groups contained skilled, experienced professionals and therefore issues were discussed naturally; as a result, participants felt stressed because they had not used the cards, yet at the same time many felt they did not need the cards.

- The cards themselves were structured in a two-sided fashion, with suggestions for possible experiences outlined on the reverse side. Participants felt these were confusing because they compelled them to spend a lot of time thinking about how to manage the suggestions 'correctly'.

- Participants considered cards may be more useful for more advanced phases of design, to develop and refine experiences.

- Target users: participants considered that the cards could be useful for meetings between design companies and museum clients, to help focus and structure their initial discussions.

6   Workshop Day 2 (Hunterian Museum, Antonine Wall Exhibit)

6.1   Organisation & Goals

Day 2 of the workshop aimed to develop experiences for the Antonine Wall display at The Hunterian without use of the design cards to allow for comparisons with Day 1. This meant that the sessions were designed to enable greater freedom, exploration, first-hand learning through physical visitation of the displays in the Hunterian, and no requirement to utilise the design cards. Like Day 1, presentations preceded participatory group work, with lectures by both design and content experts (see section 6.2 below). Following these, a semi-open-ended Antonine Wall (AW) group activity was launched which included "bodystorming" in the museum display area, designing a suitable experience for assigned personas, and a summative "dramatisation" of the experience to the plenary. Physically situating the design activity within the museum allowed participants both to experience the museum during opening hours with the general public present, and importantly, to see the physical objects on display.

Figure 9: Participants look on as groups dramatise their emotive experiences in the Hunterian Museum

6.2   Presentations

Before introducing groups to the AW, talks were presented by two workshop participants who are experts with negotiating the role of emotions in computer applications. Dr Edgar Bresó (Emotional Apps and Jaume I University) spoke on the topic of 'Emotions & Technology: how to make it possible', while Prof Ruth Aylett (Herriot Watt University) discussed 'Emotional Agents and Narrative'. Bresó provided a general framework on emotive design, reviewed his research on psychological theories of emotional engagement, and commented upon how these were used as the basis of the apps designed

by the company he is a co-founder of, Emotional Apps. He also described specific examples of application, including the deployment of emotion to capture engagement for autistic children.

Immediately following Bresó, Prof Aylett discussed the use of empathic agents in various games. Such an approach seeks to put users in more active positions, allowing them to engage emotionally in different scenarios and with various characters, typically with training and educational aims. Her work included changing attitudes and perceptions, for example to help primary school children become more aware of bullying and the opportunities for changing behaviours to more actively stop such bullying in the future. The different ways of using, stimulating, and capturing emotional engagement, as outlined by both speakers, presented several useful lessons for Emotive, some of which are noted below.

Participants were then introduced to the subject of the next design challenge, the second case study, the Antonine Wall display at The Hunterian and its related UNESCO heritage site. During three 20-minute presentations, participants were given background about the AW and the Hunterian exhibition which showcases most of the findings from the site. The presentations included:

(1) "The Hunterian and the Development of The Antonine Wall: Rome's Final Frontier Display" by Professor David Gaimster (Director of The Hunterian and responsible for the redisplay of the Antonine Wall collections at The Hunterian). Prof. Gaimster's talk introduced the Hunterian as a university museum, its history, character and type of collections, and where digital media would help to meet key aims. He also referred briefly to the profile of the Hunterian's visitors to help participants make the link with the five personas that were used later in the afternoon.

(2) "The Historic, Geographical, Political and Archaeological Context of the Antonine Wall, its Rediscovery and Importance Today" by Professor Lawrence Keppie (Professor Emeritus, University of Glasgow). Prof. Keppie's talk highlighted the importance of the monument, the multiple archaeological sites across Scotland linked with it and archaeological research after its rediscovery.

(3) "An Overview of the Management and Interpretation of the World Heritage Monument, Including Use of Digital Technologies, by Historic Environment Scotland" by Patricia Weeks (World Heritage Site Co-ordinator, Historic Environment Scotland (HES)). Weeks explained where the AW sits within the UNESCO structure of the Frontiers of the Roman Empire World Heritage Site (which cuts across several countries) and the related management implications. One of the AW's linked sites includes Limes in Germany, and in collaboration with the cultural organisations which manage that site, HES has been developing a digital platform which brings together digital models, 3D scans, augmented reality and traditional interpretation, such as video and text, for the interpretation of both Roman Frontiers sites.

With this background information in mind, it was time for participants to actively engage with the collections and material on display and start designing emotive experiences for the Antonine Wall: Rome's Final Frontier display. They physically relocated to the Hunterian Museum, within walking distance of the Sir Alwyn Williams Building where the talks took place, and situated also at the University of Glasgow campus, where the group activities took place.

6.3 Experience Design (Hunterian Museum)

As per above, during the planning phase of the workshop, it was agreed by the Emotive WP3 members that the second-day AW group work would not use the design cards tested on Day 1. This was decided in order to observe other ways of developing methodologies for creating emotive experiences. After the experience of the Day 1 participatory activity, it was decided to also give more specific instructions

to the groups on how long they should spend on the various components of the work. Accordingly, groups were asked to follow a loose model for structuring their time:

(1) Visit the AW display (10 mins)

(2) "Bodystorm" within the museum display and script the experience (605 minutes)

(3) Finalise the experience and prepare its presentation/dramatization over lunch (60 mins)

(4) Present or dramatise the experience to the plenary (10 minutes per group)

Each group was assigned one persona or a group of two from a range of five Hunterian personas, the details of which will be described in full in a forthcoming report (D3.1: User Requirements and Scenarios – Alpha). The personas were based on The Hunterian's mission statements and other strategic documents, visitor statistics, visitor observations, and informal interviews with staff.

Figure 10: Example of one persona developed for The Hunterian and used to structure experience design during Day 2 of the workshop

The delegates were divided into five groups with a different composition than the previous day. The decision to restructure the groups was taken based on informal feedback provided to various members of the team regarding human-to-human dynamics experienced on Day 1, and a related desire to start the task fresh, unaffected (as much as possible) by previous experience.

