

**Designing Digital Experiences in
Archaeology: Integrating
Participatory Processes into
Archaeological Practice**

Volume II

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Appendix A

Erimi 3D Visualisation Paradata

Activity

3D modelling of the hypothetical reconstruction of the Workshop Complex built environment.

Date

May 2015 - August 2016.

Technique used

3D modelling and texturing process done in Autodesk 3dsMax (Autodesk 2019)

Description

1) The modelling of walls and roofs has been modelled according to several interpretive hypotheses, based on the study of architectural materials, building techniques and micromorphological analyses carried out by Dr. Amadio. Walls were constructed with a stone footing laid over the limestone bedrock and courses of mudbrick. Roofs were constructed using wood beams and red clay. The external face of walls and roofs was coated with a render of calcareous yellow clay, while the internal face was covered with a layer of white plaster, which was also applied on floors. White plaster provided insulation from humidity and a bright aspect to the room; it also maintained a nice temperature by absorbing the sun's heating during the day and giving it off during the night (Amadio 2017). Following this interpretation, the external and internal faces of walls have been shaped directly upon the foundation bedrock, using limestone basements as a reference to determine the length and width (usually 50-60 cm) of walls. Dr. Amadio's analyses have also been used to determine the texture colours for walls, roofs and wooden structures (Figs. A.1-A.3).

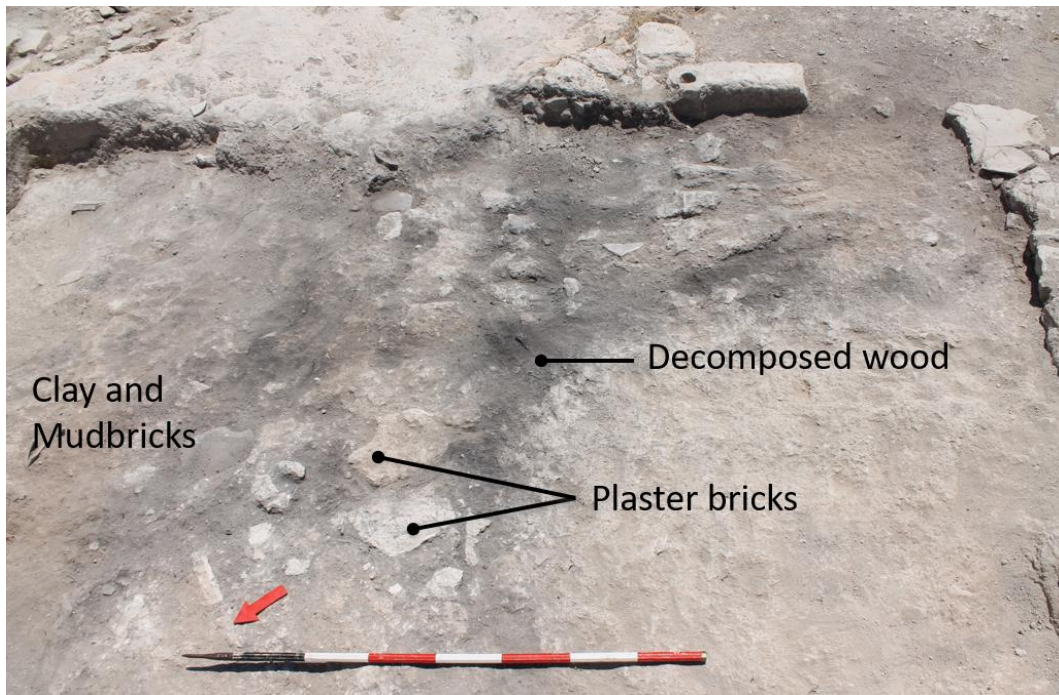


Figure A.1: Building materials from a collapsed wall of unit SA III (Bombardieri et al. 2018)

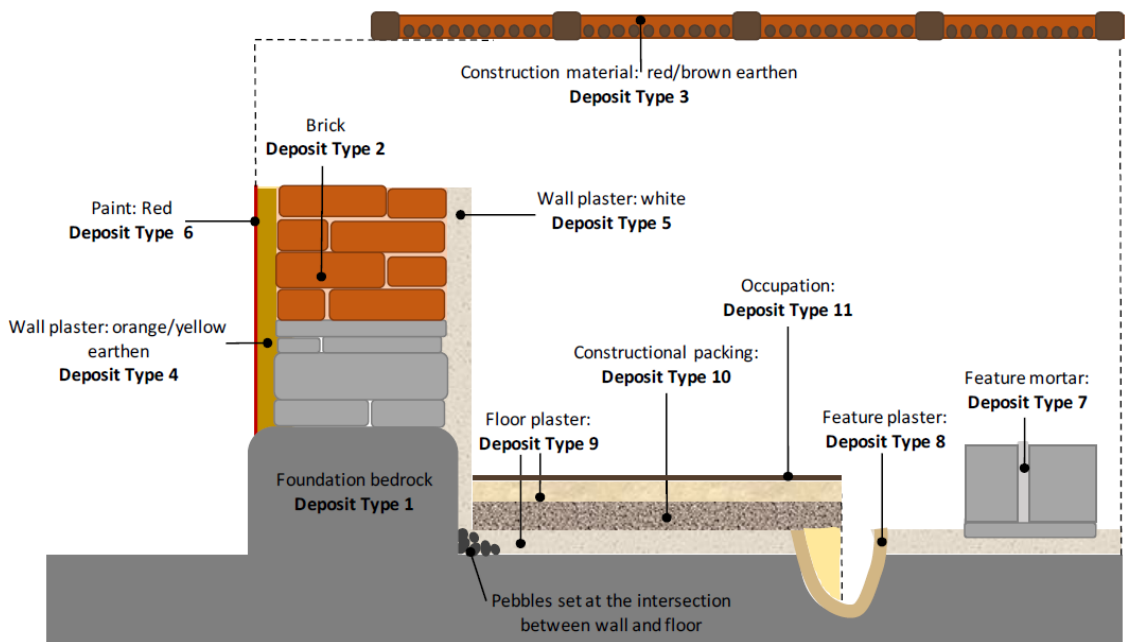
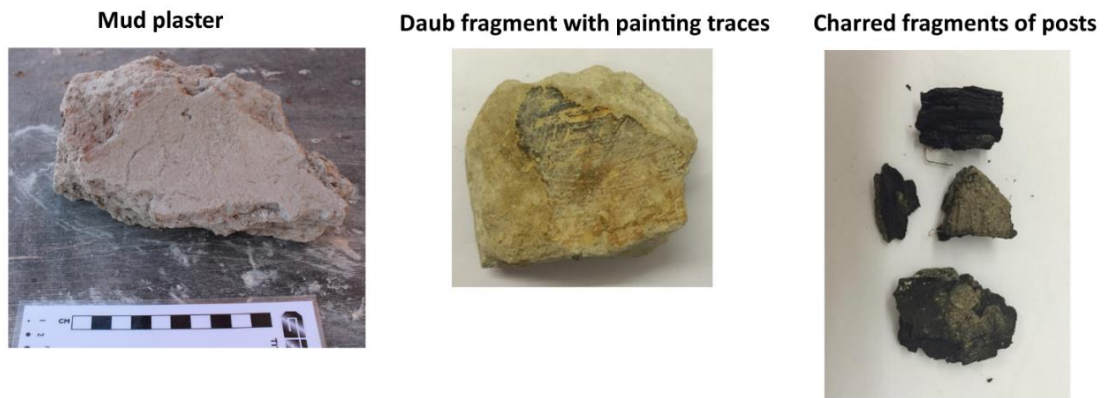


Figure A.2: Building techniques sketch (credit: Marialucia Amadio).



Soil sample: micro morphological analysis preliminary results

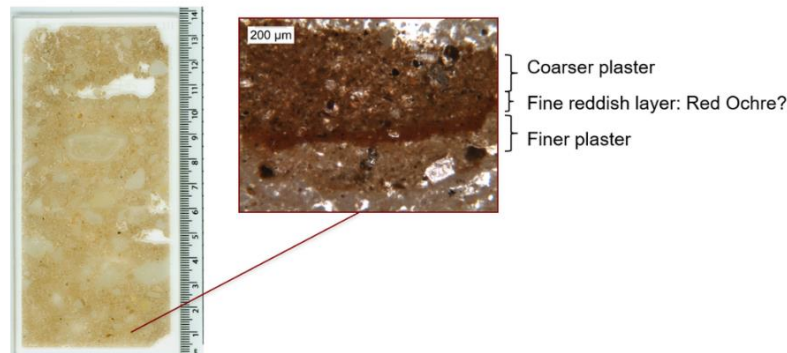


Figure A.3: Building materials (Bombardieri et al. 2018b).

2) The modelling of perishable structures has been based on the position of post-holes. In the open area WA IV, a cluster of post-holes of varied sizes forming an alignment has been attributed to a party fence used for drying textiles. This hypothesis appears to be confirmed by the location of these spaces in the northernmost wing of the complex, with direct exposure to wind channelled within the river valley (Fig. A.4). As for entrances, the modelling of doors' structures has been based on evidence of circular settings curved in limestone thresholds that were likely used to support posts for door jambs (Fig. A.5). Moreover, evidence from structural and material markers have supported the reconstruction of stone features, such as the hearth in unit SAI (Fig. A.6), and to present the spatial distribution inside roofed spaces of the material assemblage used for working and storing (Figs. A.7 and A.8) (Amadio 2017; Amadio and Dolcetti 2019).



Figure A.4: WA IV post-holes cluster (top) (credit: Marialucia Amadio). 3D visualisation of the part fence in 3ds Max 2016 (Autodesk Inc. 2019) (credit: Francesca Dolcetti).

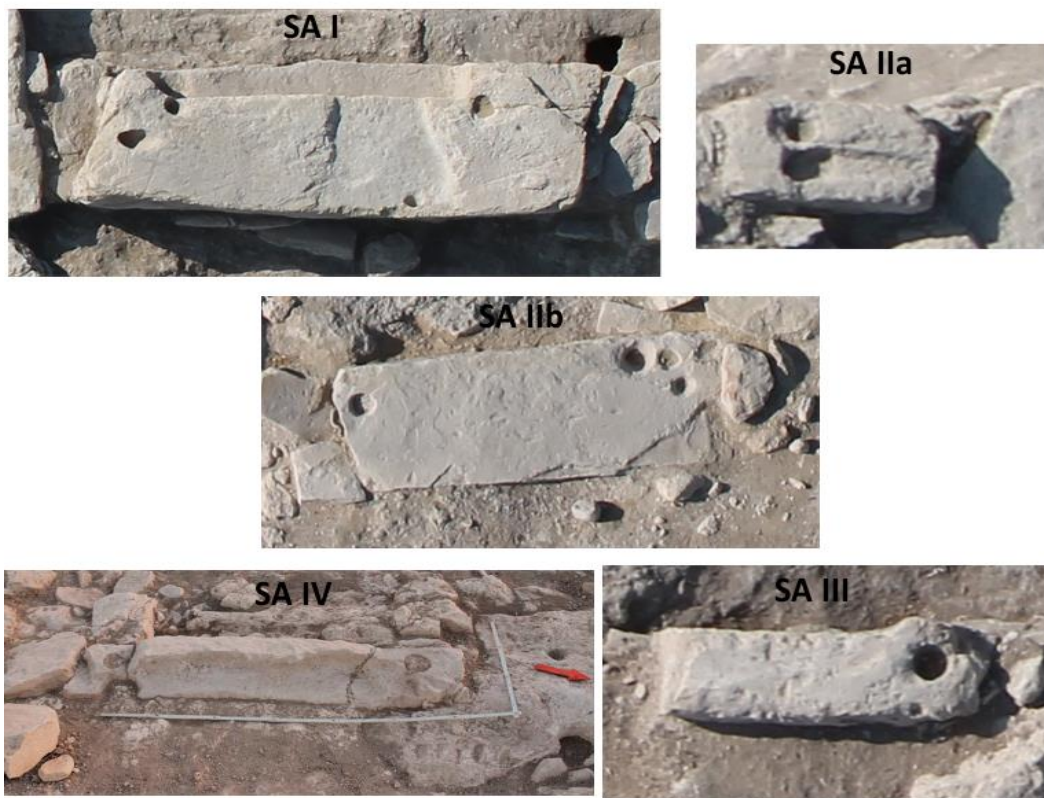


Figure A.5: Phase A, units thresholds (credit: Francesca Dolcetti).



SA I. 4

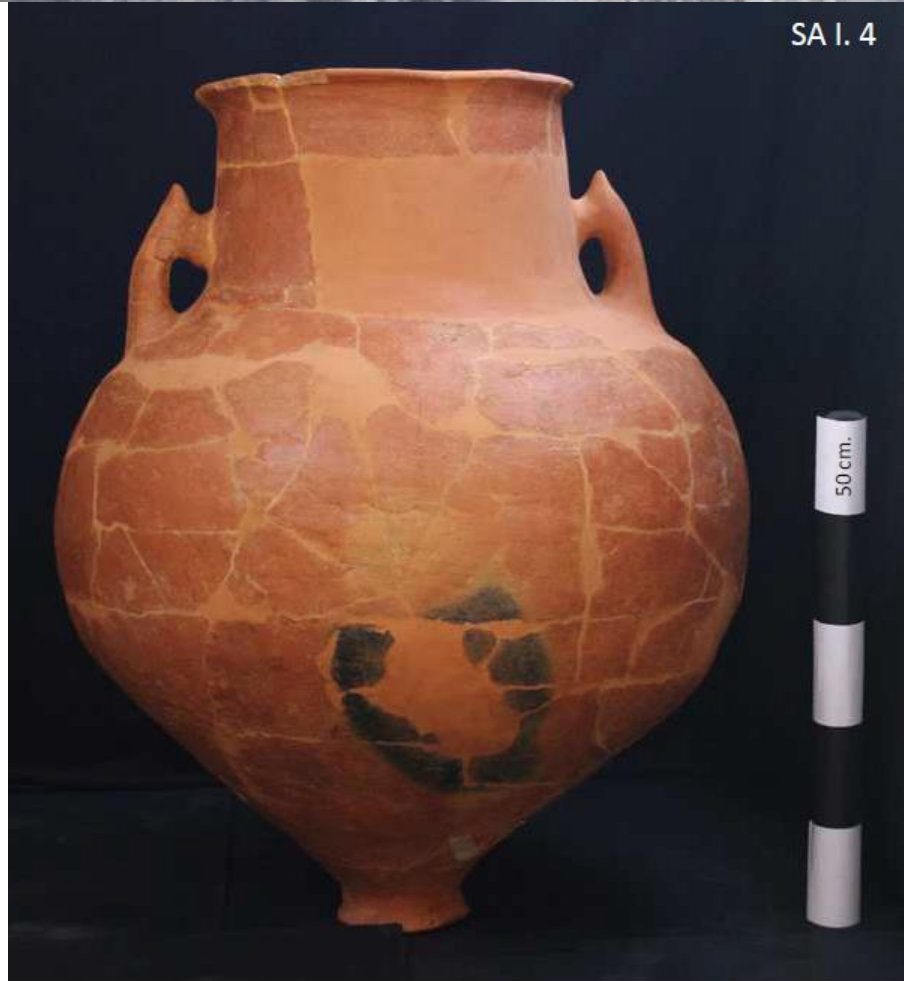


Figure A.6: From Unit SAI, heart (top) and a large storage vessel-pithos (bottom) (credit: Francesca Dolcetti).

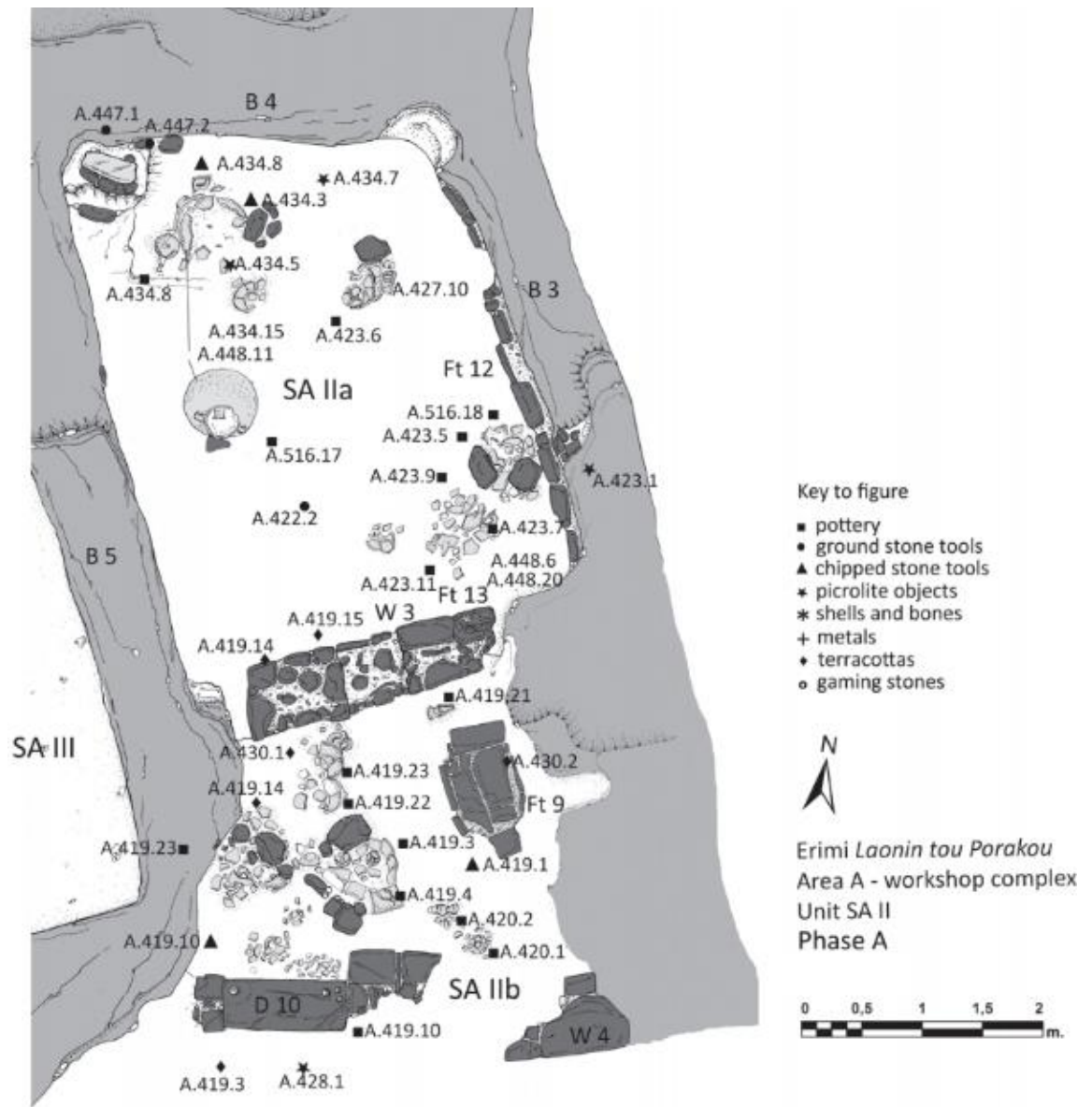


Figure A.7: Unit SAIII, material assemblage distribution plan (Bombardieri 2017, 32)



Figure A.8: Phase A. View inside roofed spaces in 3ds Max 2016 (Autodesk Inc. 2019) (credit: Francesca Dolcetti).