Each group included at least one Emotive team member, one member who was able to act as an "expert" on the AW display (from The Hunterian or HES, including Emotive members), and at least one ATHENA team member to represent technological knowledge. Each group was given materials (markers, post-it notes, A3 paper) to use to draft their experience. These sheets were then collected at the end of the session for Emotive reference purposes.

The instructions for the experience given to the participants were:

• to design an **on-site** visitor experience, i.e., for when their persona(s) is physically visiting "The Antonine Wall: Rome's Final Frontier" display at The Hunterian.

• to also consider, however, how an off-site visit could work or a hybrid combination of both an off-site and an on-site experience if they were designing for two or more personas.

• to consider all of the persona cards and choose if and how their specifically-assigned persona interacts with any of the others.

- to create a new persona if they thought this was important for their experience to work.

- to use at least 2 objects in their experience from the 6 object cards provided in their packs.

- to choose any other object(s) from the display that they thought might trigger the curiosity of their persona(s).

The groups were encouraged to focus on developing an experience appropriate for the persona(s) they were designing for, and not to worry about cost or the technical requirements needed to realise them. The resulting experiences, as for Day 1, were diverse, but also included certain interesting parallels – including integration of 3D prints into pre- or post-visit engagement, photo-sharing and selfie-taking, logo and brand identification, personalisation-focused quizzes, and tracking of visitor choices and movements. These experiences will be described in detail in Deliverable D3.1: User Requirements and Scenarios – Alpha.

Figure 11: Participants study personas and other resources in preparation for the development of emotive experiences in the Hunterian Museum

6.4   Feedback on Experience Design & Day 2

Day 2 concluded with an approximately hour-long semi-structured debriefing session amongst a majority of the participants at the workshop, led primarily by UGLA and York (note that a handful of invitees had to depart early owing to travel or other commitments). Questions concerning the structuring of the day, the background information provided to participants, and the objectives and outputs of the prototyping exercise were supplemented by comments and questions fed by the audience.

Feedback on the activities and overall organisation of Day 2 was generally more positive than for Day 1, with several participants reporting that the ability to work directly in the Hunterian while physically experiencing the AW exhibits was very helpful for the development of experiences. Furthermore,

participants acknowledged that the morning's introductory lectures on the AW and Museum set the scene for immediate engagement with the design task in the afternoon (although see below for further critical input). The introductory presentations also allowed people to tour the physical display with some pre-knowledge and gain a good sense of the objects before the design task started.

In Day 2, all groups also had the added bonus of being able to draw on their experience from Day 1's activities and benefitted from having at least trialled the design cards in that activity. Despite not being provided with the design cards in Day 2, the experience with these in Day 1 arguably helped them to jump right into the AW exhibition's design tasks. There was less "skills sharing" between new group members, possibly because people had already familiarised themselves with participants' specialisms during Day 1 and with hindsight it was more apparent what was needed to be done.

The activity brief specifically asked participants to 'design an on-site visitor experience' using at least two of the designated objects and all groups delivered this successfully. Despite the options offered in the brief for each group to include one of the other personas from the pack provided if needed, none of the groups felt the need to do so (except for one - Group 3 - which considered introducing Suzie's persona). Additionally, none of the groups felt the need to create a new persona. Finally, none of the groups chose any additional object from the display apart from the six objects included in the information sheets in their pack.

Figure 12: Participants launch into 'bodystorming' in the Antonine Wall gallery of the Hunterian Museum

By not including technological limitations on the design in the brief, it could be argued that this both hindered the process (in terms of people being unable to distil an idea down and focus in on the detail) yet it may also have freed up the design process (i.e., people were unfettered by technological constraints of what is actually possible within budget). During the final discussion, some participants (notably, professional exhibition designers and technologists) noted that they would have liked more technological or budgetary constraints from the beginning in order to refine their experiences more.

Some of the groups did specify type of technology that would be used in their experience, while others focused more on the interaction between the user and the content.

Overall, the dramatization of the experiences allowed several groups to perform within the space which produced a lot of positive energy and enthusiastic reactions by all participants, and helped visualise more clearly what was presented. A few groups used A3 charts to present or talk in a more traditional fashion in the display, while most moved around the exhibits and had different group members enter their persona's role and perform in that.

There was an impressive range, richness, and variety of experiences designed by the five groups, from dressing up profiles and soap opera scenarios, to interactive dating apps. The five AW personas worked well for all groups. Moreover, the AW object information worked effectively.

The participants cited both at the debrief discussion at the end of day 2, as well as in their online feedback questionnaires later, that they would have liked more hands-on time to develop their designs further and fewer introductory talks and speaker presentations. The group activities were evaluated as the most important and useful elements of both days for both external participants and Emotive team members.

Figure 13: Participants dramatise their emotive experiences for the audience amongst the Antonine Wall displays in the Hunterian Museum

6.4.1 Conclusions about the overall design experience

Participants would have appreciated more information about the design space (e.g., budget, available technology and resources) and the specific goal of the experience (e.g., to increase visitors, enhance engagement, etc.). Even a clearer assignment specifying type of experience and technology available (e.g., a game that increases emotional engagement with objects) perhaps would have relieved some of the tensions expressed by group members. The assignments were too broad given the timeframe.

Clearer goals and constraints would have helped complete the assignments more effectively, including presenting specific design requirements before even providing context on the sites or their visitors.

Participants also had the impression that activities were a bit rushed in terms of content. Focusing on one site during both days could have helped obtain more concrete results and eased concern expressed by some participants that they were not actually meaningful contributors to the aims of the workshop (see section 7 below). As well, a need was noted for a leader or moderator to be nominated in each group during both days' activities in order to help better structure development in the specified timeframe.