3) As the north side of the workshop complex was constantly exposed to the wind, it has been hypothesised that skylights were used as a ventilation system and source of light instead of windows. They were probably covered by a wooden plank and joined by a ladder (Fig. A.9).



Figure A.9: Detail of roofs ventilation system in 3ds Max 2016 (Autodesk Inc. 2019) (credit: Francesca Dolcetti).

Erimi 3D Model GUI

Activity

Creation of Graphic User Interface to interact with the 3D model.

Date

September 2016 – January 2017

Technique

Unity; Unity WebGL Unity 2020).

Description

The GUI built with Unity allows users to interact with the model through a basic mouse-based navigation (Fig. A.10). By clicking on luminous hotspots users can active pop ups with text descriptions (Fig. A.11), while other buttons it is possible to show or hide hotspots, roofs, artefacts and avatars (Fig. A.12). Moreover, the UI presents some additional features that allow users to change the sun position and switch from a bird's eye view to first-person navigation (Figs. A.13 and A.14)



use your keyboard arrow keys to move forward, backward, to the right and to the left



move your mouse while holding down the right button to move and rotate the model



use your mouse left click to select objects and display information about them, or to select hotspots (BLUE for Phase B and RED for Phase A) and display information about structures, building materials and techniques

Figure A.10: instruction for model navigation (Dolcetti 2017a).

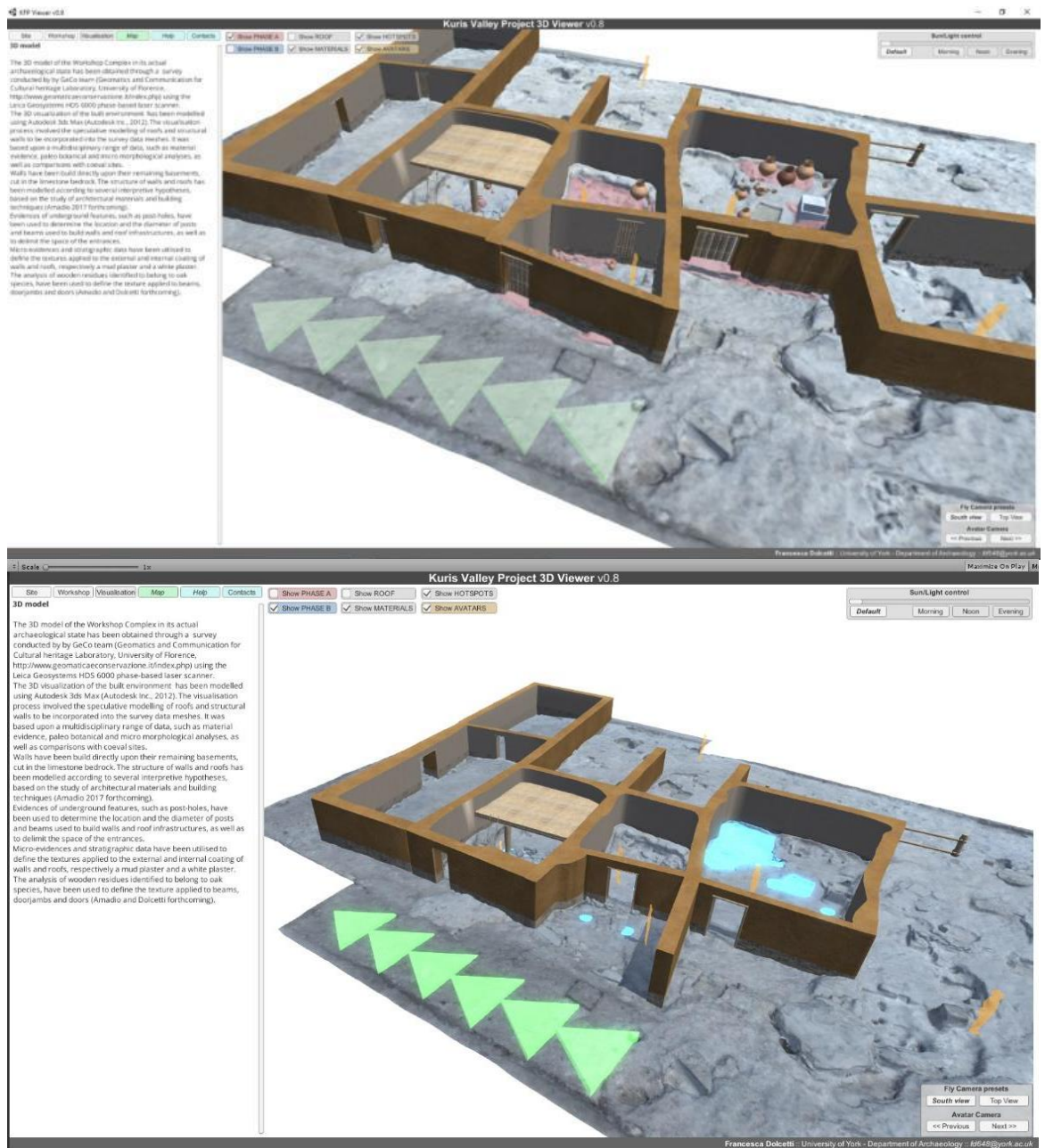


Figure A.11: Luminous hotspots in Unity (Unity Technologies 2020) (credit: Francesca Dolcetti).

- for information about the site
- for information about the workshop complex
- for information about the 3D model and how archaeological data have been interpreted and used for this hypothetical reconstruction
- for instructions on how to navigate and interact with the model
- to visualise the hypothetical reconstruction of the workshop complex during the earliest phase of occupation of the site
- to visualise the hypothetical reconstruction of the workshop complex during the latest phase of occupation of the site
- to show or hide roofs
- to shows or hide artefacts (pottery and tools)
- to show or hide the luminous hotspots (clickable areas with text descriptions)
- to show or hide avatars (human silhouettes)

Figure A.12: UI buttons (Dolcetti 2017a).

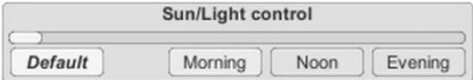
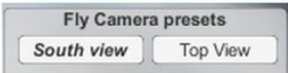
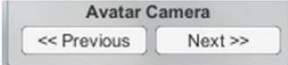
-  use the Sun/Light control slider or the buttons underneath to change the sun position
-  use South view or Top view buttons to reset the camera orientation
-  use Previous or Next buttons to switch to avatars' camera and navigate the model in first person

Figure A.13: UI additional features (Dolcetti 2017a).



Figure A.14: Detail of the avatar positioned in Unit SAI in Unity (Unity Technologies 2020) (credit: Francesca Dolcetti).

Appendix B

Interviews and First Focus Group with Erimi Research Team October 2016

Questions

- Q1. Do you have any previous knowledge and/or experience with the application of 3D modelling in archaeology?
- Q2. Do you consider 3D modelling useful for the archaeological interpretation process? If yes, explain how.
- Q3. Do you think 3D modelling helps broaden the understanding of the site? If yes, explain how.
- Q4. Do you consider this model helpful in deepening the understanding of the function of structures and objects? If yes, explain how.
- Q5. Do you consider avatars (human figures) necessary for a better understanding of the spaces and volumes in 3D models? Do you consider them necessary for a better understanding of the model overall? If so, explain how. If not, why not?
- Q6. How engaged do you feel with the model (if it all)? Describe that engagement.
- Q7. Do you consider the 3D model as it is (level of interaction + information provided) suitable for both expert and non-expert users?
- Q8. Do you think it is possible to identify a target audience for the site of Erimi-Laonin tou Porakou?
- Q9. Do you think that the interaction with the model could benefit from a storytelling-based digital guide?

Themes

1. **3D MODEL EFFICACY FOR ARCHAEOLOGICAL RESEARCH:**
Participants' opinion on whether and how the interaction with the 3D model was helpful in deepening their understanding of the site and the interpretation process.
2. **AVATARS: EFFICACY AND UNREALISM:**
Participants' opinion about the choice of avatars as silhouettes, the issue of unrealism and whether they are improving the 3D model's comprehensibility.
3. **EMOTIONAL ATTACHMENT:**
Participants' discussion around their personal involvement with the research project and their relationship with the site itself.
4. **DIFFERENT AUDIENCES NEEDS AND EXPECTATIONS:**

Participants' opinion on the 3D model efficacy for non-specialist, comprehensibility of text description, intended audience and the use of storytelling.

Theme 1

Reference 1

LORENZO:

il modello secondo me, nasce dall'analisi integrata di dati di natura differente, ma è ovviamente il frutto di un'interpretazione di questi dati, quindi il modello è un terzo step, è la visualizzazione dell'interpretazione, quindi viene dopo.

Reference 2

GRETA:

sì, perché come ogni interpretazione, c'è l'interpretazione di base, che sono ad esempio gli alzati e le strutture, e su un secondo livello che si basa magari sulla mobilità. Sì, penso che tutti la vediamo così il modello ti può sicuramente aiutare per questo secondo livello di interpretazione, ovviamente il primo è quello che è strettamente più consesso con il dato archeologico, è impossibile da far passare attraverso il modello perché è esso stesso che costituisce il modello.

Reference 3

AIDA:

mi verrebbe da dire sì ma in maniera limitata, è più utile per altre cose, per avere una visuale più completa...per il processo interpretativo sì, magari sì, hai una visione più pratica della cosa quindi magari le interpretazioni che avevi dato prima, avendo una visuale immediata e più realistica possono cambiare in certi dettagli, ma...uhm...no, all'origine del processo interpretativo non credo, ma probabilmente appunto è solo frutto del fatto che sono troppo poco abituata ad interagire con questo tipo di tecnologie.

Reference 4

AIDA:

nella visione globale del sito, sì tantissimo, perché comunque è vero che tu riesci più o meno chiaramente ad immaginarti come erano organizzate le strutture, come poteva essere l'elevato, come poteva essere la divisione dello spazio, però c'è sempre un margine di errore che dopo aver visto questo mi rendo conto è abbastanza ampio; quindi ti dà una visione immediatamente più chiara, soprattutto, sì, dell'organizzazione degli spazi e del cambiamento di fase.

Reference 5

AIDA:

un po' meno nella visione delle singole stanze e nella visione ravvicinata.

Reference 6

AIDA:

Sì, a migliorare sicuramente, sì ad approfondire anche, perché magari ti può aiutare a capire, parte appunto l'articolazione, la divisione degli spazi e la grandezza effettiva

Reference 7

AIDA:

ti aiuta tantissimo a capire anche i possibili spostamenti umani, delle persone che vivevano all'interno del sito

Reference 8

AIDA:

diciamo che riuscirei ad immaginare che è un ambiente lavorativo, che non è un ambiente domestico ma non credo che, nonostante le mie non ampissime ma quanto meno presenti competenze, non credo che riuscirei immediatamente a capire quale è l'attività svolta.

Reference 9

AIDA:

l'attività nello specifico mi servirebbe un pochino più di tempo non è altrettanto immediata, però sì, diciamo che si potrei capirlo

Reference 10

CHIARA:

Yes, I think 3D modelling can be useful for the archaeological interpretation process. To be able to visualize archaeological features and buildings in 3D can help to acquire a deeper awareness of spaces and distances and to stimulate interpretive hypotheses about their function.

Reference 11

CHIARA:

Yes, I think 3D modelling can be useful for the archaeological interpretation process. To be able to visualize archaeological features and buildings in 3D can help to acquire a deeper awareness of spaces and distances and to stimulate interpretive hypotheses about their function.

Reference 12

CHIARA:

Yes, I think it can help broadening the comprehension of the site. I think it is especially useful to be able to see the architectural differences between the two phases (A and B) as a whole.

Reference 13

CHIARA:

This can be complicated. I think the model has the potential to deepen the understanding of the function of structures and objects though more information and details (like from photographs) would be needed to better characterize them. At the same time, too much reconstruction can result in invention and falsify the real data.

Reference 14

GRETA:

Eh, sì bella domanda, nel senso che da un lato si può essere sicuramente utile perché visualizzare è una cosa importante e non tutti hanno...come dire, questa, questa capacità e quindi visualizzare ti fa rendere conto degli spazi soprattutto e del modo in cui li gestivano.

Reference 15

GRETA:

Per cui il modello probabilmente è utile per interpretare ad un altro livello ancora fondamentalmente, ad un livello più alto della normale interpretazione archeologica.

Reference 16

GRETA:

ma ti dà la possibilità di visualizzarlo in maniera complessiva, totale e quindi proprio quello di cui mi sto rendendo conto interagendo con questo modello...proprio quanto forse, appunto, ci manca la percezione degli spazi e la possibilità di metterci noi, come dire, uhm, all'interno...la possibilità di metterci non solo come studiosi all'interno di quello che scavi, ti dà la prospettiva ehm del fruitore, di come costruiva e utilizzava questi spazi.

Reference 17

GRETA:

Io come archeologo questo mi aiuta solo a visualizzarla correttamente.

Reference 18

GRETA:

Dunque, delle strutture sicuramente sì, perché ovviamente le strutture sono...ehm, come dire, le strutture sono qualcosa che è legato anche al loro funzionamento, quindi ricostruire le strutture ti porta sicuramente alla comprensione delle attività e del funzionamento delle strutture stesse, cosa facessero con queste strutture.

Reference 19

GRETA:

Per quando riguarda i materiali può essere vero come non vero, nel senso che appunto un materiale...diciamo il posto in cui viene messo un materiale è sicuramente legato alla sua funzione, ma un materiale va studiato anche per se stesso fondamentalmente: per esempio una fusaiola, non importa dove tu la possa trovare, soltanto perché è una fusaiola tu sai che uno strumento per la filatura, quindi ti può aiutare...no secondo me dipende dagli strumenti.

Reference 20

GRETA:

forse una ricostruzione in 3D te lo può dire...ehm... ti può far interagire nello spazio, ti può far vedere i vasi eccetera, della loro grandezza rispetto allo spazio, però per quanto riguarda proprio il funzionamento, se sono strumenti, in quel caso probabilmente dipende dalla natura dello strumento.

Reference 21

GRETA:

perché potresti anche renderti conto del perché abbiano deciso di coprire alcuni spazi che potrebbero essere virtualmente lasciati aperti, come, ad esempio, il basin per tingere che produce odore, eccetera, ma probabilmente non potevano lavorarci tutto il giorno esposti al vento, al sole e alle intemperie. D'altra parte, è possibile immaginare una migliore fruizione in determinate parti della giornata e questo non ci avevo a letteralmente pensato, senza modello.

Reference 22

GRETA:

questo non solo dal punto di vista lavorativo potrebbe essere utile, anche per l'interpretazione proprio dal punto di vista della comunità e quindi della fruizione degli spazi anche per altre attività, come quella del feasting, del riunirsi, dello stare insieme anche semplicemente dopo aver lavorato, mentre si lavorava prendersi delle pause

all'ombra per dire... che può sembrare una cosa non scientifica, però fa parte del pacchetto della quotidianità e anche, per dire, del lavoro...perché le pause fanno parte della vita lavorativa e questo è davvero molto interessante.

Reference 23

LORENZO:

Ritengo sia molto importante, questo è il motivo per cui per il progetto di Erimi, abbiamo, diciamo...ci siamo impegnati in modo intenso su questo argomento, perché soprattutto per contesti preistorici e protostorici la ricostruzione degli elevati, laddove lo scavo è condotto diciamo con criterio stratigrafico e microstratigrafico attento, la ricostruzione degli elevati, quindi degli spazi architettonici, è qualcosa di molto utile all'interpretazione dello spazio archeologico e quindi anche all'interpretazione del ruolo che le architetture hanno all'interno di una comunità.

Reference 24

LORENZO:

Si, a me piace molto la visione questa, la South, perché appunto come ti dicevo prima...ehm...è quello che manca assolutamente all'immaginazione che noi abbiamo degli spazi...ehm, sociali all'interno di questa comunità, perché per quanto sembri banale, l'elevato, l'alzato, quindi muri e porte, qualcosa che noi non possiamo vedere né documentare, in realtà caratterizzano in modo molto netto lo spazio.

Reference 25

LORENZO:

cosa che non si percepisce visivamente con altre forme di documentazione, si capisce che questi spazi sono...che c'è molto più di costruito nella fase A, quindi lo spazio è molto più densamente occupato, quindi visivamente è molto meno lo spazio libero, di quanto non lo sia nella fase B. Questo se non con questo modello, non si può capire in altro modo.

Reference 26

LORENZO:

di interpretare le interazioni che ci sono fra lo spazio è l'individuo in questo tipo di contesti comunitari.

Reference 27

LORENZO:

la ricollocazione degli oggetti all'interno dello spazio fisico delle unit è importantissima...per lo stesso motivo, perché da un lato ti dà un'idea immediata della

collocazione degli oggetti nel loro luogo originale, dall'altra anche ti fa capire quanto questi occupassero lo spazio e quale fosse la possibile interazione tra essere umano ambiente, in un ambiente popolato di oggetti.

Reference 28

MARICA:

Assolutamente sì, perché secondo me ti consente di avere un'idea effettivamente concreta di quella che è la ricostruzione che da archeologi si tenta di effettuare attraverso delle modalità che però molto spesso, secondo me, non si risolvono in maniera fruibile per i non esperti, i non addetti al campo

Reference 29

MARICA:

cioè secondo me sarebbe anche forse più facile per i non addetti al campo riuscire a capire bene come funzionavano le cose, come funzionavano gli spazi, come agivano e si muovevano le persone all'interno degli spazi...questo solo il modello 3D riesce di fare e di avere.

Reference 30

MARTA:

I really think so, because the possibility to observe a reconstructed space may provide a different perception of the built space. The archaeological space may potentially become more easily readable. For example, it is much easier to analyse dynamics concerning the use of the space and interaction between agents within a certain space, viewing a reconstructed model instead of a two-dimensional plan.

Reference 31

MARICA:

It can definitely help. Because it is easier to think about social dynamics, from construction to use of the structures, with a reconstructed model. It is easier to imagine social agent acting within the built space and the surrounding environment.

Reference 32

MARICA:

I think so, since looking at architectonic installations and objects within their original, reconstructed context may support the interpretation on the use of space and may possibly enhance the analysis of socio-cultural dynamics, which created and impacted on the formation of archaeological context.

Reference 33

MARICA:

The possibility to choose a view helps to focus on specific observation points; it is also very helpful the possibility to remove the roof in order to have an inside view within single buildings. The outputs are also very easy to use, and the windows with information are clear and easily readable.

Reference 34

MONICA:

Beh, certo, sicuramente soprattutto per queste fasi così antiche, quindi la preistoria, è sicuramente interessante perché uno alla fine, soprattutto per gli elevati, non ha idea, quindi vederli ricostruiti così ti permette...anche se, come dire, si possono immaginare durante il lavoro di scavo, però vederli realizzati visualmente ti permette di avere un'idea più complessiva dell'area e anche dello sfruttamento dello spazio, rende tutto un po' più completo.

Reference 35

MONICA:

mentre vederlo rappresentato in questo modo rende davvero più chiaro e secondo me serve proprio per ampliare i ragionamenti e le ipotesi che si possono fare comunque sul contesto che si sta studiando nel particolare. Soprattutto poi questa caratteristica di poter cambiare tra le fasi, più antica e più recente, con i materiali inseriti è davvero molto più chiaro, perché solitamente uno vede tutto insieme, non ha mai un distacco reale tra una fase e un'altra e come venissero sfruttati gli spazi, mentre in questo modo è molto chiaro e molto utile per lo studio.

Reference 36

MONICA:

Beh, sì delle strutture sicuramente, perché riesci a veder l'alzato e come le strutture si rapportano le une con le altre, ma l'oggetto anche, comunque vederlo sul posto, intero, che occupa uno spazio reale, cioè virtuale ma fondamentale è reale all'interno del modello, ti dà un'idea dello sfruttamento dello spazio in sé.

Reference 37

MONICA:

perché fondamentale è quello che manca, quindi avere un elevato, vedere delle stanze vere e proprie con immateriali all'interno.

Theme 2

Reference 1

AIDA:

allora lo scopo degli avatar è quello di darti una visuale diversa e più dettagliata delle stanze. Io li toglierei se ci fosse un altro modo abbastanza chiaro per accedere a quella visuale. In quel caso li toglierei senza ombra di dubbio, ma se non c'è un modo chiaro e immediato tanto quanto loro per accedere a quella visuale allora vanno necessariamente lasciati.

Reference 2

GRETA:

secondo me invece l'avatar va assolutamente lasciato perché è la misura, è l'uomo, se tu togli l'uomo e noi misuriamo tutto a misura nostra, se tu non hai la sagoma dell'omino ti chiederai sempre quanto è alto, se ci stava o non ci stava...

Reference 3

LORENZO:

sì, come metro di misura, anche un po' come caratterizzazione dello spazio, perché sembra deserto questo luogo, sembra un workshop abbandonato, oppure un modellino dell'Ikea.

Reference 4

LORENZO:

sì, però l'uomo dentro allo spazio ti dà la misura dell'avvicinarti e dell'allontanarti. Ma poi davvero questa vuotezza di un ambiente pieno di gente.

Reference 5

MONICA:

forse piuttosto di dà la misura dello spazio in sé, cioè vedi una persona oltre l'oggetto e capisci davvero quanto è grosso lo spazio.

Reference 6

GRETA:

io vorrei far notare che oltre a non avere abbastanza dati per caratterizzare anatomicamente le persone, non ne abbiamo neanche per caratterizzarne l'aspetto.

Reference 7

AIDA:

sicuramente meglio delle silhouette che ci sono adesso, che sono completamente anonime, sembrano quasi delle presenze, dei fantasmi così evanescenti. Non si contestualizzano bene secondo me.

Reference 8

GRETA:

io non ho particolari problemi con le silhouette. Mi danno l'idea che sia un uomo, quindi la presenza umana me la danno, non è assolutamente caratterizzata quindi al massimo mi posso immaginare come fosse, ma nessuno mi sta suggerendo che è in un modo o in altro

Reference 8

AIDA:

esatto. il contesto è troppo realistico rispetto a loro. Ecco è questo dislivello che ti...ovviamente il contesto meno realistico non può essere quindi hai una sola opzione

Reference 9

GRETA:

io sarei molto più interessata ad un omino che cammina all'interno del workshop, piuttosto che ad un omino caratterizzato.

Reference 10

GRETA:

una persona che magari riesce a muoversi, nel senso se tu la attivi c'è questa opzione che è quella della mobilità dell'omino all'interno del workshop. Tipo gli dici 'omino vai in WAV' e ti rendi conto dei percorsi che può fare per arrivarci.

Reference 11

LORENZO:

allora si potrebbe fare anche questa cosa qui. oltre alla circolazione per esempio, c'è anche la fruibilità degli spazi in termini di persone che ci possono entrare dentro, allora uno potrebbe scegliere l'opzione 'popolami SA I': allora a quel punto tu potresti fare una ricostruzione delle varie attività che si svolgono nei vari ambienti.

Reference 12

MONICA:

più che altro per capire quanto spazio occupavano svolgendo le attività.

Reference 13

AIDA:

Sì, sicuramente il punto di vista ravvicinato ed all'altezza umana sicuramente aiuta ad orientarti meglio all'interno degli spazi

Reference 14

AIDA:

la loro presenza sicuramente aiuta a rendere più chiaro...(interagisce con il modello)...sì anche questo, se la visione globale ti fa rendere conto della circolazione, del movimento, diciamo, tra gli ambienti, questo ti fa rendere conto dello spazio immediatamente attorno a te, quindi si è utile, perché puoi magari materialmente immaginare che movimenti potrebbero fare e quanto spazio hanno per farli e di conseguenza anche quanto più o meno grande...no va beh ma questo te l'ho dà anche la visione globale...potesse essere la produzione o la mole di lavoro che andavano ad intraprendere.

Reference 15

CHIARA:

Yes, I think avatars are useful for understanding the volumes in the 3D model. Besides, they help navigation offering different perspectives.

Reference 16

GRETA:

sì, penso proprio di sì, perché la figura umana ci riporta...è il metro con il quale noi misuriamo le cose inconsciamente, perché siamo noi stessi e quindi ci ritroviamo collocati in un contesto e siamo in grado di percepire assolutamente più quali siano gli spazi, le altezze e io penso anche le profondità, però per le altezze credo che sia essenziale quasi avere una figura umana standard.

Reference 17

LORENZO:

Si io penso che sia molto importante la presenza della figura umana, perché ci aiuta di nuovo a capire l'interazione dell'uomo nello spazio, che è quello che ci interessa in realtà, quello che ci interessa è capire come lo spazio venisse vissuto e popolato, quindi la sua presenza ricostruita è importante.

Reference 18

LORENZO:

come tu virtualmente ricostruisci un'architettura dai dati micro-morfologici relativi ai materiali da costruzione, così puoi ricostruire la figura umana attraverso dati archeologicamente attendibile come l'archeobotanica o i corredi funerari. Quindi per me l'avatar è molto importante e potrebbe essere addirittura ulteriormente caratterizzato.

Reference 19

LORENZO:

il lavoro è grosso da fare più sull'essere umano che non sull'architettura, però penso che poi di conseguenza l'effetto emotivo possa essere addirittura più forte.

Reference 20

MARICA:

Allora sicuramente utili per il discorso dei volumi e delle dimensioni, perché è vero che tu hai una ricostruzione visivamente immediata della struttura, ma è anche vero che il nostro occhio secondo me è abituato a percepire gli spazi partendo proprio dalle misure del nostro corpo, quindi questo secondo me è fondamentale.

Reference 21

MARICA:

perché non sono molto favorevole al discorso dell'avatar all'interno delle ricostruzioni, perché lo considero un attimino un di più che tendenzialmente a livello visivo preferirei evitare, però ripeto nell'ottica del discorso sugli spazi ei volumi mi sembrano assolutamente adatti, anzi per vane un'idea di quella che è la dimensione del volume e dello spazio.

Reference 21

MARICA:

la parte positiva dell'avatar è quella di catturare l'attenzione di...ecco in questo senso ti posso parlare di target, di persone che non specificatamente coinvolte e legate al sito, quindi è ovvio che l'avatar potrebbe essere l'elemento che può attirare l'attenzione...per persone che potrebbero essere interessate alla nozione puramente archeologica del contesto, io penso che avatar o non avatar, non cambierebbe tanto.

Reference 22

MARICA:

però se si fa un discorso di fruibilità ud un grande pubblico di non esperti, l'avatar è quell'elemento che riesce a coinvolgere più gente, quindi più attrattivo dal punto di vista visivo.

Reference 23

MARTA:

They would definitely help to have a broaden perception of the space. For example their use would help to estimate how many people were able to work together in the same space, without limiting the accessibility to workstations and working structures within a certain building.

Reference 24

MONICA:

sì, gli avatar sono un po' strani da vedere così.

Reference 25

MONICA:

la cosa di vedere anche attraverso loro (riferendosi agli avatar) è bella, è solo strani vederli lì un po' piantati.

Reference 26

MONICA:

Allora, avere delle figure non so, perché ad esempio questi che hai inserito sono...non so, li percepisco un po' come delle anomalie all'interno di questo modello, anche perché così non mi servono fondamentalmente a niente, nel senso non mi aiutano a comprendere meglio gli spazi e lo sfruttamento, anzi li trovo in po'...come se mi facessero perdere la concentrazione nell'osservare il modello in sé. Però usare invece il loro punto di vista quello sì, è interessante, mi piace più che altro perché hai una visione delle altezze e dello spazio a 360 gradi.

Reference 27

MONICA:

non so, secondo me forse sono anche evitabili, piuttosto mettere delle panoramiche ad altezza uomo, quello sì, ma una figura proprio all'interno n o, secondo me ti fa perdere un po'...risulta un po' estranea anche s e sono completamente stilizzati.

Reference 28

MONICA:

sì, davvero questi avatar sono proprio fastidiosi in mezzo.

Theme 3

Reference 1

AIDA:

nel senso che il coinvolgimento emotivo c'è a priori, però si sicuramente è un po' come vedere la realizzazione di qualcosa, nel senso di...è come se lo vedessi completato in un certo senso e avere un impatto così immediato è come vederlo veramente, anche se ovviamente ti rendi conto di tutti i limiti e di tutte le approssimazioni che ci possono essere, l'impatto emotivo è sicuramente forte anche se cerchi di separare il fatto che è un posto dove lavori benissimo.

Reference 2

AIDA:

è una sorta di completamento, forse perché sono un po' carente io di immaginazione...lo sono sempre stata...quindi è veramente come se si realizza qualcosa, se si completa qualcosa che hai sempre immaginato però non sai mai se l'hai immaginato giusto, quanto hai potuto sbagliare, quindi sì, sì, l'impatto emotivo ce sicuramente.

Reference 3

GRETA:

diciamo, avendoci lavorato, insomma la mia percezione del modello appare più entusiastica.

Reference 4

GRETA:

sì, decisamente sì, nel senso che...ehm... ovviamente, ehm, penso che questo aspetto faccia parte di un mix di fattori che sono legati al carattere della persona dal grado di emotività e ovviamente dal background, dall'interesse, eccetera. In questo caso io non sono una persona particolarmente emotiva però ho sicuramente un attaccamento molto alto al sito e al lavoro che faccio per cui devo dire che è effettivamente molto emozionante.

Reference 5

GRETA:

sembra effettivamente non solo l'oggetto dei tuoi studi, ma un luogo dove delle persone hanno vissuto e questo ti rende più coinvolta in qualche modo, più vicina e boh, si

ti...come dire...ti mette nell'ottica di idee che ci fosse vita, ci fossero emozioni, ci fosse interazione con lo spazio, ci fosse ...boh...anche se il modello è muto, che ci fossero voci, rumore, che ci fosse gente che lavorava...tutte cose che non si percepiscono, non si riescono ad immaginare fino in fondo...un posto realmente vissuto e popolato da persone come noi, perché tu sei nell'ottica loro alla fine no?! Per cui è bello.

Reference 6

LORENZO:

c'è anche da dire che il mio coinvolgimento emotivo è molto forte in generale.

Reference 7

LORENZO:

questo è parte di integrante del tuo lavoro, anche gli elementi che apparentemente sembrano più banali, per esempio vedere l'alzato, la ricostruzione della porta, quindi il legno delle assi della porta, è qualcosa che chiaramente è molto forte emotivamente, proprio perché è un oggetto semplice...è una porta di legno non ci aspetta nulla di diverso...però vederla di fronte a te è emotivamente molto forte. Direi proprio le cose più semplici come, ad esempio, vedere l'effetto dell'interno delle pareti in plaster, le porte, tutto questo qui e tutti gli elementi apparentemente più semplici sono quelli che secondo me danno più dal punto di vista emotivo.

Reference 8

LORENZO:

Il lavoro è grosso da fare più sull'essere umano che non sull'architettura, però penso che poi di conseguenza l'effetto emotivo possa essere addirittura più forte.

Reference 9

MARICA:

Si, guarda...poi va beh scavando questo sito, ti emozioni al contesto ed avere un'idea visivamente così chiara

Reference 10

MARICA:

Quindi è assolutamente emozionante

Reference 11

MARTA:

I feel pretty engaged with the model.

Reference 12

MONICA:

no, è proprio scioccante vederlo ricostruito così davvero.

Reference 13

MARICA:

Beh, coinvolgimento c'è, perché finalmente si vede materialmente l'insediamento che si scava, quindi non più semplicemente tagli nella bedrock ma strutture vere e proprie, quindi secondo me è sconvolgente perché ti lega ancora di più a questo contesto, agli spazi, al contesto produttivo preistorico in cui vivevano insomma queste persone, che alla fine doveva vedere degli spazi del genere, quindi come coinvolgimento è altissimo.

Theme 4

Reference 1

GRETA:

sì assolutamente. Questo è il discorso...queste domande sono sicuramente correlate e fatte alla stessa persona che è archeologo e che ha scavato il sito...ehm. Non ti possono rispondere no, perché se mi aiuta per l'interpretazione mi aiuta a comprendere a maggior ragione il sito che sto scavando, ma penso possa aiutare anche e ancora di più un utente che non si rende conto fondamentalmente, o si rende conto ma non ha scavato lui e non è conscio della stratigrafia e dei processi deposizionali che noi abbiamo potuto vedere con mano e che ora sono tolti perché ovviamente te lo scavo è un processo distruttivo eccetera, ma anche occhio per delle strutture molto diverse da quelle che lui è abituato a fruire della modernità, perché sono strutture appunto che possono essere rovinate, sono preistoriche, sono ehm, come dire...lontane da...oppure possono essere appunto estrapolate dal suo normale contesto di tradizione, di edifici e cose del genere, per cui nel senso a volte risulta molto difficile andando in un sito e vedendo semplicemente le tracce di quello che è stato poter immaginare e, appunto, anche avere la percezione di quali fossero gli ambienti...anche semplicemente a Erimi-Laonin di quali fossero ambienti chiusi o aperti non è così immediatamente comprensibile, proprio perché si trovano semplicemente solo dei tagli, per cui è molto utile indicare laddove abbiamo la certezza che l'ambiente fosse chiuso al pubblico e all'utente che fosse sicuramente chiuso. Io ho questa informazione, questo mi aiuta a visualizzarla no? Io come archeologo questo mi aiuta solo a visualizzarla correttamente, però io come utente probabilmente non ho immediatamente accesso a questa informazione solo se vedo e nessuno mi spiega, ma anche se qualcuno mi spiega possono fare fatica ad entrare in

quest'ordine di idee; il modello, invece, essendo una cosa immediatamente comprensibile, perché ti mette dentro ad una ricostruzione, risolve questo problema enorme.