In terms of resources, the persona files worked very well. The number of personas was sufficient for the task and they were perceived as representative of actual and potential visitors. The information provided was useful to understand visitors in a quick fashion. One group suggested that the motivation of personas to go to Çatalhöyük was not clear enough, but this was not reiterated by other groups. Çatalhöyük's personas were designed as groups of visitors, as it is unheard of for anyone to travel to the site independently. These 'group personas' were perceived as more challenging than single personas owing to having to attend to the needs of many users simultaneously. However, they also clearly helped workshop participants to take into account group dynamics and different roles played by members of a visiting party. The process was effective because, in comparison with marketing personas (to be discussed in D3.1: User Requirements and Scenarios – Alpha), Emotive personas were very much action-oriented. In conclusion, participants considered group personas to be suitable for cultural heritage settings given group visitation is the normal visit modality in comparison with other design contexts.

With regards to site-specific cards, while the Hunterian's were well-received, there was a concern that Çatalhöyük's were too particular to Building 52. Participants wanted access to more general information (landscape, eras of occupation) to be able to create experiences, even if still related to the building. They acknowledged that having a Çatalhöyük expert in their group was tremendously effective: he/she would (1) bring relevant information, (2) clarify where an activity, story, character, etc. suggested for the experience made sense, and (3) give a sense of the actual setting and visitor experience in the present day. With or without the presence of an expert, however, information - short and concise - containing general ideas or larger concepts that might be interesting for a diverse range of target audiences (including non-visitors) would be more useful for site-specific cards.

Figure 14: Participants dramatise their emotive experiences for the crowd in the Hunterian Museum

With respect to Emotive's larger project goals in relation to the prototyping experience, it was argued that to effectively include emotions in cultural heritage experiences, it would be meaningful to specify certain emotions that people share or can easily relate to (instead of talking about them in an abstract way: i.e., 'create an emotional experience'). Also, as there are obvious topics and circumstances that are shared between people past and present (e.g. migration, poverty), these can be deployed as powerful tools for connecting individuals across time and space. It was recommended that we aim not merely to generate happy experiences amongst users, but (as Aylett evidenced during her presentation) to draw on negative situations and emotions, as they have the potential to trigger reflection and change perspectives. Following on, participants suggested that experiences should aim at challenging people without being too sentimental or without making them feel overly vulnerable. It is important to think (perhaps via surveys or emotion-mapping exercises) about how to set up experiences to support people through such processes. A structure similar to Freytag's pyramid was proposed, as well as the integration of different emotions along the experience. It was also suggested that we work in terms of position along two axes: level of user activation and level of user pleasure. In any case, the use of emotions is justified by their role in creating memorable experiences.

A final discussion also posed the question of whether Emotive should address the needs of school visits (i.e., design experiences as educational resources for teachers to prepare visits and for pupils to enjoy them). The challenges of such work, especially taking into consideration the diversity of educational methodologies, organization, and curricula, are many and require sustained reflection.

6.4.2   Recommendations for future work

Given the timeframe of the workshop, the Emotive cards were probably not the most appropriate tool to meet the event's goals. Such cards aim at a more open, long-term design process, whereas

participants in Workshop #1 felt they needed to complete a quite complex task in a very limited amount of time. Further review of the cards collected at this workshop will be incorporated into D5.1.

As a final note:

(1) group personas appear to be very suitable for some, if not all, cultural heritage settings, as they represent the normal visit modality.

(2) The information provided about cultural sites cannot substitute for the presence of an expert. Yet, in the case where such experts are not present, the material made available to users should provide high-level, identifiable information that may appeal to a diverse range of visitors, and give a sense of the actual physical configuration of the heritage setting.

(3) More research and reflection on the purpose, implementation, and perception by visitors of emotions in cultural heritage settings should be conducted.

(4) A follow-up email containing the results of the workshop, and how it was useful to the Emotive Consortium and is shaping current work, should be sent to workshop participants.

As evidenced in section 7 below, these conclusions, derived from analysis of notes and recordings gathered during Days 1 and 2 of the workshop, are affirmed by findings from a post-workshop, mixed quantitative-qualitative questionnaire circulated by EXUS to participants.

7 Evaluation of the Workshop

The first Emotive Experience Prototyping Workshop was evaluated by its participants one week after the event with the use of an online questionnaire. Participants evaluated (a) the various sessions in terms of usefulness, organisation, duration, how well they matched their original expectations, and (b) the overall workshop organisation and experience. They also had the chance to comment (free text) on the positive and negative aspects of the workshop and make suggestions for improving future Emotive events.

In total the questionnaire was sent to the 20 workshop participants (the organising committee was excluded from the mailing list), and 10 answers were collected.

The questionnaire is available in Annex 4. Results are presented in the following sections.

7.1 Evaluation of the workshop organization

Q1 – I attended

80% of the respondents attended both days of the workshop.

Answer Choices	Responses	
Day 1 only	0.00%	0
Day 2 only	20.00%	2
Both days	80.00%	8
Total		**10**

Q2 – Before the meeting…

This question aimed to evaluate the extent to which participants had the correct idea / expectations about the goals of the workshop. A large number of respondents (60%) came to the event without knowing about, or unsure of the purpose of the meeting. At the same time, however, most of them (60%) agreed that they received sufficient information. This brings attention to the fact that Consortium members need to be more descriptive about the goals and objectives of future workshops.

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree	Total	Weighted Average
The meeting purpose and objectives were clearly stated	0.00% 0	30.00% 3	30.00% 3	40.00% 4	0.00% 0	10	3.10
Sufficient, useful and clear information was provided	0.00% 0	10.00% 1	30.00% 3	40.00% 4	20.00% 2	10	3.70

Q3 – Suitability of venue and equipment

Most participants (90%) found the working venue suitable for the workshop.

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree	Total	Weighted Average
The working venue was suitable for the meeting in terms of room size, equipment, furniture	0.00% 0	0.00% 0	10.00% 1	20.00% 2	70.00% 7	10	4.60

Q4 – Effectiveness of the meeting

Most participants (~65%) found the workshop overall effective. They all agreed that the right people were present in the workshop and most of them (60-70%) agreed that the workshop was well structured, the presentations were effective and the agenda was covered. However, a large number of participants (70%) were not sure whether the goals of the workshop were achieved. In combination with Q2 regarding the purpose and objectives of the workshop, these results show that introductory information sent to the participants could be more detailed.