Reference 2

LORENZO:

Si, si penso che sia del tutto comprensibile. Allora, dunque, non esperti sicuramente l'elemento...più ci allontana verso il pubblico generico, più elemento di emotività causato da questo tipo di ricostruzione secondo me diminuisce, nel senso che il pubblico generico probabilmente ha bisogno di elementi più forti, più contrastanti...qui molto dell'emozione è dato dal fatto che chi lo vede riesce a capire da cosa siamo partiti e a cosa siamo arrivati. Un pubblico di esperti fra virgolette, un pubblico di archeologi o di esperti del settore anche se non di archeologia cipriota, tendenzialmente secondo me è un fruitore più consapevole ed emotivamente più attratto da questo tipo di ricostruzione. L'archeologo cipriota sicuramente è estremamente interessato a questo tipo di esperimento, perché in più ovviamente c'è l'interesse per il contesto in sé.

Reference 3

MARICA:

Assolutamente sì, perché secondo me ti consente di avere un'idea effettivamente concreta di quella che è la ricostruzione che da archeologi si tenta di effettuare attraverso delle modalità che però molto spesso, secondo me, non si risolvono in maniera fruibile per i non esperti, i non addetti al campo.

Reference 4

MARICA:

Ma sai la comprensione di strutture sì e no, nel senso che...immagino una persona che si debba interfacciare con un grafico di questo tipo, probabilmente non avendo conoscenze pregresse potrebbe non riuscire comunque a capire a cosa effettivamente servissero i vari spazi e le varie strutture.

Reference 5

MARICA:

Si, guarda...poi va beh scavando questo sito, ti emozioni al contesto ed avere un'idea visivamente così chiara, vedendolo attraverso questo modello è tutta un'altra cosa...è difficile crearsi un'immagine visiva semplicemente scavando il sito, quindi questo modo è davvero... l'immagine più immediata e reale che uno possa avere...in altro modo non si potrebbe mai concretamente avere, perché appunto manca la documentazione

fotografica i quelle che sono le strutture perché è impossibile produrla, quindi questo secondo me è l'unico strumento che oggi abbiamo per avere questa immagine, quindi è assolutamente bellissimo...è un sistema che mi piace moltissimo, magari averlo per tutti i siti, per tutti i contesti, cioè secondo me sarebbe anche forse più facile per i non addetti al campo riuscire a capire bene come funzionavano le cose, come funzionavano gli spazi, come agivano e si muovevano le persone all'interno degli spazi...questo solo il modello 3D riesce di fare e di avere. Quindi è assolutamente emozionante.

Reference 6

MONICA:

sì secondo me sì, è sfruttabile da entrambi, perché comunque l'esperto riuscirà sicuramente a trarre magari delle informazioni più puntuali e precise, però non so credo sia più interessante forse proprio per chi non è del settore. Perché un esperto fondamentalmente nella sua testa perché, anche non conoscendo il contesto in particolare, però comunque è all'interno di questo tipo di conoscenza...un visitatore invece non abituato, secondo me ricostruito in questo modo lo rende più vicino alla persona no? E anche questo fatto di poter indagare, di poter cliccare sui vari oggetti, distinguere le fasi, vedere i vasi in loco eccetera, senso me è sfruttabile per un pubblico più vasto, almeno io penso che sia...perché è proprio comprensibile, è semplice da vedere, è semplice da capire.

Reference 7

MONICA:

Ma io penso che sia fruibile ad ampio raggio, perché comunque l'esperto riuscirà...non avrà bisogno di una visione di insieme però può focalizzarsi su aspetti più particolari, dal tipo di costruzioni all'orientamento degli spazi, quindi l'assemblage che c'è all'interno...per i fruitori un pochino più, diciamo, generici funziona perché è semplice da utilizzare ed è di impatto.

Reference 8

GRETA:

no secondo me invece bisogna incanalare l'utente non specializzato verso un tipo di informazione, prendere noi la decisione perché se no si perde fondamentalmente e rischia di, come dire, annoiarsi; mentre ovviamente lasciare allo specialista la scelta, cioè tutta la gamma di informazioni a disposizione.

Reference 9

GRETA:

infatti, ovviamente la struttura è diversa, però nel senso il concetto che sta alla base è che la parte grafica è fruibile da tutti, ma è la parte scritta il problema, come sempre, quindi sì anche secondo me bisognerebbe adottare due versioni differenti.

Reference 10

GRETA:

ma soprattutto più semplifichi e meno rendi dispersiva l'informazione, più loro capiscono effettivamente quali attività noi abbiamo ricostruito lì, se invece tu cominci a descrivere tutto puntualmente potrebbero non capire che noi abbiamo identificato come main activities alcune cose e non.

Reference 11

LORENZO:

ok, allora io ho cambiato idea mentre parlavamo, mi sono innamorato di questa seconda idea di suddividere per tipo di visita e non per tipo di visitatore, sul piano di tipologia e quantità di informazioni, perché secondo me c'è un modo per enfatizzare l'oggetto nel suo contesto per la visita al museo, l'architettura nel suo spazio fisico per la visita sul sito e entrambi...in generale per la visita on-line io metterei una quantità sovrabbondante di informazioni, perché tanto il livello di astrazione è inferiore, cioè il livello di cortocircuito tra la realtà e il modello non c'è, mentre negli altri due casi c'è modo di enfatizzare le cose. Per esempio, la descrizione dei pithoi in quanto tali è molto più importante nella visita al museo che non nella visita sul sito.

Reference 12

AIDA:

Si per gli esperti ovviamente sì, nel senso magari soffermeranno su alcune cose che i non esperti magari non noteranno, o appunto magari avranno una visione più immediata del particolare, mentre sul non esperto secondo me agisce più la visione globale del sito. Magari un archeologo dell'Età del Bronzo noterà moltissimi particolari che per un occhio non allenato o che per la prima volta vede dei basini o delle strutture in elevato, ovviamente non può notare, però a livello di chiarezza è ineccepibile in entrambi i casi. Ma, uhm...mi devi dare un attimo che do un'occhiata...probabilmente...potrebbero tendere a trovarle, essendo abituati alla disciplina e quindi avendo un altro schema mentale, potrebbero tendere a trovarle forse un po' generiche, ma se devi pensare ad un grande pubblico devi per forza usare un linguaggio semplificato e non scendere troppo

nei particolari. L'unica tendenza potrebbe essere un po' quella, considerarle un pochino generiche.

Reference 13

CHIARA:

I think that for the model to suit the exigencies of non-professionals it would be useful to add more details, for example about the surrounding environment, and simplify descriptions. Also, in order to enrich explanations, it could be nice to hypothesise some further reconstruction for example of the hearth of phase B.

Reference 14

GRETA:

uhm...sì da un lato sì, perché ci sono delle cose di immediata comprensione e segnalata nella maniera più elementare possibili, soprattutto la parte dei colori e delle forme, penso che sia comprensibile e che, come dire, transculturale no?! Veramente e globalmente comprensibile. D'altra parte, ovviamente ci sono alcune parti che sono in inglese, quindi io mi immagino. Non lo so. Appunto delle persone italiane, io mi immagino miei genitori a interagire con questo modello non potrebbero capire tutto...questo mi rendo conto che è ovviamente il problema della Torre di Babele e che non ci si possa fare niente...uhm...alcuni concetti come fase A e fase B ovviamente devono...come dire, fanno più parte propriamente del nostro lessico. Ehm...penso che possano essere capiti, non so fino a che livello, però penso di sì obiettivamente. Altre cose che fanno parte del nostro lessico, ad esempio la parola 'materiali, molto spesso non si usa, ad esempio in italiano non si usa materiali per riferirsi agli oggetti, quindi potrebbe creare un attimino di, come dire, esitazione da parte del fruitore...ehm...certo è ovviamente facilmente scavalcabile, perché è semplicemente una questione di lessico...ehm. Per il resto gli hot spot, gli avatar sono cose che ormai sono entrate così tanto nella nostra quotidianità che non si può fare a meno di comprenderli. Quindi...no, certo, è sicuramente comprensibile.

Reference 15

MARICA:

Si, si assolutamente, perché comunque il testo è chiaro, io ho letto poche righe, ma il testo è chiaro e penso che, come ti dicevo prima, è fondamentale associare l'immagine al testo e chiunque, anche una persona non interessata nello specifico al contesto cronologico e geografico del sito, potrebbe tranquillamente avere piacere a leggere il testo e associare il testo all'immagine e viceversa, quindi penso, ti ripeto, che il testo sia

assolutamente fondamentale...soprattutto appunto per persone che non conoscono bene il sito, sai perché se ci scavi il presupposto fondamentale è che tu queste nozioni già dovresti averle apprese e il modello ti dà quel di più che ti manca a livello visivo per avere l'idea generale di come funzionava l'area; mentre invece per una persona non coinvolta, che non ha lavorato nell'ambiente o che non è conoscitore del periodo storico e del contesto geografico potrebbe essere una chiara idea di quello che è emerso dallo scavo stesso.

Reference 16

MARICA:

ma guarda come ti dicevo prima io non sono tanto per gli avatar in questo senso, perché...ecco secondo me, la parte positiva dell'avatar è quella di catturare l'attenzione di...ecco in questo senso ti posso parlare di target, di persone che non specificatamente coinvolte e legate al sito, quindi è ovvio che l'avatar potrebbe essere l'elemento che può attirare l'attenzione...per persone che potrebbe essere interessate alla nozione puramente archeologica del contesto, io penso che avatar o non avatar, non cambierebbe tanto. L'importante è avere il testo scritto se è associato all'immagine di riferimento, poi per il resto io non avrei nessun bisogno di associare altro tipo di immagini o avatar, però se si fa un discorso di fruibilità ad un grande pubblico di non esperti, l'avatar è quell'elemento che riesce a coinvolgere più gente, quindi più attrattivo dal punto di vista visivo.

Reference 17

MARTA:

I think so. The 3d model is easily accessible by everyone. However, I would suggest to make the informative panels easier, in case the user is a child.

Reference 18

GRETA:

è io quello te lo avevo già detto, questo potrebbe essere davvero fondamentale per far capire loro effettivamente che non si tratta qualcosa di strano di vecchio, ma qualcosa di molto simile a quello che percepiscono come vita quotidiana, cioè che quello era veramente un luogo di vita e non è soltanto un luogo esterno al loro villaggio o un campo dove noi andiamo fare cose strane, ma se tu lo vedi come è ricostruito e lo senti simile o più vicino a quella che è la tua realtà quotidiana. comprendi l'importanza di quello che noi facciamo.

Reference 19

LORENZO:

secondo me, sulla base di quella che è la mia esperienza sono due gli elementi che avvicinano il contesto in cui lavoriamo e la comunità attuale ed entrambi si basano sullo stesso meccanismo, che è quello dell'orgoglio che la comunità ha nei confronti del suo passato. E come si manifesta l'orgoglio: attraverso due canali di autorappresentazione: uno è la ricchezza che questa comunità ha, la seconda è proprio l'aspetto industriale, cioè è molto per loro accattivante.

Reference 20

LORENZO:

se posso fare una nota su questo: è molto interessante, però è anche un'arma a doppio taglio, perché quello che per loro è il passato folkloristico dei loro nonni, per come si è sviluppata la società cipriota nell'arco degli ultimi 50 anni, non è una cosa di cui vanno molto orgogliosi...cioè se tu gli dici 'guarda questo è come ce lo avete voi' lui ti dirà 'no, guarda questo lo aveva mia nonna, io ora ho l'iphone'...quindi secondo me è meglio fargli capire che loro erano all'avanguardia, se vogliamo creare un ponte dobbiamo fare dei passi verso di loro e non pretendere che loro ne facciano verso di noi.

Reference 21

AIDA:

Ma tendenzialmente in questi casi io non credo dipenda dalla tipologia del sito, comunque sono cose che risultano abbastanza interessanti un po' in generale, ma in particolare essendo comunque credo una visione abbastanza, diciamo, non semplificata perché comunque sulla base degli studi il sito effettivamente è così quindi non è semplificata, però essendo strutture molto semplici sulle quali non devi concentrarti magari sull'evoluzione delle strutture, sui cambiamenti...cioè i cambiamenti sulle due fasi ci sono ma sono minimi...e appunto anche le strutture, la forma delle strutture risulta piuttosto semplice, credo che abbia un impatto particolarmente interessante anche sui bambini e sui non esperti di età adulta. Gli esperti, essendo esperti di Età del Bronzo. Tu con esperti intendi archeologi in generale.

Reference 22

CHIARA:

I do not think there is a specific audience for the 3D model of Erimi-Laonin tou Porakou though I am convinced that the people who would greater benefit from it are non-

professionals, i.e. people not familiar with prehistoric features and archaeology in general.

Reference 23

GRETA:

uhm...ma io penso che sia interessante in generale. Ovviamente penso che abbia uno specifico appeal per quanto riguarda gli studiosi, specialisti, perché in questo momento Erimi-Laonin è sulla cresta dell'onda dei principali filoni di ricerca a Cipro, nell'archeologia cipriota in questo momento, per il concetto di industrializzazione, proto-urbanizzazione, di comunità, di come essa percepiva sé stessa...sono tutti concetto su cui si sta lavorando ora nell'archeologia cipriota, per quello risulta molto interessante per gli specialisti. D'altra parte perché non allargarlo e coinvolgere un gruppo più generale, alla fine è un sito che si presta secondo me moltissimo, perché nonostante sembra isolato, in realtà è molto accessibile, vicino al villaggio di Erimi presenta una varietà, come dire, di abitato, zone più specializzate a livello industriale, necropoli, eccetera, che è molto stimolante per un auditorio anche non specializzato...può secondo me suscitare l'attenzione di, come dire...uhm...a molti livelli, perché magari c'è chi è più interessato alla necropoli, chi ad una situazione di abitato e lì avrebbero la possibilità di fruire di un sito nella sua totalità, che è una cosa che fra l'altro a Cipro per vari motivi, non è sempre possibile. Probabilmente sarebbe anche utile, dal mio punto di vista, coinvolgere anche di più la popolazione locale, gli abitanti di Erimi stessa e un progetto del genere potrebbe forse anche dare l'input giusto per stabilire il giusto contatto, perché li metterebbe forse di fronte alla realtà di quello che è stato e quindi di qualcosa che non è solo nella nostra mente di archeologi no?! è qualcosa di realmente esistente, con cui devono fra virgolette fare i conti.

Reference 24

LORENZO:

Si, io individuerei tre categorie di fruitori: la prima i colleghi che si occupano di preistoria cipriota, i quali ovviamente di questo modello fruiscono soprattutto i dettagli relativi a quanto tu hai fatto per ricostruire in elevato, ehm, l'aspetto dell'elevato basandoti sui dati micro morfologici e immateriali dati dalle building techniques; il secondo gruppo è senz'altro quello più ampio degli addetti...più che degli addetti all'archeologia, in generale degli addetti...di chi si occupa di protostoria, di società mediterranee di questo periodo, i quali possono essere interessati per via comparativa ad avere dati più immediatamente fruibili, perché questo modello li mette davanti con

rapidità ad alcune cose che loro possono comparare più facilmente, ad esempio i sistemi di immagazzinamento, sistemi di aperture e permeabilità degli spazi, tutte queste cose che, diciamo, si vedono in un attimo, invece di recepirle leggendoti alcuni articoli. Quindi questo è il secondo gruppo, che è un sottogruppo del primo. L'altro gruppo importante di fruitori di questo tipo di modello sono ipotetici visitatori di miei che espongono questi oggetti, che ovviamente avrebbero grande vantaggio nel poter avere una ricostruzione navigabile degli ambienti i cui oggetti sono musicalizzati nei musei stessi e poi, ovviamente, all'interno di questo gruppo il sottogruppo degli ipotetici visitatori del sito, i quali a loro volta se potessero avere accesso a questo modello visitando il sito fisicamente avrebbe sicuramente quello che tu chiamavi prima un forte impatto emotivo, perché ricostruirebbero con facilità ciò che vedono e ciò che tu hai ricostruito.

Reference 25

AIDA:

Si per gli esperti ovviamente sì, nel senso magari soffermeranno su alcune cose che i non esperti magari non noteranno, o appunto magari avranno una visione più immediata del particolare, mentre sul non esperto secondo me agisce più la visione globale del sito. Magari un archeologo dell'Età del Bronzo noterà moltissimi particolari che per un occhio non allenato o che per la prima volta vede dei basini o delle strutture in elevato, ovviamente non può notare, però a livello di chiarezza è ineccepibile in entrambi i casi. Ma, uhm...mi devi dare un attimo che do un'occhiata...probabilmente...potrebbero tendere a trovarle, essendo abituati alla disciplina e quindi avendo un altro schema mentale, potrebbero tendere a trovarle forse un po' generiche, ma se devi pensare ad un grande pubblico devi per forza usare un linguaggio semplificato e non scendere troppo nei particolari. L'unica tendenza potrebbe essere un po' quella, considerarle un pochino generiche.

Reference 26

Chiara

I think that for the model to suit the exigencies of non-professionals it would be useful to add more details, for example about the surrounding environment, and simplify descriptions. Also, in order to enrich explanations, it could be nice to hypothesise some further reconstruction for example of the hearth of phase B.

Reference 27

LORENZO:

Si, si penso che sia del tutto comprensibile. Allora, dunque, non esperti sicuramente l'elemento...più ci allontana verso il pubblico generico, più elemento di emotività causato da questo tipo di ricostruzione secondo me diminuisce, nel senso che il pubblico generico probabilmente ha bisogno di elementi più forti, più contrastanti...qui molto dell'emozione è dato dal fatto che chi lo vede riesce a capire da cosa siamo partiti e a cosa siamo arrivati. Un pubblico di esperti fra virgolette, un pubblico di archeologi o di esperti del settore anche se non di archeologia cipriota, tendenzialmente secondo me è un fruitore più consapevole ed emotivamente più attratto da questo tipo di ricostruzione. L'archeologo cipriota sicuramente è estremamente interessato a questo tipo di esperimento, perché in più ovviamente c'è l'interesse per il contesto in sé.