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree	Total	Weighted Average
The right people were present in the meeting	0.00% 0	0.00% 0	0.00% 0	50.00% 5	50.00% 5	10	4.50
The meeting was well structured	0.00% 0	0.00% 0	40.00% 4	50.00% 5	10.00% 1	10	3.70
The presentations were effective	0.00% 0	10.00% 1	30.00% 3	50.00% 5	10.00% 1	10	3.60
During the meeting all the topics included in the agenda were covered	10.00% 1	0.00% 0	20.00% 2	40.00% 4	30.00% 3	10	3.80
The goals of the meeting have been achieved	0.00% 0	0.00% 0	70.00% 7	20.00% 2	10.00% 1	10	3.40

## Q5 – Effectiveness of communication / knowledge exchange during the meeting

The majority of participants (~85%) found communication and knowledge exchange effective. 80% of the participants agreed that the participants had the opportunity to contribute their own expertise and were actively involved. All participants found that the workshop had a positive tone. Attention should be given in the future to the fact that 20% of participants found the discussion not properly controlled and managed.

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree	Total	Weighted Average
The discussion was properly controlled and managed	0.00% 0	20.00% 2	0.00% 0	70.00% 7	10.00% 1	10	3.70
The participants had the opportunity to contribute with their own expertise	0.00% 0	0.00% 0	10.00% 1	50.00% 5	40.00% 4	10	4.30
All meeting participants were actively involved	0.00% 0	0.00% 0	30.00% 3	40.00% 4	30.00% 3	10	4.00
The meeting had a positive tone	0.00% 0	0.00% 0	0.00% 0	20.00% 2	80.00% 8	10	4.80

Q6 – Overall, how would you rate the meeting?

Overall, participants found the conference "good" (30%) to "very good" (60%), with one participant ranking it as excellent. This result shows that the event was successfully organised.

Poor	Fair	Good	Very good	Excellent
0.00% 0	0.00% 0	30.00% 3	60.00% 6	10.00% 1

Legend: Poor | Fair | Good | Very good | Excellent
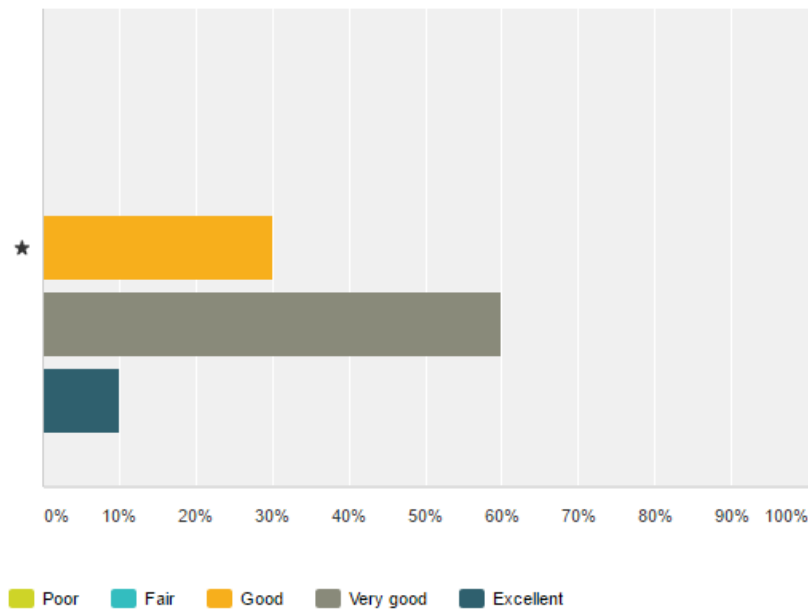
7.2 Comments / Suggestions for improvement

Q16 – What did you like about the meeting?

This was a free-text question. Responses focused on:

- **Participant expertise**

"A lot of varying participants with different views which added to the challenge and discussion."

"Incredible expertise and experience of participants."

"I enjoyed meeting new people from different backgrounds with different skills."

"It was great being able to meet people with similar interests but working in different fields."

"[…] I enjoy meeting and discussing issues with a diverse range of experts with varied experiences and skill-sets."

"Meeting colleagues with a wide range of specialisms sparked lots of ideas."

- **Collaboration and Creativity**

"Enjoy the discussion and the people."

"[…] equally liked brainstorming with different individuals and thinking creatively."

"The collaboration aspect was very good!"

"I particularly enjoyed being able to see the museum itself which aided in the creation of the experience."

"Speaking with international collaborators was also a brilliant experience."

"It is always a good experience to be creative within one's field of research."

"Very fresh and unexpected ideas come out of the working sessions!"

"Positive buzz and creativity."

- **Case studies**

"That it was based around practical case studies."

▪ **Comments on organisation issues**

"The networking, timing of schedule, people present, tasks given, visiting the Hunterian, sharing lovely dinner, having coffee on tap."

Meeting Participants Experience Ideas Able

Text frequency analysis on the best aspects of the workshop, as articulated by respondents to the workshop evaluation questionnaire.

Q8 – What did you dislike about the meeting?

This was a free-text question. Responses focused on:

▪ **Vague goals and instructions**

"*I was vague about the overall goal. I thought it was about creating and connecting emotional experiences using collections but there was an inherent trend towards using multi-media. The task on the first day was too broad, too many options without really knowing what the limitations of the exercise were, e.g. do we have to use mobile devices or not. The project seemed to favour using mobile but it was never specified. I would have like clearer definition of what was being sought, e.g. 1 - a mobile friend device, 2- an interactive exhibition experience, 3 - a low-tech interactive, 4 - a static interpretation etc...***"**

"Lack of direction/facilitation in the group exercises."

"Parts of the process were not clear (e.g., how and why to use the cards)."

"*Unsure of if we realised the potential of having so many skilled people together for 2 days...not clear on the goals of the workshop.***"**

"As I've been thinking-- it might be great to just have started by sharing out what have been some of our emotional experiences in a museum. What caused those for us? Then go to in which way technology could have enhanced that emotional experience. When we get clarity over what is the root of what we want to accomplish, we can figure out to plan an activity around it."

▪ **The tight agenda – time allowed to cover all aspects**

"At times it seemed a little rushed, but to be honest it was not a problem for the most part."

"The limited time available for the working sessions limited the creative process of the groups."

"Quantity/scope of tasks compared to time allowed."

"Some speakers did take a little too long which impacted on discussion time."

"Instructions were rushed and a little hard to follow after morning presentations. Overrun in morning session was unfortunate but perhaps unavoidable."

▪ **Not valuable results**

"For me the most frustrating thing about the meeting was that it wasn't clear whether the information we had provided or ideas we generated were valuable. For me it therefore was not a very rewarding experience. I understand that the project is in a very early stage, but I would have liked to be able to see more tangible evidence about what is going to happen with the ideas we generated. In order for this to happen, I strongly feel that we needed more time to brainstorm ideas (at least half a day), as well as time to provide critical feedback on the ideas of other groups. I also did not feel that I really understood what the next steps were. Whilst we did discuss our thoughts towards the process and tools

used in the development of our ideas, we did not discuss what would actually happen to the ideas themselves!"

"The presenters were very knowledgeable- Felt it was very much pass of information compared to doing. I did not gain actionable things I could use right then at apply to game creation. All of it is great in theory-- where is the next step.. how do we do this now? There are a lot of great storytelling resources on emotional story telling."

Q9 – Is there anything else you'd like to share about the meeting?

Through this question the participants shared various ideas for future improvements:

"I really enjoyed it, thought it was huge fun and learned lots. The people at it were wonderful and I am still blown away by Catalhoyuk"

"I went to the Kelvingrove Art Museum following this meeting and feel they NAILED it on what we were aiming to achieve during this workshop. They had one gallery that hit so many emotional levels and engaged participants in such an outstanding way.. I wish we would have gone there first just to get ideas of how it can be done. They expand from there. Examples:

1.) Gave you the information about the carving of a canoe and challenge participants to take a risk and share the story with strangers around them.

2.) Had speech bubbles attached near a painting where guests could type in what they felt the three people in the painting were thinking and it would show up on the screen!

3.) Guess how the story goes... You had a flip book of different scenarios (Some of which greatly humorous) of what might have happened.

4.) An activity based on a painting of a table where the elements of the table where movable pieces. Guests arranged the pieces based on how they felt they should go and then were asked to go around the gallery to find the real painting and see how the artist felt it should be made! (Recognition of the painting in the gallery after the game part of that was a great emotional experience). THEN the verbiage of the wall plaque listed what the artist believed first! Not any history lead up, just this artist believed in painting to show the world.

There were many, many more examples of emotions in technology (Tablet near a painting that told the story of the artist along with music and pictures! All which are so great to get someone engaged in the artwork and it also broke social conventions regarding what a museum experience was all about!- Sit on a chair in front of a painting and listen to music? Love it!

I think there is so much power to what can be accomplished during this project and I want us to figure out something tangible that we can all walk away from and say!-- YES! Here is a clear idea of how we accomplish. Maybe that is wanting to be more involved than just brainstorming! It is all very exciting."

"It would perhaps have been good to know which outcomes were most valued (the process or the product) in order to know how best to have approached the tasks."

"I really enjoyed taking part and appreciate the work that goes into organising such an event. I would look forward to being involved in the future."

"Thank you for setting this up! It was a fascinating workshop."

"Could have been clearer about what would happen next with the ideas created."

"More time for the work-shopping element with just a couple of introductory lectures would be better."

8   Conclusions

Overall, the first Emotive Workshop was a generally very successful two-day event. It brought together 30 cultural heritage experts, of which 20 were experts external to the consortium. All contributed a wide range of expertise, with participants ranging from archaeologists and site experts (both for Çatalhöyük and the Antonine Wall/Hunterian) to museologists, creative designers, user experience designers and developers.

The Workshop balanced talks, by invited speakers and members of the consortium on issues relevant to the project, with hands-on work in focus groups to design experiences for the two sites. The groups gave participants the possibility to brainstorm about innovative ways to make the two sites more attractive in a seamless off-site (virtual) and on-site fashion.

On the whole, the event proceeded on time with good flow between the talks and the hands-on sessions. The first day of the Workshop tested the card-based design approach developed by the Emotive team in the hands-on group session. The cards provided an alternative and more direct representation of the Emotive experience guidelines (an alternative resource whose intent and dimensions will be articulated in D5.1: Conceptual Framework and Guide). The participants provided extensive comments and feedback on how to improve the use and process of the cards.

Participants also commented profusely on the process of the hands-on sessions, identifying issues that must be taken into account for the organization of the next User Workshop. They explained that the time allocated to the group sessions was too limited. They felt that the work could have been better focused if more explicit constraints had been given on the nature of the experience they were called to design, including the cultural institution's concrete objectives, the duration, the implementation budget, and Emotive's own goals. Lastly, participants would have liked more time allocated to the exploration of the emotional aspect of the experience.

The results of the group design sessions will be analysed in depth and included in the deliverable D3.1: User Requirements and Scenarios – Alpha. They will also inform the guidelines definition process and its card-based representation, the first version of which will be reported in deliverable D5.1: Conceptual Framework and Guide.

9 Bibliography

Bekker, T., & Antle, A. (2011) Developmentally situated design (DSD): Making theoretical knowledge accessible to designers of children's technology. *CHI 2011 conference*, Vancouver, Canada.

Hornecker, E. (2010) Creative idea exploration within the structure of a guiding framework: The card brainstorming game. In *TEI 2010: Proceedings of the fourth international conference on Tangible, embedded, and embodied interaction*, Cambridge, USA.