Reference 28

MARTA:

I think so. The 3d model is easily accessible by everyone. However, I would suggest to make the informative panels easier, in case the user is a child.

Reference 29

MONICA:

io la vedo come un'imposizione, decidi tu il punto di vista. Ma poi oltretutto come fai a fare uno storytelling su un contesto che fondamentalmente unitario.

Reference 30

AIDA:

no, è limitante perché deciderebbe lui che domande porti, quali cose evidenziare, perché ovviamente se tu hai quel filone narrativo ti concentri su quelli, quindi hai meno fantasia da un certo punto di vista.

Reference 31

MONICA:

no, è che secondo me si ricollega di nuovo al fruitore, nel senso il fruitore x che non sa niente del contesto eccetera, magari lo storytelling gli può anche servire perché non sa dove andare a guardare e rimane tutto un po' sul vago, mentre seguire un filone preciso fa sì che tu ti avvicini di più.

Reference 32

GRETA:

ah, un percorso guidato. No, perché stiamo già raccontando qualcosa. Ah, no quello sì. da un punto di vista dello specialista è la cosa più deleteria che ti possa capitare.

Reference 33

AIDA:

sì esatto. Che poi io non ero d'accordo sullo storytelling come unica opzione. Se poi fosse un'aggiunta dopo che io mi sono girata il sito, ho quest'opzione che è anche un po' chiarificatrice se vogliamo allora sì, ma in sostituzione del mio navigare a modo mio nel modello no.

Reference 34

AIDA:

No, credo che sia limitante all'immaginazione, perché tendenzialmente se tu hai già una guida tendi a notare solo quello che la guida ti sta dicendo e magari ti perdi tanti particolari ai quali penseresti dovendoti, così, tra virgolette, arrangiare e capire tu come muoverti e cosa fare. Quinis solo attraverso lo storytelling, se lo storytelling dovesse costituire un secondo step, nel senso che ' prima ho fatto questo, ho visto, ho cercato di capire e poi posso avere anche un ulteriore elemento che approfondisca' allora sì, assolutamente sì, ma solo lo storytelling non mi convince molto come ipotesi, lo troverei abbastanza selettivo.

Reference 35

CHIARA:

I think a narrative path through the 3D model can be very enjoyable, especially for non-professionals. Besides, people tend to be lazy and a narrative path can help increase curiosity.

Reference 36

GRETA:

sì da un lato direi di sì, dall'altro sono conscia, come dire, degli ostacoli a cui si andrebbe incontro presentando uno storytelling a persone...scienziati, archeologi, a persone competenti, perché solitamente la nostra impostazione mentale, come dire, non dovrebbe consentirci di...come si può dire...di vedere la nostra ricerca come una storia raccontata, perché sembra sempre pericoloso allo scienziato fare una operazione di questo tipo. D'altra parte se si riesce a vincere questo pregiudizio, si tratta tutto con estrema scientificità come ovviamente questo modello sta facendo, io direi perché no?!

alla fine è utile avere un approccio il più aperto possibile, anche mentalmente, per cui...si, potrebbe essere utile, anche come dire per esperti di archeologia cipriota, perché è sicuramente un mezzo probabilmente così comprensibile a vari livelli, che può essere sicuramente fruibile sia dai non specialisti che da quelli più specializzati.

Reference 37

LORENZO:

Secondo me potrebbe esserlo nell'ottica di una visita che prescinde dal sito, dal museo e dall'interesse scientifico, cioè se il modello fosse...per chi vuole fruire del modello a sé stante, la narrazione è importante, per cui per una possibile forma di visita on-line o in un ambiente esterno, come dire, anonimo allora sì lo storytelling ti aiuta a creare un filo conduttore nella visita. Altrimenti negli altri casi che ti ho detto lo storytelling secondo me non è utile, perché il visitatore è più facile che si senta lui più libero di creare delle connessioni, dei legami e di creare una sua sorta di itinerario visita interno. Nel caso in cui si trovi sul sito stesso o in un museo lo storytelling secondo me appesantisce la visita e ti distacca dalla connessione fra l'oggetto e il suo modello.

Reference 38

LORENZO:

Io penso che sarebbe un elemento di distrazione per chi visita il sito col tablet e vede i modelli sul sito stesso, o per chi visita il museo in cui sono conservati gli oggetti col tablet e il modello stesso: in quel caso sarebbe un elemento di troppo, di più che impedirebbe in qualche modo anche la libertà di collegamenti che capisci ci possono essere...immagino la vista tradizionale al sito archeologico, la narrazione in qualche modo ingabbia in quel tipo di visita e nella visita nel museo è lo stesso. Mi viene in mente alcuni musei in cui c'è un eccesso di questo tipo di guide, di in un qualche modo forzatura nella guida dell'itinerario...tu ha la sensazione di dire 'ma se io volessi andare nell'altra sala invece che in quella, invece sono obbligato'...questo obbligo è molto utile se tu sei in un ambiente anonimo come appunto il web, allora ce qualcuno che ti guida, ti fa da cicerone, allora va bene, sei invece sei tu in un ambiente fisico allora questo tuo supporto ulteriore, diciamo, secondo me lo storytelling appesantisce.

Reference 39

MARTA:

I really think so. Especially in case of non-specialist users and children/schools.

Reference 40

MONICA:

Uhm...no secondo me nono tanto, perché ti perdi secondo me...perché qualcuno che ti racconta, quindi ti impone un percorso particolare secondo me no, perché perdi la concentrazione su singole stanze, sui singoli oggetti... e po' è una cosa predominante, quindi come fai ad impostare un percorso fondamentale? Li si parla di un insediamento, almeno per come la vedo io, con una storia comunitaria, quindi impormi un percorso no, no lo vedo come una forzatura...però non ti saprei dire invece per un visitatore inesperto, magari invece potrebbe rendere più agevole...però anche lì perdi un po' la visione generale, che è anche la cosa bella di questo modello...cioè è bello poter vedere l'insieme e poi concentrarti su determinate cose. Un racconto così, no secondo me ti fa perdere la concentrazione. È un po' come la guida al museo che si, magari è anche interessante perché ti spiega delle cose in più, però va avanti a scaglioni, quindi quello che c'è prima e dopo si perde sempre un po', mentre secondo me è meglio interagire da solo. Poi, ti dico, questo è anche un contesto particolare, non ti saprei dire se una persona completamente inesperta forse magari glielo po' render più chiaro, io questo contesto lo conosco, quindi quello un po' frega diciamo perché conosco quel contesto...magari metter la possibilità di scegliere, mettere un avatar con una possibilità di storytelling oppure no, magari si eco quello si può fare...però sì la bellezza è quella di poter interagire così in solitaria...e poi anche, come dire, avere una persona virtuale che ti spieghi. No, no, oltre che proprio un'imposizione ti fa perdere la concentrazione, quindi non lo farei, non la vedo come una scelta che possa portare miglorie.

Interviews transcripts

INTERVIEWER:

Cominciamo con la prima intervista. Prenditi tutto il tempo che vuoi per navigare. Se hai commenti da fare durante la navigazione sull'interfaccia e quant'altro sentiti pure libera. Poi quando hai sufficientemente navigato cominciamo con le domande.

GRETA:

va bene, però come faccio a spostarle, dovrei cliccare...no perché io sono un po'...su queste cose, ma non si sposta Non mi viene la manina che si sposta.

INTERVIEWER:

no, non c'è la manina...e tasto destro e giri con il mouse.

GRETA:

ah, perché è il tasto destro, ho confuso la destra con la sinistra...è normale sì allora. (Sussurra) Oddio, oddio che bello...sono un po' emozionata. No, non so se sono abbastanza attendibile perché mi sembra tutto bellissimo perché, oddio, Erimi-Laonin in versione...allora volevo semplicemente che, diciamo, avendoci lavorato, insomma la mia percezione del modello appare più entusiastica.

INTERVIEWER:

ah, ma non ti preoccupare discuteremo di questo con la domanda apposita.

GRETA:

Ora ho perso tutto però. Scusa mi puoi aiutare, perché sono io che sono un po' insomma...insomma. Non propriamente... ah ecco. La persona più adatta a questo tipo di ...

INTERVIEWER:

Ok puoi usare anche tutto questo qua sotto e il principio è sempre lo stesso...esatto, rotate.

GRETA:

è come pilotare un aereo, oddio questo è, questo è la struttura della tintura, sono un po' emozionata! Come faccio a cambiare fase? Posso? Non ho capito.

INTERVIEWER:

puoi...South view, show phase A e show phase B...

GRETA:

ahhh, ma sono io, scusatemi eh.

INTERVIEWER:

Sempre South view, show hotspots, show avatars...

GRETA:

Ah, bello mi piace anche questa versione senza tetto, tra virgolette, che ti dà la possibilità di guardarci dentro dall'alto. Perché è un po' come...è un po' la nostra prospettiva questa, diciamo, più archeologica fondamentalmente

INTERVIEWER:

Puoi anche utilizzare top view.

GRETA:

Ah, bello questa è una prospettiva anche topografica se vogliamo. Vediamo la phase B, uhm.

INTERVIEWER:

puoi utilizzare le frecce per muoverlo.

GRETA:

queste sono più comode per quanto mi riguarda.

INTERVIEWER:

puoi anche usare gli hotspots qui che ti danno informazioni.

GRETA:

Ah, bello. Vediamo cosa hai scritto per il nostro amico basin...che è di fase B. Ah sì sì, bene bene, sì, che bello!

INTERVIEWER:

poi per avere le vision interne devi andare su show avatar, clicchi qui sotto vai su previous e sei all'interno di una stanza. Dopodiché più fare il click and rotte per girare intorno alla stanza.

GRETA:

Ah, bello, mi piace questo (riferendosi alla texture per l'alzato) così...così con questa cosa che sembra appunto un po'...che richiama un po' la struttura...incannicciata.

INTERVIEWER:

Do you have any previous knowledge and/or experience with the application of 3D modelling in archaeology?

GRETA:

no, no.

INTERVIEWER:

non hai mai interagito con modelli 3D in contesti museali?

GRETA:

sì, quello sì l'ho fatto. Per esempio c'erano questi monitor nel museo che ho recentemente visitato a Posna, molto interessante perché lì praticamente è un museo, dove hanno ricostruito...praticamente scende nel sottosuolo e ti fanno vedere il punto dove hanno scavato questa cinta muraria, questa struttura della primissima città e appunto, proprio c'è tutta la stratigrafia che stanno cercando di preservare e ci sono dei

monitor con tutte le ricostruzioni eccetera e si possono semplicemente con dei touch screen...uhm...si può navigare tranquillamente come ti dicevo, diciamo, poi a volte c'è anche un modello...però, insomma, è molto diverso usare un touch screen che usare un computer.

INTERVIEWER:

quindi con un basso livello di interattività fondamentalmente.

GRETA:

sì, perché puoi soltanto girare, mettere anche upside down praticamente, però non puoi fare nient'altro. E forse questo mi è capitato anche...sì, non soltanto nei musei...una volta avevo visto con il computer. Aspetta che faccio un attimo mente locale e mi ricordo di...cerco di ricordare che oggetti fossero...penso, ma non ne sono sicurissima, fossero oggetti da...uhm...sicuramente Vicino Oriente, penso Arabia e penso fossero una sorta di catalogo online, realizzato della missione archeologica italiana <...> che io seguo sempre. Comunque, erano questi oggetti che potevano essere ruotati in tutte le direzioni, capovolti, girati.

INTERVIEWER:

quindi interazioni prevalentemente in contesto museale.

GRETA:

sì, sì non mi viene in mente altro.

INTERVIEWER:

Do you consider 3D modelling useful for the archaeological interpretation process? If yes, explain how.

GRETA:

Eh, sì bella domanda, nel senso che da un lato si può essere sicuramente utile perché visualizzare è una cosa importante e non tutti hanno...come dire, questa, questa capacità e quindi visualizzare ti fa rendere conto degli spazi soprattutto e del modo in cui li gestivano. D'altra parte, dal momento che, ehm, appunto, tutto è estremamente caratterizzato. Ehm, interpretare attraverso, avendo già le cose fatte è sbagliato, perché dovresti invece, dovrebbe essere il processo contrario, per cui dovresti costruire il tuo modello in base anche alla tua interpretazione. Perché se tu per esempio, prendi anche come abbiamo fatto noi, trovi dei tagli e dei crolli, eccetera, quelli sono tutti dato che poi noi abbiamo interpretato come unità chiuse o aperte con muri e strutture che hai molto bene riportato in questo modello, però non poteva essere fatto prima

dell'interpretazione dei singoli dati fondamentalmente. Per cui il modello probabilmente è utile per interpretare ad un altro livello ancora fondamentalmente, ad un livello più alto della normale interpretazione archeologica, quindi ti consente forse di avere più...come dire...di andare oltre l'interpretazione diciamo materiale e occuparti forse anche più del...cioè del materiale, del singolo oggetto intendo...e proprio rivolgerti al contesto, non soltanto dicendo, appunto, questo è un contesto in cui si fa questo, ci sono queste strutture, ma ti dà la possibilità di visualizzarlo in maniera complessiva, totale e quindi proprio quello di cui mi sto rendendo conto interagendo con questo modello...proprio quanto forse, appunto, ci manca la percezione degli spazi e la possibilità di metterci noi, come dire, uhm, all'interno...la possibilità di metterci non solo come studiosi all'interno di quello che scavi, ti dà la prospettiva ehm del fruitore, di come costruiva e utilizzava questi spazi, che è molto importante perché toglie diciamo un pochettino una distanza che a volte è ottima da avere, nel senso, perché è scientifica, ma d'altra parte se sia ha troppo certe cose non si possono capire fondamentalmente, per cui...

INTERVIEWER:

Do you think 3D modelling helps broaden the understanding of the site? If yes, explain how.

GRETA:

sì assolutamente. Questo è il discorso...queste domande sono sicuramente correlate e fatte alla stessa persona che è archeologo e che ha scavato il sito...ehm. Non ti possono rispondere no, perché se mi aiuta per l'interpretazione mi aiuta a comprendere a maggior ragione il sito che sto scavando, ma penso possa aiutare anche e ancora di più un utente che non si rende conto fondamentalmente, o si rende conto ma non ha scavato lui e non è conscio della stratigrafia e dei processi deposizionali che noi abbiamo potuto vedere con mano e che ora sono tolti perché ovviamente te lo scavo è un processo distruttivo eccetera, ma anche occhio per delle strutture molto diverse da quelle che lui è abituato a fruire della modernità, perché sono strutture appunto che possono essere rovinare, sono preistoriche, sono ehm, come dire...lontane da...oppure possono essere appunto estrapolate dal suo normale contesto di tradizione, di edifici e cose del genere, per cui nel senso a volte risulta molto difficile andando in un sito e vedendo semplicemente le tracce di quello che è stato poter immaginare e, appunto, anche avere la percezione di quali fossero gli ambienti...anche semplicemente a Erimi- Laonin di quali fossero ambienti chiusi o aperti non è così immediatamente comprensibile, proprio perché si

trovano semplicemente solo dei tagli, per cui è molto utile indicare laddove abbiamo la certezza che l'ambiente fosse chiuso al pubblico e all'utente che fosse sicuramente chiuso. Io ho questa informazione, questo mi aiuta a visualizzarla no? Io come archeologo questo mi aiuta solo a visualizzarla correttamente, però io come utente probabilmente non ho immediatamente accesso a questa informazione solo se vedo e nessuno mi spiega, ma anche se qualcuno mi spiega possono fare fatica ad entrare in quest'ordine di idee; il modello, invece, essendo una cosa immediatamente comprensibile, perché ti mette dentro ad una ricostruzione, risolve questo problema enorme.

INTERVIEWER:

bene, se vuoi continuare a navigare. Esplorare...

GRETA:

sì, ora vado in fase A che c'è più roba, vedo che già c'è una marea di roba. Ah sì, un'altra ricostruzione che avevo visto, scusa eh salto di palo in frasca, è quella del tempio di Anemosphila, quello minoico, e infatti mi ricordo che tutti vasi erano modellati al 3D e non disegnati. Ah, ma che carino!

INTERVIEWER:

La scheda materiali è una complessiva di tutti.

GRETA:

ahhh ecco, no perché infatti leggevo 'askos a forma di capra' in una stanza dove non ci doveva essere...

INTERVIEWER:

no, anzi, qualunque feedback tu mi possa dare è estremamente utile quindi...

GRETA:

ora lo guardo bene...oddio ma è meraviglioso, oddio ma che bello (riferendosi alla visione interna degli spazi data dagli avatar)

INTERVIEWER:

Do you consider this model helpful in deepening the understanding of the function of structures and objects? If yes, explain how.

GRETA:

Dunque, delle strutture sicuramente sì, perché ovviamente le strutture sono...ehm, come dire, le strutture sono qualcosa che è legato anche al loro funzionamento, quindi ricostruire le strutture ti porta sicuramente alla comprensione delle attività e del

funzionamento delle strutture stesse, cosa facessero con queste strutture. per quando riguarda i materiali può essere vero come non vero, nel senso che appunto un materiale...diciamo il posto in cui viene messo un materiale è sicuramente legato alla sua funzione, ma un materiale va studiato anche per se stesso fondamentalmente: per esempio una fusaiola, non importa dove tu la possa trovare, soltanto perché è una fusaiola tu sai che uno strumento per la filatura, quindi ti può aiutare...no secondo me dipende dagli strumenti. Una macina ad esempio ricollocata su una struttura, una bench per esempio, lo strumento ricollocato e ricostruito ti può dare un'idea di come macinassero, di quale fosse il modo in cui utilizzavano quello strumento, se in piedi o in ginocchio o seduti, eccetera. Altri tipi di strumento no, perché sono, come dire, parlano per loro stessi, quindi non contestualizzati...cioè, nel senso, forse una ricostruzione in 3D te lo può dire...ehm... ti può far interagire nello spazio, ti può far vedere i vasi eccetera, della loro grandezza rispetto allo spazio, però per quanto riguarda proprio il funzionamento, se sono strumenti, in quel caso probabilmente dipende dalla natura dello strumento.

INTERVIEWER:

quindi può essere utile, ma a seconda dell'oggetto o della struttura?

GRETA:

sì secondo me sì, perché appunto alcuni oggetti non hanno proprio niente, cioè il loro funzionamento non è proprio...dal punto di vista di a cosa servissero, non è legato fondamentalmente alla ricollocazione nello spazio e neanche a...cioè è legato alle loro caratteristiche fisiche, però indipendentemente dalla loro ricostruzione o meno, perché tanto nel senso tu quell'oggetto ce l'hai, lo hai ritrovato e perché ha le sue proprie caratteristiche fisiche, sai perché funziona e quale fosse la sua funzione.

INTERVIEWER:

Do you consider avatars (human figures) necessary for a better understanding of the spaces and volumes in 3D models? Do you consider them necessary for a better understanding of the model overall? If so, explain how. If not, why not?

GRETA:

sì, penso proprio di sì, perché la figura umana ci riporta...è il metro con il quale noi misuriamo le cose inconsciamente, perché siamo noi stessi e quindi ci ritroviamo collocati in un contesto e siamo in grado di percepire assolutamente più quali siano gli spazi, le altezze e io penso anche le profondità, però per le altezze credo che sia essenziale quasi avere una figura umana standard. uhm sì, anche del modello in

generale, perché no?! Perché se tu vedi il modello in generale nel suo insieme che contiene appunto il discorso fatto prima ovviamente sì, di conseguenza...

INTERVIEWER:

Did you feel an emotional involvement while interacting with the model? Would you describe the experience as engaging? Please, explain the answer.

GRETA:

sì, decisamente sì, nel senso che...ehm... ovviamente, ehm, penso che questo aspetto faccia parte di un mix di fattori che sono legati al carattere della persona dal grado di emotività e ovviamente dal background, dall'interesse, eccetera. In questo caso io non sono una persona particolarmente emotiva però ho sicuramente un attaccamento molto alto al sito e al lavoro che faccio per cui devo dire che è effettivamente molto emozionante vedere tutte le...una costruzione...boh effettivamente, nel senso, ehm così...come dire, realistica e reale anche, anzi che va là di là di quella che poteva essere la mia immaginazione, che può anche essere sempre fra virgolette molto precisa, ma appare sempre un pochino sfocata, oppure va sempre per spot, invece non riesci mai ad immaginartelo tutto nel complesso fondamentalmente, è molto difficile, invece in questo caso riesci a vedere come dire, sembra effettivamente non solo l'oggetto dei tuoi studi, ma un luogo dove delle persone hanno vissuto e questo ti rende più coinvolta in qualche modo, più vicina e boh, si ti...come dire...ti mette nell'ottica di idee che ci fosse vita, ci fossero emozioni, ci fosse interazione con lo spazio, ci fosse ...boh...anche se il modello è muto, che ci fossero voci, rumore, che ci fosse gente che lavorava...tutte cose che non si percepiscono, non si riescono ad immaginare fino in fondo...un posto realmente vissuto e popolato da persone come noi, perché tu sei nell'ottica loro alla fine no?! Per cui è bello.

INTERVIEWER:

ritieni che comunque il coinvolgimento emotivo derivi dal fatto che c'è un tuo coinvolgimento personale e lavorativo in questo preciso contesto archeologico?

GRETA:

sì nel mio caso sì, perché se vedessi lo stesso modello di una cosa che non mi interessa, di un'automobile per dire, probabilmente attirerebbe la mia attenzione perché posso manipolarlo, spostarlo eccetera, magari posso aprire le porte, posso giocare tra virgolette, d'altra parte non sarei interessata a tutte le componenti di un'automobile dopo un poi probabilmente non starei così tanto tempo a...quindi penso che possa essere fondamentalmente molto legato anche agli interessi personali, ma d'altra parte il

discorso è anche diverso perché, ad esempio, un'automobile è un oggetto che attira un interesse specifico, mentre l'archeologia parla un pochettino anche del vissuto di tutti noi, perché alla fine tutti abbiamo una casa, viviamo in un'atmosfera di, di condivisione di spazi anche con altre persone, o di privato e quindi, come dire, il fatto di vedere la stessa cosa ma proiettata in un certo periodo storico penso che possa comunque interessare chiunque no?! stuzzicare l'attenzione, il desiderio di conoscenza di chiunque.

INTERVIEWER:

bene ci sono altri commenti, osservazioni che vuoi fare?

GRETA:

qua, solo perché mi salta all'occhio, non sembra che questi pithoi sembrano un pochettino... perché questa punta no?!...tu li hai voluti giustamente mettere nel luogo dove sono stati ritrovati, però sembrano quasi come se non si potessero reggere in piedi, cioè io li noterei nel modello di qualcun altro, soprattutto non conoscendo appunto...se non sapessi che sono stati ritrovati proprio in quella posizione, che hanno proprio quelle caratteristiche, eccetera, mi sembrerebbero dei vasi un po' strani, quasi un po', come dire, non funzionali...potrebbero falsare la veridicità diciamo...lo so che sono così, però proprio perché cerco di calarmi nei....

INTERVIEWER:

non, no anzi sono tutti consigli molto utili. Se hai altre osservazioni da fare su qualunque aspetto del modello nel suo complesso ritieni pure libera di esprimerle.

GRETA:

beh, forse...ma perché sono puntigliosa io. Questo è SAIII...dal momento che SA III non ha queste strutture come SA I e II che si capisce sono basin, sono banchine, sono strutture utilizzate durante il lavoro per appunto produrre delle determinate cose, sembrano chiaramente delle strutture vive da come le hai ricostruite. Questo Ammasso fondamentalmente di pietre e Ground Stone di SA III che tu hai lasciato come rilevato, come ricostruito esattamente com'era, sembra effettivamente qualcosa di abbandonato e contrasta un pochettino con i vasi messi perfettamente in posto come effettivamente se fosse un ambiente utilizzato l'altro ieri no'!

INTERVIEWER:

Quindi ritieni, se ho bene interpretato il tuo pensiero, che sarebbe più opportuno rimarcare in un qualche modo, sottolineare in un qualche modo che siano relative ad una fase di abbandono?

GRETA:

Sì nel senso che così tutto insieme sembra veramente che queste persone usassero uno spazio accidentato o semi-abbandonato per appunto...per esempio. Per viverci, perché ci sono i loro vasi in posto, tutte le loro cosine, per cui mi dà un po'...ma solo questo ambiente qua, gli altri sono in realtà...è questo che contrasta molto invece con gli altri ambienti, SAI è invece molto ben organizzato, molto netto no?! e invece arrivi qua e ci sono tutte queste pietre...non lo so, cioè sembra che siano un pochino schizofrenici!

INTERVIEWER:

ti ha creato qualche problema o ritieni che non sia scientificamente corretto il fatto che siano presenti le strutture di entrambe le fasi?

GRETA:

non credo sia scientificamente corretto e che vada fatto, forse se ci fosse un modo per...non lo so...renderle non dico meno visibili, renderle visibili ma meno impattanti quando tu non stai guardando quella fase.

INTERVIEWER:

quindi l'utilizzo di ad esempio di due colori differenti per le due fasi ritieni non sia sufficiente o che possa creare confusione nella lettura del modello in generale?

GRETA:

no, nel modello in generale no, è di quella particolare stanza, perché io sono ora in SA I e sto capendo perfettamente quello che sto vedendo ed è tutto perfettamente chiaro e sembra appunto, effettivamente abbandonata l'altro ieri o ancora in uso, ma appunto con delle strutture più antiche segnalate, ma che non mi disturbano. Purtroppo, ti è andata male perché è il contesto che è così, però sembrava leggermente più confuso. Magari si può segnalare in una maniera diversa che...non so...più che altro il tuo problema è che non sai, non sappiamo come effettivamente fossero...quale effettivamente fosse la funzione di quelle pietre in quella stanza, nel senso che è possibile che ci fossero delle strutture fatte con quelle pietra, ma è anche possibile che fossero solo delle Ground Stone ammassate, perché quello era il magazzino delle Ground Stone, oppure potrebbero essere entrambe le cose ma noi non abbiamo finito di indagare propriamente; quindi forse in futuro togliendo qualche Ground Stone si capisce quali facessero parte dell'architettura e quali siano state messe lì semplicemente anche solo perché le abbandonavano in quella stanza o le volevano conservare eccetera, per cui magari sarà più chiaro anche per te e quindi ci sarà sicuramente un'interazione scavo-interpretazione-modello, forse il modello ci sta aiutando anche in questo caso a dirci '

guarda tutti gli altri ambienti sono precisi, netti, eccetera, e anche se si dividono in due fasi si capisce; in quell'ambiente non si sta capendo cosa c'è, perché anche la parte architettonica, che è costituita principalmente da pietra squadrate o Ground Stone, crea dei problemi perché sembra semplicemente una situazione di abbandono che non si riesce a ricostruire e non si riescono a ricostruire le strutture che erano alla base. Cosa ce? Quale è il problema? Cosa non sta funzionando?'. Questo modello secondo me ce lo sta segnalando, potrebbe essere un campanello di allarme per noi. Il modello ci sta aiutando, molto più della pianta, perché noi abbiamo visto, abbiamo rilevato, abbiamo detto 'ci torna', invece no, non ci torna, perché cosa ci fanno tutte quelle pietre lì in mezzo, con i vasi e tutto? Niente, eh!

INTERVIEWER:

Do you consider the 3D model as it is (level of interaction + information provided) suitable for both expert and non-expert users?

GRETA:

uhm...sì da un lato sì, perché ci sono delle cose di immediata comprensione e segnalata nella maniera più elementare possibili, soprattutto la parte dei colori e delle forme, penso che sia comprensibile e che, come dire, transculturale no?! Veramente e globalmente comprensibile. D'altra parte, ovviamente ci sono alcune parti che sono in inglese, quindi io mi immagino. Non lo so. Appunto delle persone italiane, io m i immagino miei genitori a interagire con questo modello non potrebbero capire tutto...questo mi rendo conto che è ovviamente il problema della Torre di Babele e che non ci si possa fare niente...uhm...alcuni concetti come fase A e fase B ovviamente devono...come dire, fanno più parte propriamente del nostro lessico. Ehm...penso che possano essere capiti, non so fino a che livello, però penso di sì obiettivamente. Altre cose che fanno parte del nostro lessico, ad esempio la parola 'materiali, molto spesso non si usa, ad esempio in italiano non si usa materiali per riferirsi agli oggetti, quindi potrebbe creare un attimino di, come dire, esitazione da parte del fruitore...ehm...certo è ovviamente facilmente scavalcabile, perché è semplicemente una questione di lessico...ehm. Per il resto gli hot spot, gli avatar sono cose che ormai sono entrate così tanto nella nostra quotidianità che non si può fare a meno di comprenderli. Quindi...no, certo, è sicuramente comprensibile.

INTERVIEWER:

non so se avessi notato che da questo pannello...

GRETA:

si può mettere mezzogiorno! Ed è stranissimo, perché noi lo percepiamo sempre come la distesa nel deserto, invece qua dentro guarda quanta bella ombra che c'è! E se metto il tetto c'è totalmente buio!

INTERVIEWER:

puoi anche utilizzare la barra per scorrere e vedere l'arco solare nel corso della giornata.

GRETA:

Ahhh beh questo è davvero interessante, perché me lo stavo perdendo?! Meno male che me lo hai segnalato. Ma perché sono io che non guardo tutto...ma ci sarei arrivata in realtà devo dire, ma smanettandoci un po'. Ahhh, beh sì, ma è meraviglioso...fra l'altro è meraviglioso il fatto che l'ombra vada sugli spazi lavorativi all'aperto...troppo bello davvero...perché potresti anche renderti conto del perché abbiano deciso di coprire alcuni spazi che potrebbero essere virtualmente lasciati aperti, come, ad esempio, il basin per tingere che produce odore, eccetera, ma probabilmente non potevano lavorarci tutto il giorno esposti al vento, al sole e alle intemperie. D'altra parte è possibile immaginare una migliore fruizione in determinate parti della giornata e questo non ci avevo a letteralmente pensato, senza modello, perché in effetti se ti qual l'ombra sui basins che sono ricavati su una distesa di calcare...ehm...tanto meglio, sicuramente ti muovi meglio e ...ed è probabilmente anche...questo non solo dal punto di vista lavorativo potrebbe essere utile, anche per l'interpretazione proprio dal punto di vista della comunità e quindi della fruizione degli spazi anche per altre attività, come quella del feasting, del riunirsi, dello stare insieme anche semplicemente dopo aver lavorato, mentre si lavorava prendersi delle pause all'ombra per dire... che può sembrare una cosa non scientifica, però fa parte del pacchetto della quotidianità e anche, per dire, del lavoro...perché le pause fanno parte della vita lavorativa e questo è davvero molto interessante e potrebbe ricollegarsi al lavoro di Ale (Alessandra Saggio) delle gaming stones e del fatto di utilizzare questi spazi non solo per lavorare, ma anche per interagire... tutto questo soltanto per aver cambiato, per aver messo evening, bello...ora proviamo a calare la notte su Laonin...bello, sono molto colpita da questa cosa veramente! Mi metto un attimo qua e faccio avatar da (interno di una unit) ...ahhh vedi che filtra un po' il sole, però fondamentalmente la percezione che abbiamo noi di quell'altopiano doveva essere completamente diversa, più viva fondamentalmente! Meno male ci si poteva vivere! ... (continua la navigazione) no va beh, è strabiliante da vero, starei delle ore a giocarci!

INTERVIEWER:

Do you think it is possible to identify a target audience for the site of Erimi-Laonin tou Porakou?

GRETA:

uhm...ma io penso che sia interessante in generale. Ovviamente penso che abbia uno specifico appeal per quanto riguarda gli studiosi, specialisti, perché in questo momento Erimi-Laonin è sulla cresta dell'onda dei principali filoni di ricerca a Cipro, nell'archeologia cipriota in questo momento, per il concetto di industrializzazione, proto-urbanizzazione, di comunità, di come essa percepiva sé stessa...sono tutti concetto su cui si sta lavorando ora nell'archeologia cipriota, per quello risulta molto interessante per gli specialisti. D'altra parte perché non allargarlo e coinvolgere un gruppo più generale, alla fine è un sito che si presta secondo me moltissimo, perché nonostante sembra isolato, in realtà è molto accessibile, vicino al villaggio di Erimi presenta una varietà, come dire, di abitato, zone più specializzate a livello industriale, necropoli, eccetera, che è molto stimolante per un auditorio anche non specializzato...può secondo me suscitare l'attenzione di, come dire...uhm...a molti livelli, perché magari ce chi è più interessato alla necropoli, chi ad una situazione di abitato e lì avrebbero la possibilità di fruire di un sito nella sua totalità, che è una cosa che fra l'altro a Cipro per vari motivi, non è sempre possibile. Probabilmente sarebbe anche utile, dal mio punto di vista, coinvolgere anche di più la popolazione locale, gli abitanti di Erimi stessa e un progetto del genere potrebbe forse anche dare l'input giusto per stabilire il giusto contatto, perché li metterebbe forse di fronte alla realtà di quello che è stato e quindi di qualcosa che non è solo nella nostra mente di archeologi no?! è qualcosa di realmente esistente, con cui devono fra virgolette fare i conti.

INTERVIEWER:

Do you think that the interaction with the model could benefit from a storytelling-based digital guide?

GRETA:

sì da un lato direi di sì, dall'altro sono conscia, come dire, degli ostacoli a cui si andrebbe incontro presentando uno storytelling a persone...scienziati, archeologi, a persone competenti, perché solitamente la nostra impostazione mentale, come dire, non dovrebbe consentirci di...come si può dire...di vedere la nostra ricerca come una storia raccontata, perché sembra sempre pericoloso allo scienziato fare una operazione di questo tipo. D'altra parte se si riesce a vincere questo pregiudizio, si tratta tutto con

estrema scientificità come ovviamente questo modello sta facendo, io direi perché no?! alla fine è utile avere un approccio il più aperto possibile, anche mentalmente, per cui...si, potrebbe essere utile, anche come dire per esperti di archeologia cipriota, perché è sicuramente un mezzo probabilmente così comprensibile a vari livelli, che può essere sicuramente fruibile sia dai non specialisti che da quelli più specializzati...poi dipende anche da quello che ci inserisci, nel senso il modello è questo, però per uno specialista potresti mettere approfondimenti, didascalie qua a lato con, ad esempio, bibliografia no? Questo verrebbe molto apprezzato, soprattutto perché supportato da tutta la letteratura di quel settore...anzi potrebbe essere molto più utile, perché se io...a me piace molto anche la parte di etnografia...e se io ho ricostruito in base anche a non solo quello che ho letto in letteratura, in confronto con gli altri siti, a quello che ho trovato, ai materiali, eccetera; ma ho ricostruito anche su base etnografica e mi cita la fonte, per dire, e mi dici che quello è esattamente quello che si trova nell'architettura tradizionale di Cipro...accidenti se è utile no? Voglio dire, tutti vorrebbero questo tipo di multidisciplinarietà...e vederlo senza andarti a cercare il libro, perché sai che quello è quel tipo di architettura, eccetera...non so, meglio di così!