Katifori, A., Perry, S., Vayanou, M., Pujol, L., Chrysanthi, A., Kourtis, V., & Ioannidis, Y. (2016) Cultivating mobile-mediated social interaction in the museum: Towards group-based digital storytelling experiences. In *MW2016: Museums and the Web, 2016*, published 15 January: http://mw2016.museumsandtheweb.com/paper/cultivating-mobile-mediated-social-interaction-in-the-museum-towards-group-based-digital-storytelling-experiences/

Lalioti, E. (2016) The innovation colours. The Innovation Consultancy: http://eclass.uoa.gr/modules/document/file.php/DI411/project/TheInnovationColoursTM.pdf

Lucero, A., & Arrasvuori, J. (2012) The PLEX Cards and its techniques as sources of inspiration when designing for playfulness. *International Journal of Arts and Technology* 6(1):22-42.

Roussou, M., Pujol, M., Katifori, A., Chrysanthi, A., Perry, S. & Vayanou, M. (2015) The museum as digital storyteller: Collaborative participatory creation of interactive digital experiences. In *MW2015: Museums and the Web, 2015;* published 31 January: http://mw2015.museumsandtheweb.com/paper/themuseum-as-digital-storyteller-collaborative-participatory-creation-of-interactive-digital-experiences/

Schell, J. (2008) *The art of game design: A book of lenses.* Waltham: Morgan Kaufmann.

Schell, J. (2005). Understanding Entertainment: Story and Gameplay Are One. *ACM Computers in Entertainment (CiE)*, *3*(1), 835–843.

Seventhinkers (2016) Building little thinkers: A kids-centred card game designed to help kids to solve anything creatively: http://seventhinkers.com/en/WORKS/Khandu/

Wetzel, R., Rodden, T., & Benford, S. (2016) Developing ideation cards for mixed reality game design. In proceedings of DIGRA-FDG 2016, Dundee, Scotland.

ANNEX 1: Workshop #1 Programme

1st Emotive Experience Prototyping Workshop

Wednesday 22nd and Thursday 23rd February 2017

Programme

Day 1: Wednesday 22 February

Sir Alwyn Williams Building (SAWB), Level 5, top floor, University of Glasgow, G12 8QN

9.30   Arrival and Coffee

10:00 - 10:10   Welcome to Glasgow and house-keeping (Maria Economou, University of Glasgow)

10:10 - 10:25   Overview to Emotive (Maria Roussou, Athena Research Centre)

10:25 - 10:45   Participant Introductions

Introduction to Çatalhöyük

10:45 - 10:50   Welcome and Introduction to the workshop (Sara Perry, University of York, Director of Visualisation Team, Çatalhöyük Research Project)

10:50 - 11:20   Overview to Çatalhöyük Research Project (James Taylor, Co-Field Director, Çatalhöyük Research Project)

11:20 - 11:50   Coffee break

11:50 - 12:10   Overview of public interpretation programme (Sara Perry)

Experience with visitors at Çatalhöyük (Katrina Gargett & Andrew Henderson-Schwartz, University of York)

12:10 - 12:30   Instructions for group activity (Laia Pujol Tost & Akrivi Katifori)

12.30 - 13.00   Buffet Lunch

13 :00 - 15:00   Group Activity

15 :00 - 15 :15 Coffee Break

15 :15 - 16 :00   Participants reassemble and share experiences

16:00 - 17:00   On designing interactive experiences (Jesse Schell, Schell Games & Carnegie Mellon University) via Skype

19:00   Everyone is invited to dinner, The Bothy, 11 Ruthven Lane, Glasgow West End, G12 9BG

Day 2: Thursday 23 February

Sir Alwyn Williams Building (SAWB), Level 5, University of Glasgow, G12 8QN

9:00   Coffee Provided

9:30 - 9:50   Emotions & technology: How to make it possible (Edgar Bresó, Emotional Apps / Jaume I University, Spain)

9.50 - 10.10   On emotional agents and narrative (Ruth Aylett, Heriot Watt University)

10:10 - 10:30   Coffee break

Introduction to The Hunterian and the Antonine Wall (AW)

10:30 - 10:50   Welcome to the Hunterian & Introduction to *The Antonine Wall: Rome's Final Frontier* display (David Gaimster, Director of The Hunterian)

10:50 - 11:10   The Antonine Wall and related research (Lawrence Keppie, Emeritus Professor, University of Glasgow)

11:10 - 11:30   Managing the monument and visitor interpretation (Patricia Weeks, AW World Heritage Site Co-ordinator, Historic Environments Scotland)

Walk from SAWB to The Hunterian across University Avenue (5 mins)

The Hunterian, University of Glasgow, Gilbert Scott main building

11.40 - 11.50   Introduction to Antonine Wall group activity 1

11.50 - 13:00   a) Visit of the AW exhibition and AW group activity 1

13.00 - 14.00   buffet lunch provided (Main Hall, Hunterian Museum)

(groups can continue AW group activity 1 or prepare for AW group activity 2)

14.00 - 15.00   b) AW group activity 2

Walk back to SAWB

Sir Alwyn Williams Building, Level 5, University of Glasgow

From 15.05   Coffee, tea and refreshments provided

15.30 - 16.30   Participants reassemble and share a summary of their overall two-day workshop experiences

Concluding remarks and close of workshop (Maria Economou, University of Glasgow)

ANNEX 2: Workshop #1 Invitation

INVITATION: Emotive project workshop, Glasgow, 22-23 February

Dear ___

I would like to extend an invitation to you to attend (expenses paid) a forthcoming workshop that we are hosting as part of the newly-launched, €2.6-million European Union-funded Emotive project (see http://www.emotiveproject.eu/ for placeholder website - the full version is set to go live this month).

The project seeks to develop emotionally-resonant digital experiences for visitors at cultural heritage sites, with a particular focus on the unique - but curatorially very challenging - UNESCO sites of Çatalhöyük in Turkey (http://www.catalhoyuk.com/) and the Antonine Wall in Scotland (http://www.antoninewall.org/). These experiences aim to allow on-site, off-site and hybrid (local and remote) forms of digital engagement, drawing on the power of storytelling, and seeking also to foster group/social interaction.

Our first project workshop is set for **Wednesday and Thursday, 22-23 February 2017** at the **Hunterian Museum in Glasgow, Scotland** (http://www.gla.ac.uk/hunterian/). Here our focus is to test out, in hands-on fashion, the preliminary tools that we've been developing to generate emotional engagement, group play and group collaboration between site visitors.

As an expert in the field of ___, your contribution to the workshop would be invaluable. This contribution would entail (1) learning about our case-study sites through short presentations by site experts, (2) participating in a group-based hands-on session, and (3) if you'd be amenable, a presentation by yourself to the group about your own current research/project work/topic of expertise.

We would cover your travel expenses, accommodation in Glasgow, and meals for the 2 days.

I do hope you might be able to join us. We've invited a range of leading international specialists in the fields of user design, gaming, curation, digital engagement and interpretation. Your participation would make for an especially exceptional event!

Should you be able to confirm your attendance, we will shortly be in touch to book your travel and to provide you with more detail about the agenda.

With many thanks for your consideration - I do hope you can join!

ANNEX 3: Workshop #1 Cover Letter & Site Information

Cover Letter for Participants

Please find attached the agenda, the list of invitees and some travelling information to our forthcoming Emotive project workshop. The workshop will be a hands-on event, focused on developing prototypes of digital experiences for visitors to our project's two main partner sites: the Neolithic site of Çatalhöyük in Turkey (www.catalhoyuk.com) and the Hunterian Museum (Antonine Wall exhibition) in Scotland (http://www.gla.ac.uk/hunterian/collections/permanentdisplays/theantoninewall/). After an overview of the Emotive project at the start of Day 1 of the workshop (Wednesday, 22 Feb), we will be introduced to the partner site of Çatalhöyük by experts who lead both research and visitor development here. We will spend the afternoon in groups developing prototypes, and then debrief on both the prototypes themselves and on the process of creating them. We also have the great fortune of hearing from game designer & professor, Jesse Schell (www.jesseschell.com), who will join us via Skype at the end of the day.

On Day 2, following short expert lectures on emotional design and evaluation, we will be introduced to the Hunterian Museum and Antonine Wall collections, and from there we will develop further prototypes, but following a slightly different strategy.

As you know, we will be providing food and refreshments across both days. Please could you let us know if you have any dietary preferences?

Also, if you have any other special requirements or questions about the event, please don't hesitate to get in touch. We are very excited to welcome you to Glasgow & look forward to collaborating with you later this month!

[ONLY FOR PRESENTERS:
We would be very grateful if you could email me (with a copy to HIlary Young hilary.young.2@glasgow.ac.uk from the Glasgow team), the file of your presentation **by the 21st February**]

Thanks so much for your participation.

USEFUL INFO FOR TRAVELLING TO GLASGOW FOR THE 1st Emotive EXPERIENCE PROTOTYPING WORKSHOP

The workshop will take place on Wednesday 22nd and Thursday 23rd February 2017 and is going to be held at the **Sir Alwyn Williams Building** (Day 1 & parts of 2) which is just off University Gardens (postcode G12 8QN; D20 on the UoG campus map), and the **Hunterian Museum** (parts of Day 2) which is in the Main Gilbert Scott Building of the University of Glasgow on University Avenue (A15 in the UoG campus map; entrance through Memorial Gates or Main Gate; participants will be guided to the Hunterian on Day 2).

The dinner on 22nd of February will be held at 'The Bothy' (11 Ruthven Lane, Glasgow West End, G12 9BG) at 7pm. (Menu)

If you have never been to Glasgow or Scotland before: be prepared to not understand the Glaswegian accent and for usually extra friendly taxi drivers with their own sense of humour.

All useful POIs are on:

https://drive.google.com/open?id=1D_m2UO_inTwMW04mKYW8i6DPGgU&usp=sharing

FROM THE AIRPORT TO THE WEST END

Here is some information for arriving from the **airport** to the West End of Glasgow (where the University of Glasgow, The Hunterian, and your hotel are):

A.   Most convenient, fastest (but more expensive if only one person travelling)

A.1) TAXI – OFFICIAL AIRPORT ONES

The easiest would be to get a taxi from the airport, especially if there is more than one of you travelling together. The **white official airport taxis** that queue right outside the terminal building are the most expensive (no need to book) – about **£22-£25**.

A.2) Non- OFFICIAL AIRPORT TAXIS (cheaper)

You can order a **Hampden** Cabs company taxi which is safe and reliable. These cost about **£15** for the West End. You can either call them at: **+44- 0141-332 5050** or order them via the **app** on your smart phone (for iphones: https://itunes.apple.com/uy/app/hampden-cabs-glasgow-private/id473911023?mt=8) There is also an android one (https://play.google.com/store/apps/details?id=com.cordic.glasgow.hampden&hl=en_GB). You can contact them just after you land and get out of the airplane and inside the airport building. It takes them about 10 mins to arrive. Glasgow airport is quite small and efficient and has free wifi. It's best to download the Hampden Taxi app when you are home /office with good wife and enter all your details (it takes credit cards also). Hampden and any other kind of non-official airport taxis (i.e Uber) wait for you at the official pick up point in **Car Park 2** which is covered from the rain etc. and directly opposite the main terminal building (very close to the official taxi rank).

B.   BUSES

Cheapest and least convenient:

There is a bus from the airport that takes you to the city centre (but **not** the West End):

B.1   Bus First Glasgow Airport Express service 500 **-** direct to Glasgow City Centre 24 hours per day from Stance 1 (right outside the main terminal building). £7.50 single.

You then need to get either a bus, Subway, or taxi from the city centre to the West End. The subway from Glasgow Queen Street Train station from the city centre takes you to Hillhead station (the closest in the West End. You can check different bus or other options at

https://www.firstgroup.com/greater-glasgow/plan-journey/journey-planner

(You can put "Terminal Building (E-bound) - Glasgow Airport, Paisley " or departure, and the Argyll post code for destination is: G12 8EB (you only need to put that in the destination) to get relevant buses etc.