INTERVIWER:

Cominciamo con la seconda intervista.

LORENZO:

Bellissimo posso fare dei commenti?

LORENZO:

mi piace molto...stupendo...questi sono gli avatar...è meraviglioso!

INTERVIEWER:

Per poter interagire con gli avatar vai su previous o next, a quel punto clicchi sul destro e poi ruoti.

LORENZO:

come esco da qui?!

INTERVIEWER:

se vuoi gli avatar vai su previous e next altrimenti vai su south view o top view.

LORENZO:

sunlight control...ah, stupendo...evening mi piace molto...

INTERVIEWER:

c'è il cursore anche se vuoi.

LORENZO:

nooo, questo è stupendo...quando il sole se ne va...queste sono le sue fasi... (per alcuni minuti legge ad alta voce i vari comandi mentre naviga).

INTERVIEWER:

Do you have any previous knowledge and/or experience with the application of 3D modelling in archaeology?

LORENZO:

Dunque, esperienze sì, perché hai partecipato ad un progetto di ricerca, volto alla creazione di un museo interattivo, quindi altri colleghi hanno ricostruito modelli digitali, tridimensionali ed interattivi di oggetti archeologici. Quindi era un museo virtuale in qualche modo, con le collezioni cipriote ed egee del Museo Archeologico di Firenze; quindi la mia esperienza non riguarda 3D modelling in architettura, ma 3D modelling di oggetti di per la creazione di collezioni interattive e virtuali.

INTERVIEWER:

Do you consider 3D modelling useful for the archaeological interpretation process? If yes, explain how.

LORENZO:

Ritengo sia molto importante, questo è il motivo per cui per il progetto di Erimi, abbiamo, diciamo...ci siamo impegnati in modo intenso su questo argomento, perché soprattutto per contesti preistorici e protostorici la ricostruzione degli elevati, laddove lo scavo è condotto diciamo con criterio stratigrafico e microstratigrafico attento, la ricostruzione degli elevati, quindi degli spazi architettonici, è qualcosa di molto utile all'interpretazione dello spazio archeologico e quindi anche all'interpretazione del ruolo che le architetture hanno all'interno di una comunità.

INTERVIEWER:

bene, se vuoi puoi continuare ad interagire con il modello mentre rispondi alle domande...se ci sono altre cose che vuoi esplorare...

LORENZO:

Sì, a me piace molto la visione questa, la South, perché appunto come ti dicevo prima...ehm...è quello che manca assolutamente all'immaginazione che noi abbiamo degli spazi...ehm, sociali all'interno di questa comunità, perché per quanto sembri banale, l'elevato, l'alzato, quindi muri e porte, qualcosa che noi non possiamo vedere né documentare, in realtà caratterizzano in modo molto netto lo spazio. Per esempio,

guardando adesso il modello di fase A rispetto al modello di fase B si presenta in maniera del tutto evidente, cosa che non si percepisce visivamente con altre forme di documentazione, si capisce che questi spazi sono...che c'è molto più di costruito nella fase A, quindi lo spazio è molto più densamente occupato, quindi visivamente è molto meno lo spazio libero, di quanto non lo sia nella fase B. Questo se non con questo modello, non si può capire in altro modo.

INTERVIEWER:

Do you think 3D modelling helps broaden the understanding of the site? If yes, explain how.

LORENZO:

Aiuta moltissimo in questa operazione, aiuta molto. La comprensione del sito, come ti dicevo, e anche le dinamiche fra membri della comunità, perché questi spazi, ad esempio il complesso artigianale, sono spazi comunitari, quindi la mobilità, la permeabilità...come dire, il modo attraverso cui le persone si muovevano in questo spazio comune frequentato da un gruppo ampio di persone di questa comunità, si possono solo ricostruire in questo modo. Tutto il resto, la bidimensionalità, ti impedisce di capire la reale gestione comunitaria dello spazio, quindi secondo me è utilissimo soprattutto in questi termini, per lo sviluppo diacronico fase B-fase A e per la capacità, diciamo, di interpretare le interazioni che ci sono fra lo spazio e l'individuo in questo tipo di contesti comunitari.

INTERVIEWER:

Do you consider this model helpful in deepening the understanding of the function of structures and objects? If yes, explain how.

LORENZO:

Sì. La funzione anche attraverso la locazione, per esempio gli oggetti che abbiamo potuto trovare in posto hanno subito in realtà due processi di concretizzazione: il primo, fisico, attraverso il restauro; questo primo passo di ricostruzione fisica dell'oggetto è valorizzata dal modello tridimensionale, perché l'oggetto ricostruito tridimensionalmente, quindi l'oggetto reale, è reale...virtualmente ricollocato nel suo posto. Quindi, per esempio, nella visione di ambienti in cui c'è uno spazio, diciamo, in uno spazio particolare dove la localizzazione degli oggetti è significativa, il...aspetta un attimo che ci torno qua (va al modello per tornare alla visione di una specifica unit)...la ricollocazione degli oggetti all'interno dello spazio fisico delle unit è importantissimo...per lo stesso motivo, perché da un lato ti dà un'idea immediata della

collocazione degli oggetti nel loro luogo originale, dall'altra anche ti fa capire quanto questi occupassero lo spazio e quale fosse la possibile interazione tra essere umano ambiente, in un ambiente popolato di oggetti. Quindi, secondo me, in questo caso dal doppio stop ricostruzione fisica-ricollocazione fisica dell'oggetto virtuale nel suo spazio è molto importante per capire la funzione dell'ambiente e solo il modello 3D ci può dare questo tipo di approccio.

INTERVIEWER:

Do you consider avatars (human figures) necessary for a better understanding of the spaces and volumes in 3D models? Do you consider them necessary for a better understanding of the model overall? If so, explain how. If not, why not?

LORENZO:

Si io penso che sia molto importante la presenza della figura umana, perché ci aiuta di nuovo a capire l'interazione dell'uomo nello spazio, che è quello che ci interessa in realtà, quello che ci interessa è capire come lo spazio venisse vissuto e popolato, quindi la sua presenza ricostruita è importante. Poi in più la figura che adesso è neutra e non caratterizzata, a sua volta la figura umana può essere ricostruita virtualmente come gli ambienti architettonici e questo ovviamente è più difficile rispetto alla ricostruzione degli ambienti, però è un obiettivo che uno si può porre nel corso del tempo, perché altri sono gli elementi a disposizione. Come la micro-stratigrafia ti aiuta a capire i caratteri peculiari dei materiali da costruzione, quindi ti permette di ricostruire in modo più verosimile, altre cose, per esempio l'archeobotanica, ti permette di capire quali fossero semplicemente le tinture utilizzate per i tessuti e quindi il colore degli abiti, o, per esempio, i materiali che troviamo nei corredi funerari delle tombe ci danno un'altra importante indicazione di come potessero essere vestiti questi personaggi. La tomba che abbiamo scavato quest'anno, per esempio, coi bronzi che abbiamo trovato, ci dà un'idea di quali potessero essere gli accessori per l'abbigliamento; quindi anche questo, per esempio, è un ulteriore obiettivo da porsi...come tu virtualmente ricostruisci un'architettura dai dati micro-morfologici relativi ai materiali da costruzione, così puoi ricostruire la figura umana attraverso dati archeologicamente attendibile come l'archeobotanica o i corredi funerari. Quindi per me l'avatar è molto importante e potrebbe essere addirittura ulteriormente caratterizzato.

INTERVIEWER:

How engaged do you feel with the model (if it all). Describe that engagement.

LORENZO:

Allora...coinvolgimento emotivo molto...c'è anche da dire che il mio coinvolgimento emotivo è molto forte in generale con questo tipo di ambiente, quindi è chiaro che vederlo in questo modo è ancora più emozionante. Sì, c'è un forte elemento di emozione in...nel...come dire, apprezzare...questo è parte di integrante del tuo lavoro, anche gli elementi che apparentemente sembrano più banali, per esempio vedere l'alzato, la ricostruzione della porta, quindi il legno delle assi della porta, è qualcosa che chiaramente è molto forte emotivamente, proprio perché è un oggetto semplice...è una porta di legno non ci aspetta nulla di diverso...però vederla di fronte a te è emotivamente molto forte. Direi proprio le cose più semplici come, ad esempio, vedere l'effetto dell'interno delle pareti in plaster, le porte, tutto questo qui e tutti gli elementi apparentemente più semplici sono quelli che secondo me danno più dal punto di vista emotivo e ancora di più lo darà ovviamente vederlo popolato di...sì, ecco per tornare al discorso di prima, l'avatar rivestito aumenta questo elemento di forte emotività, perché lì c'è l'essere umano ovviamente...capisco che sia molto difficile trovare l'equilibrio giusto, per evitare il pagliaccesco e le cadute di stile e per farlo sentire il più vero possibile, il lavoro è grosso da fare più sull'essere umano che non sull'architettura, però penso che poi di conseguenza l'effetto emotivo possa essere addirittura più forte.

INTERVIEWER:

Do you consider the 3D model as it is (level of interaction + information provided) suitable for both expert and non-expert users?

LORENZO:

Sì, sì penso che sia del tutto comprensibile. Allora, dunque, non esperti sicuramente l'elemento...più ci allontana verso il pubblico generico, più elemento di emotività causato da questo tipo di ricostruzione secondo me diminuisce, nel senso che il pubblico generico probabilmente ha bisogno di elementi più forti, più contrastanti...qui molto dell'emozione è dato dal fatto che chi lo vede riesce a capire da cosa siamo partiti e a cosa siamo arrivati. Un pubblico di esperti fra virgolette, un pubblico di archeologi o di esperti del settore anche se non di archeologia cipriota, tendenzialmente secondo me è un fruitore più consapevole ed emotivamente più attratto da questo tipo di ricostruzione. L'archeologia cipriota sicuramente è estremamente interessato a questo tipo di esperimento, perché in più ovviamente c'è l'interesse per il contesto in sé.

INTERVIEWER:

Do you think it is possible to identify a target audience for the site of Erimi-Laonin tou Porakou?

LORENZO:

Di fruitori?

INTERVIEWER:

Sì, di fruitori per il nostro sito.

LORENZO:

Sì, io individuerei tre categorie di fruitori: la prima i colleghi che si occupano di preistoria cipriota, i quali ovviamente di questo modello fruiscono soprattutto i dettagli relativi a quanto tu hai fatto per ricostruire in elevato, ehm, l'aspetto dell'elevato basandoti sui dati micro morfologici e immateriali dati dalle building techniques; il secondo gruppo è senz'altro quello più ampio degli addetti...più che degli addetti all'archeologia, in generale degli addetti...di chi si occupa di protostoria, di società mediterranee di questo periodo, i quali possono essere interessati per via comparativa ad avere dati più immediatamente fruibili, perché questo modello li mette davanti con rapidità ad alcune cose che loro possono comparare più facilmente, ad esempio i sistemi di immagazzinamento, sistemi di aperture e permeabilità degli spazi, tutte queste cose che, diciamo, si vedono in un attimo, invece di recepirle leggendo alcuni articoli. Quindi questo è il secondo gruppo, che è un sottogruppo del primo. L'altro gruppo importante di fruitori di questo tipo di modello sono ipotetici visitatori di miei che espongono questi oggetti, che ovviamente avrebbero grande vantaggio nel poter avere una ricostruzione navigabile degli ambienti i cui oggetti sono musicalizzati nei musei stessi e poi, ovviamente, all'interno di questo gruppo il sottogruppo degli ipotetici visitatori del sito, i quali a loro volta se potessero avere accesso a questo modello visitando il sito fisicamente avrebbe sicuramente quello che tu chiamavi prima un forte impatto emotivo, perché ricostruirebbero con facilità ciò che vedono e ciò che tu hai ricostruito. L'immediatezza visiva è più facile se tu stai in un ambiente in cui riconosci degli elementi sui quali l'architettura è nata...quello sarebbe molto bello senz'altro, credo anche fattibile in qualche forma.

INTERVIEWER:

Do you think that the interaction with the model could benefit from a storytelling-based digital guide?

LORENZO:

Secondo me potrebbe esserlo nell'ottica di una visita che prescinde dal sito, dal museo e dall'interesse scientifico, cioè se il modello fosse...per chi vuole fruire del modello a sé stante, la narrazione è importante, per cui per una possibile forma di visita on-line o in un ambiente esterno, come dire, anonimo allora sì lo storytelling ti aiuta a creare un filo conduttore nella visita. Altrimenti negli altri casi che ti ho detto lo storytelling secondo me non è utile, perché il visitatore è più facile che si senta lui più libero di creare delle connessioni, dei legami e di creare una sua sorta di itinerario visita interno. Nel caso in cui si trovi sul sito stesso o in un museo lo storytelling secondo me appesantisce la visita e ti distacca dalla connessione fra l'oggetto e il suo modello.

INTERVIEWER:

Sarebbe un elemento di distrazione...

LORENZO:

Io penso che sarebbe un elemento di distrazione per chi visita il sito col tablet e vede i modelli sul sito stesso, o per chi visita il museo in cui sono conservati gli oggetti col tablet e il modello stesso: in quel caso sarebbe un elemento di troppo, di più che impedirebbe in qualche modo anche la libertà di collegamenti che capisci ci possono essere...immagino la vista tradizionale al sito archeologico, la narrazione in qualche modo ingabbia in quel tipo di visita e nella visita nel museo è lo stesso. Mi viene in mente alcuni musei in cui c'è un eccesso di questo tipo di guide, di in un qualche modo forzatura nella guida dell'itinerario...tu ha la sensazione di dire 'ma se io volessi andare nell'altra sala invece che in quella, invece sono obbligato'...questo obbligo è molto utile se tu sei in un ambiente anonimo come appunto il web, allora c'è qualcuno che ti guida, ti fa da cicerone, allora va bene, sei invece sei tu in un ambiente fisico allora questo tuo supporto ulteriore, diciamo, secondo me lo storytelling appesantisce.

INTERVIEWER:

bene, ci sono altri i commenti, osservazioni che vuoi fare?

LORENZO:

No. Posso dire che navigando il modello è molto, diciamo, bello da navigare e avvicinarsi con questi zoom assoluti con cui tu puoi davvero arrivare al dettaglio del singolo oggetto è molto...e di grande effetto. Ho avuto qualche difficoltà a centrare gli avatar, nel senso che non riesco...ma questo può darsi che sia un problema mio e non del modello...non riesco bene ad allontanarmi...a gestire la visione dell'avatar, mi sembra

sempre di perdere un pochino l'orientamento. Solo per questo, per il resto delle visioni niente da dire sulla navigabilità.

INTERVIEWER:

Bene ora procediamo con la terza intervista.

AIDA:

legge i comandi ad alta voce e chiede informazioni sulle modalità di navigazione. Esplora in silenzio il modello. Chiede informazioni su come funzionano gli avatar. Si trova disorientata dalla visione dell'avatar, non capisce in quale parte del workshop si trova.

INTERVIEWER:

Do you have any previous knowledge and/or experience with the application of 3D modelling in archaeology?

AIDA:

Uhm non...a parte...non, no assolutamente no.

INTERVIEWER:

Neanche in contesto museale?

AIDA:

Uhm...non con in quali potevo interagire, cioè c'era una ricostruzione nei pannelli con le didascalie associate, ma tu non potevi interagire. Le uniche cosa che mi è capitato in esposizioni temporanee o allestimenti museali erano dei grandi schermi touch in cui tu magari potevi selezionare le diapositive o un percorso educativo, però non che ti potevi muovere materialmente...eh, virtualmente all'interno del sito e vedere sotto diversi punti di vista, avevi l'immagine fissa e potevi guardarla.

INTERVIEWER:

Do you consider 3D modelling useful for the archaeological interpretation process? If yes, explain how.

AIDA:

Uhm...bah...sicuramente da una visione più chiara del...del sito anche se...cioè, sia ad una persona esterna che non lo ha mai visto , anzi soprattutto, sia ovviamente ad una persona che si occupa di uno scavo archeologico e...probabilmente sono troppo abituata ai processi interpretativi appunto proprio perché non ho avuto mai a che fare...perché di getto mi verrebbe da dire sì ma in maniera limitata, è più utile per altre cose, per avere una visuale più completa...per il processo interpretativo sì, magari sì, hai una visione più

pratica della cosa quindi magari le interpretazioni che avevi dato prima, avendo una visuale immediata e più realistica possono cambiare in certi dettagli, ma...uhm...no, all'origine del processo interpretativo non credo, ma probabilmente appunto è solo frutto del fatto che sono troppo poco abituata ad interagire con questo tipo di tecnologie.

INTERVIEWER:

Do you think 3D modelling helps broaden the understanding of the site? If yes, explain how.

AIDA:

allora...assolutamente sì...soprattutto nella parte precedente al movimento degli avatar, quindi nella visione globale del sito, sì tantissimo, perché comunque è vero che tu riesci più o meno chiaramente ad immaginarti come erano organizzate le strutture, come poteva essere l'elevato, come poteva essere la divisione dello spazio, però c'è sempre un margine di errore che dopo aver visto questo mi rendo conto è abbastanza ampio; quindi ti dà una visione immediatamente più chiara, soprattutto, sì, dell'organizzazione degli spazi e del cambiamento di fase...un po' meno nella visione delle singole stanze e nella visione ravvicinata. A livello globale sì assolutamente sì, è utile, straordinario. ehm, nella visione ravvicinata, forse avrei, no è ovviamente molto utile anche ma l'impatto è meno immediato, hai bisogno di più tempo, almeno io ho bisogno di più tempo, per capire, per razionalizzare dove ti trovi, come ti stai muovendo...oltre va beh che nel mio caso è un fatto proprio di familiarizzare con il movimento...ehm mi ripeti la domanda?

INTERVIEWER:

ripeto la domanda.