Or

B.2   Bus First 77 Hospital Connect - Glasgow City Centre (via Renfrew, Braehead shopping centre, South Glasgow University Hospital and **Partick**) from Stance 6.

This takes longer (about 40 mins) but leaves you in the West End. You need to get off Partick. From there it's a 15 minute walk via Dumbarton Road and Byres Road to Sir Alwyn Williams Building.

ARRIVE BY TRAIN TO GLASGOW

For those travelling by train that arrives at either Central or Queen Street train stations, you can then take public transport (St Enoch underground from Central, and Queen Street from QS train station, both take you to Hillhead U station), or taxi – about £5-8.

More info on how to get to the University of Glasgow and the West End

http://www.gla.ac.uk/about/maps/howtogethere/
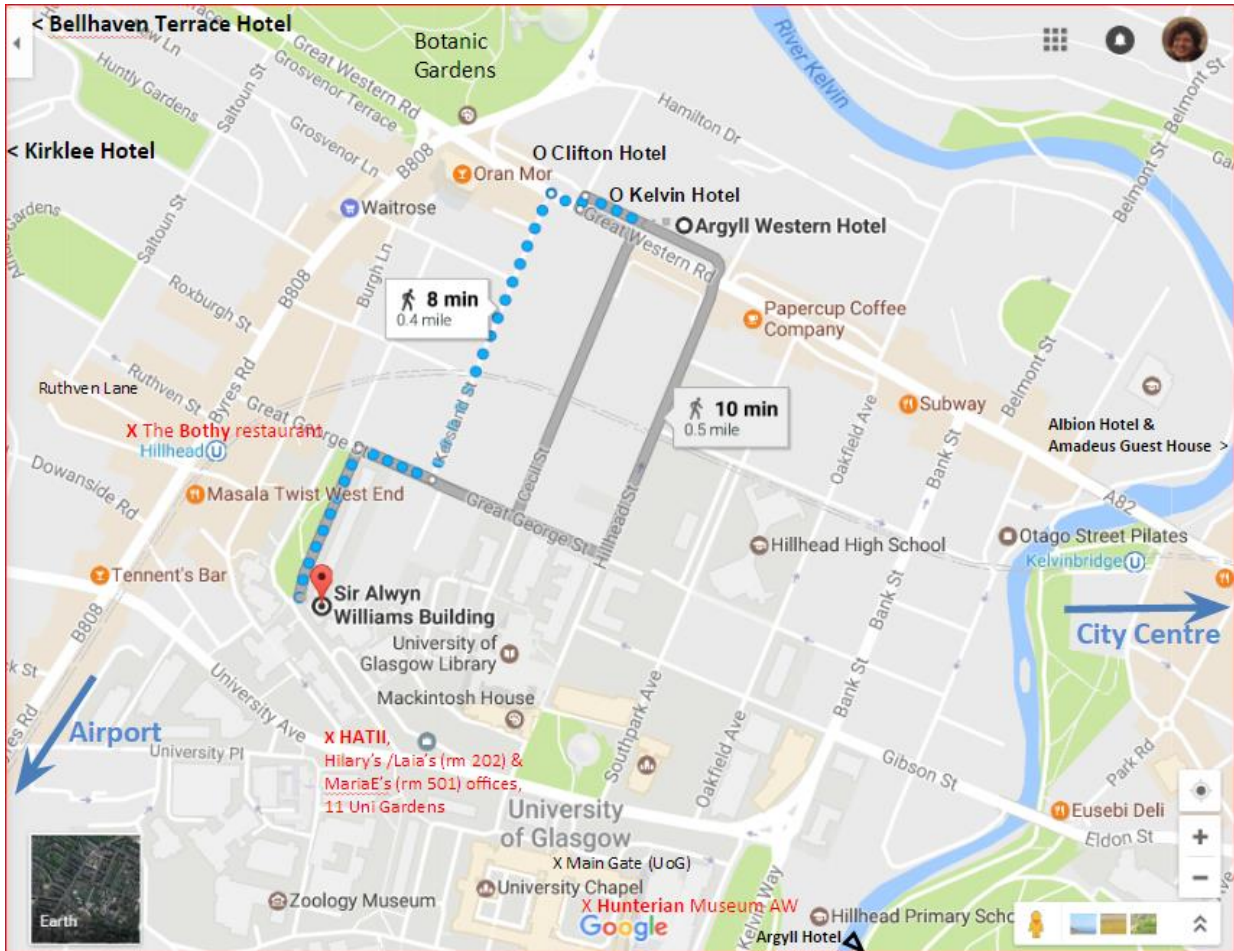
ANNEX 4: Post-Workshop Questionnaire

1st EMOTIVE Experience Prototyping Workshop (Glasgow 22-23/2/2017)

EMOTIVE

I attended

- ○ Day 1 only
- ○ Day 2 only
- ○ Both days

Before the meeting...

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
The meeting purpose and objectives were clearly stated	○	○	○	○	○
Sufficient, useful and clear information was provided	○	○	○	○	○

Suitability of venue and equipment

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
The working venue was suitable for the meeting in terms of room size, equipment, furniture	○	○	○	○	○

Effectiveness of the meeting

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
The right people were present in the meeting	○	○	○	○	○
The meeting was well structured	○	○	○	○	○
The presentations were effective	○	○	○	○	○
During the meeting all the topics included in the agenda were covered	○	○	○	○	○
The goals of the meeting have been achieved	○	○	○	○	○

Effectiveness of communication / knowledge exchange during the meeting

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
The discussion was properly controlled and managed	○	○	○	○	○
The participants had the opportunity to contribute with their own expertise	○	○	○	○	○
All meeting participants were actively involved	○	○	○	○	○
The meeting had a positive tone	○	○	○	○	○

Overall, how would you rate the meeting?

Poor	Fair	Good	Very good	Excellent
☆	☆	☆	☆	☆

What did you like about the meeting?

What did you dislike about the meeting?

Is there anything else you'd like to share about the meeting?

EMOTIVE