AIDA:

Sì a migliorare sicuramente, sì ad approfondire anche, perché magari ti può aiutare a capire, parte appunto l'articolazione, la divisione degli spazi e la grandezza effettiva...che quando hai solo il basamento si ovviamente la percepisci, ma di questo te ne rendi conto anche quando fai le piante, hai una percezione completamente diversa della grandezza effettiva degli ambienti...e, quindi ad approfondire sì anche in quel senso e ti aiuta tantissimo a capire anche i possibili spostamenti umani, delle persone che vivevano all'interno del sito. A questo non ci arrivi neanche con le piante secondo me, o comunque devi fare un grande lavoro di immaginazione, con questo no, cioè ti aiuta tantissimo a capire quali erano i percorsi, i collegamenti tra le stanze, quale effettivamente percorso dovevi fare per muoverti. Posso... (indica il modello per chiedere se può continuare a navigare mentre parla)?

INTERVIEWER:

Tu mentre parli puoi continuare ad interagire certo!

AIDA:

(riprende il discorso) quale movimento devi fare, quale percorso devi fare per muoverti da una stanza all'altra e quindi quanto agevoli potevano essere questi spostamenti, quindi la frequenza di questi spostamenti possibilmente con materiali...hai una visione completamente più pratica di come avvenivano e di come soprattutto ci si viveva dentro, come ci si muoveva e quale è il rapporto tra la persona e lo spazio circostante.

INTERVIEWER:

Do you consider this model helpful in deepening the understanding of the function of structures and objects? If yes, explain how.

AIDA:

Ok...mi risulta un attimino difficile perché non mi risulta facile estraniarsi dal fatto che sai quale fosse la funzione, ma se io dovessi immaginare che non conosco assolutamente quali attività si svolgessero in questo sito...eh diciamo che riuscirei ad immaginare che è un ambiente lavorativo, che non è un ambiente domestico ma non credo che, nonostante le mie non ampissime ma quanto meno presenti competenze, non credo che riuscirei immediatamente a capire quale è l'attività svolta. Dovrei concentrarmi un attimino a guardare i materiali all'interno e meglio sì la disposizione...guardandola attentamente con un po' di riflessione attenta sì, riuscirei a capire. Nell'immediato lo capisci che è un ambiente lavorativo, l'attività nello specifico mi servirebbe un pochino più di tempo non è altrettanto immediata, però sì, diciamo che si potrei capirlo... (torna nel modello a visualizzare i materiali di fase A) ...quindi dunque tu non mi stai chiedendo solo dell'impatto visivo, ma anche delle didascalie?

INTERVIEWER:

sì, il modello nel suo insieme con anche le didascalie.

AIDA:

Allora sì, scusami le avevo trascurate effettivamente, ma quando hai questo davanti...

INTERVIEWER:

credi che passino in secondo piano (parlando degli hotspots)?

AIDA:

Si io dato immediatamente più importanza all'impatto visivo, ma...va beh...forse ho una visione falsata della cosa perché lo aspettavo da troppo tempo, quindi ti butti subito

sulla cosa ovviamente più sorprendente, diciamo...sì allora ovviamente sì (riferendosi alla domanda su strutture ed oggetti).

INTERVIEWER:

Do you consider avatars (human figures) necessary for a better understanding of the spaces and volumes in 3D models? Do you consider them necessary for a better understanding of the model overall? If so, explain how. If not, why not?

AIDA:

Si sicuramente il punto di vista ravvicinato ed all'altezza umana sicuramente aiuta ad orientarti meglio all'interno degli spazi, piuttosto che comunque la visione globale con la quale devi farti un attimo un ragionamento più in scala, è più immediato e quindi...sì la loro presenza sicuramente aiuta a rendere più chiaro...(interagisce con il modello)...sì anche questo, se la visione globale ti fa rendere conto della circolazione, del movimento, diciamo, tra gli ambienti, questo ti fa rendere conto dello spazio immediatamente attorno a te, quindi sì è utile, perché puoi magari materialmente immaginare che movimenti potrebbero fare e quanto spazio hanno per farli e di conseguenza anche quanto più o meno grande...no va beh ma questo te l'ho dà anche la visione globale...potesse essere la produzione o la mole di lavoro che andavano ad intraprendere.

INTERVIEWER:

How engaged do you feel with the model (if it all). Describe that engagement.

AIDA:

Sì, allora...diciamo che il coinvolgimento emotivo è un po' lo stesso ragionamento che fai con 'Riesci a capire la funzione?' , nel senso che il coinvolgimento emotivo c'è a priori, però sì sicuramente è un po' come vedere la realizzazione di qualcosa, nel senso di...è come se lo vedessi completato in un certo senso e avere un impatto così immediato è come vederlo veramente, anche se ovviamente ti rendi conto di tutti i limiti e di tutte le approssimazioni che ci possono essere, l'impatto emotivo è sicuramente forte anche se cerchi di separare il fatto che è un posto dove lavori benissimo, dove ti trovi benissimo, dove hai speso tanto tempo e tanta fatica, anche riuscendo a separare le due cose, provando ad immaginare comunque la ricostruzione di un sito in cui io mi posso muovere al quale però non sono così legata a livello personale, sicuramente rimane un impatto emotivo a prescindere...perché appunto è una sorta di completamento, forse perché sono un po' carente io di immaginazione...lo sono sempre stata...quindi è veramente come se si realizza qualcosa, se si completa qualcosa che hai sempre

immaginato però non sai mai se l'hai immaginato giusto, quanto hai potuto sbagliare, quindi sì, sì, l'impatto emotivo c'è sicuramente.

INTERVIEWER:

Quindi ritieni che comunque sia dovuto almeno in parte ad un tuo coinvolgimento personale e lavorativo?

AIDA:

Sì, sicuramente, perché comunque anche se cerchi di isolare la cosa, diciamo che si sarei impressionata, avrei un impatto...se io vedessi un sito dove non ho mai scavato l'impatto sarebbe solo di meraviglia, se vedo questo l'impatto non è solo di meraviglia ma anche di coinvolgimento personale, c'è questa differenza che non è poi tanto sottile!

INTERVIEWER:

Do you consider the 3D model as it is (level of interaction + information provided) suitable for both expert and non-expert users?

AIDA:

Si per gli esperti ovviamente sì, nel senso magari soffermeranno su alcune cose che i non esperti magari non noteranno, o appunto magari avranno una visione più immediata del particolare, mentre sul non esperto secondo me agisce più la visione globale del sito. Magari un archeologo dell'Età del Bronzo noterà moltissimi particolari che per un occhio non allenato o che per la prima volta vede dei basini o delle strutture in elevato, ovviamente non può notare, però a livello di chiarezza è ineccepibile in entrambi i casi. Ma, uhm...mi devi dare un attimo che do un'occhiata...probabilmente...potrebbero tendere a trovarle, essendo abituati alla disciplina e quindi avendo un altro schema mentale, potrebbero tendere a trovarle forse un po' generiche, ma se devi pensare ad un grande pubblico devi per forza usare un linguaggio semplificato e non scendere troppo nei particolari. L'unica tendenza potrebbe essere un po' quella, considerarle un pochino generiche...va beh cosa che comunque può essere chiarita interagendo...non in realtà non puoi perché la tua interazione è questa, quindi non puoi porre ulteriori domande...sì l'unica che si potrebbe pensare sarebbe...trovarle un pochino semplificate, però dipende...cioè essendo una cosa finalizzata per la fruizione da parte del grande pubblico non puoi rischiare di tagliare fuori il resto e non può funzionare.

INTERVIEWER:

Quindi eventualmente avere due versioni diverse una per un pubblico generico e una per gli esperti?

AIDA:

Ma dipende, perché se lo immagini proposta all'interno di un museo come fai a proporre due varianti diverse, è impossibile. Non che le didascalie siano carenti, non volevo assolutamente dire questo, infatti la premessa è che avendo quello schema mentale, tu che sei abituato a studiarlo per tanto tempo quel tipo di ricerca, anche se per periodi e aree geografiche diverse potresti tendere a considerarlo...ma le descrizioni in sé non risultano mancanti di informazioni fondamentali secondo me, quindi materialmente non è fattibile, Se lo stai presentando a un workshop o ad una conferenza allora si ti puoi permettere un linguaggio più specifico, più scientifico e non rischiare di essere fraintesa.

INTERVIEWER:

Do you think it is possible to identify a target audience for the site of Erimi-Laonin tou Porakou?

AIDA:

Ma tendenzialmente in questi casi io non credo dipenda dalla tipologia del sito, comunque sono cose che risultano abbastanza interessanti un po' in generale, ma in particolare essendo comunque credo una visione abbastanza, diciamo, non semplificata perché comunque sulla base degli studi il sito effettivamente è così quindi non è semplificata, però essendo strutture molto semplici sulle quali non devi concentrarti magari sull'evoluzione delle strutture, sui cambiamenti...cioè i cambiamenti sulle due fasi ci sono ma sono minimi...e appunto anche le strutture, la forma delle strutture risulta piuttosto semplice, credo che abbia un impatto particolarmente interessante anche sui bambini e sui non esperti di età adulta. Gli esperti, essendo esperti di Età del Bronzo. Tu con esperti intendi archeologi in generale.

INTERVIEWER:

Si.

AIDA:

Ma secondo me chiunque potrebbe trovare interessante una ricostruzione in 3D, anche uno che studia...poi dipende anche dall'ampiezza mentale, da come riesci a spaziare nei tuoi campi di interesse, se sei una persona fossilizzata solo sul periodo che studia o sulla classe di materiali che studia allora magari non ti suscita il minimo interesse...però da lì a stabilire un target preciso non credo che si possa, almeno non tra gli esperti. Tra i non esperti forse sì, boh io ci vedo un bambino sugli 8/10 anni particolarmente preso bene da questa cosa di esplorare, se proprio dovessi sforzarmi di identificare, perché

comunque credo sia una cosa che possa interessare e coinvolgere ogni fascia di età di persone anche minimamente interessate alla musealizzazione, alla esposizione.

INTERVIEWER:

Do you think that the interaction with the model could benefit from a storytelling-based digital guide?

AIDA:

No, credo che sia limitante all'immaginazione, perché tendenzialmente se tu hai già una guida tendi a notare solo quello che la guida ti sta dicendo e magari ti perdi tanti particolari ai quali penseresti dovendoti, così, tra virgolette, arrangiare e capire tu come muoverti e cosa fare. Quinis solo attraverso lo storytelling, se lo storytelling dovesse costituire un secondo step, nel senso che ' prima ho fatto questo, ho visto, ho cercato di capire e poi posso avere anche un ulteriore elemento che approfondisca' allora sì, assolutamente sì, ma solo lo storytelling non mi convince molto come ipotesi, lo troverei abbastanza selettivo.

INTERVIEWER:

Se ci sono altri commenti e osservazioni che vuoi fare...

AIDA:

Eh, sì ti volevo chiedere se hai messo dei materiali emblematici per fare capire più o meno questi tipi di vasi...questi non sono tutti i vasi che sono stati trovati all'interno delle SA?

INTERVIEWER:

Sono tutti quelli ricostruiti.

AIDA:

Tutti quelli che abbiamo ricostruito ok. Me ne immaginavo di più non si perché Come mai ha fatto soltanto la visione dall'alto e da sud e no quella da nord? Ti sembrava superficiale?

INTERVIEWER:

No, avevo messo la visione da nord ma avevo notato che poi era difficile riuscire a ruotare il modello.

AIDA:

Ah, quindi per una questione pratica.

INTERVIEWER:

Si avevo notato questo problema e ho pensato fosse più opportuno, più comodo...Perché sarebbe stato più utile avere anche una visione da nord o in sostituzione.

AIDA:

No in sostituzione no assolutamente, La visione è già chiara così, forse per una visione migliori degli angoli sul retro e delle working areas, ma insomma non è di fondamentale importanza, giusto per avere una visione completa a 360 gradi.

INTERVIEWER:

cominciamo con la quarta intervista. Io per ora non ti dico niente ti lascio interagire da sola, su 'help' trovi le indicazioni su come navigare ed interagire con il modello.

MONICA:

Posso parlare?

INTERVIEWER:

Certo, anzi, mentre navighi senti pure libera di commentare.

MONICA:

(Interagisce per un po' con il modello) ...sì gli avatar sono un po' strani da vedere così...
(continua ad interagire avendo qualche problema con il click and rotate) ...

INTERVIEWER:

Ci deve essere un problema con gli hotspots di SAIII fase A.

MONICA:

Qui c'è solo Area A?

INTERVIEWER:

sì, il modello è solo quello del workshop.

MONICA:

(continua la navigazione) ...bello, bello, mi piace!

INTERVIEWER:

Do you have any previous knowledge and/or experience with the application of 3D modelling in archaeology?

MONICA:

Non, non ho nessuna esperienza.

INTERVIEWER:

neanche in contesto museale?

MONICA:

no, no, non ho nessuna esperienza.

INTERVIEWER:

Do you consider 3D modelling useful for the archaeological interpretation process? If yes, explain how.

MONICA:

beh, certo, sicuramente soprattutto per queste fasi così antiche, quindi la preistoria, è sicuramente interessante perché uno alla fine, soprattutto per gli elevati, non ha idea, quindi vederli ricostruiti così ti permette...anche se, come dire, si possono immaginare durante il lavoro di scavo, però vederli realizzati visualmente ti permette di avere un'idea più complessiva dell'area e anche dello sfruttamento dello spazio, rende tutto un po' più completo.

INTERVIEWER:

Do you think 3D modelling helps broaden the understanding of the site? If yes, explain how.

MONICA:

Si, perché finché, diciamo...in questo contesti più antichi si vede solo basement e fondazioni delle strutture, quindi sono anche magari immaginabili, però uno non ha davvero un contatto reale con quello che si scava, mentre vederlo rappresentato in questo modo rende davvero più chiaro e secondo me serve proprio per ampliare i ragionamenti e le ipotesi che si possono fare comunque sul contesto che si sta studiando nel particolare. Soprattutto poi questa caratteristica di poter cambiare tra le fasi, più antica e più recente, con i materiali inseriti è davvero molto più chiaro, perché solitamente uno vede tutto insieme, non ha mai un distacco reale tra una fase e un'altra e come venissero sfruttati gli spazi, mentre in questo modo è molto chiaro e molto utile per lo studio.

INTERVIEWER:

Se vuoi puoi usare anche sotto ci sono gli avatar...

MONICA:

Ah, sì bellissimo...

INTERVIEWER:

se voi puoi anche usare l'impostazione per la luce naturale.

MONICA:

Ma la luce naturale...ma io posso farti delle domande?

INTERVIEWER:

Certo!

MONICA:

Ma la luce naturale per cosa ti serve? Ha una funzione per capire meglio gli spazi o lo sfruttamento degli spazi?

INTERVIEWER:

Tu per cosa pensi possa essere utile avere la possibilità di osservare lo spazio costruito con la luce solare nell'arco della giornata?

MONICA:

per gli spazi coperti non ti cambia niente, però magari per gli spazi aperti che sono coperti solo con pali e tetti più...non con chiusure a 360 gradi, allora la luce solare ti può dare un'idea del lavoro che si svolgeva in quegli spazi, in base al movimento del sole magari uno riesce a...la cosa di vedere anche attraverso loro (riferendosi agli avatar) è bella, è solo strani vederli lì un po' piantati. (Continua a navigare usando gli avatar e poi passa, chiedendomi come fare, alla visione dall'alto).

INTERVIEWER:

Do you consider this model helpful in deepening the understanding of the function of structures and objects? If yes, explain how.

MONICA:

Beh sì delle strutture sicuramente, perché riesci a veder l'alzato e come le strutture si rapportano le une con le altre, ma l'oggetto anche, comunque vederlo sul posto, intero, che occupa uno spazio reale, cioè virtuale ma fondamentale è reale all'interno del modello, ti dà un'idea dello sfruttamento dello spazio in sé, quindi anche solo vedere una camera che può essere piena o vuota in base a quello che è stato trovato può essere utile per avere una visione generale dell'insediamento. Sì, sì, da davvero un'idea chiarissima. Non è proprio immaginabile, alla fine noi vediamo solo fondazioni e basamenti...no è proprio scioccante vederlo ricostruito così davvero.

INTERVIEWER:

Do you consider avatars (human figures) necessary for a better understanding of the spaces and volumes in 3D models? Do you consider them necessary for a better understanding of the model overall? If so, explain how. If not, why not?

MONICA:

Intendi poter usare il loro punto di vista?

INTERVIEWER:

Sì e comunque avere delle figure umane dentro il modello.

MONICA:

Allora, avere delle figure non so, perché ad esempio questi che hai inserito sono...non so, li percepisco un po' come delle anomalie all'interno di questo modello, anche perché così non mi servono fondamentalmente a niente, nel senso non mi aiutano a comprendere meglio gli spazi e lo sfruttamento, anzi li trovo in po'...come se mi facessero perdere la concentrazione nell'osservare il modello in sé. Però usare invece il loro punto di vista quello sì, è interessante, mi piace più che altro perché hai una visione delle altezze e dello spazio a 360 gradi, quindi questo sì è utile, anche per vedere la pavimentazione, il banco come si muove...si rende più chiaro anche gli oggetti...ti dà proprio un'idea dello sfruttamento degli spazi...magari cambiarli, magari mettere qualcosa di un po' più legato al contesto potrebbe renderlo qualcosa di un po' meno estraneo alla visione generale, però non saprei...non so, secondo me forse sono anche evitabili, piuttosto mettere delle panoramiche ad altezza uomo, quello sì, ma una figura proprio all'interno no, secondo me ti fa perdere un po'...risulta un po' estranea anche se e sono completamente stilizzati.

INTERVIEWER:

How engaged do you feel with the model (if it all). Describe that engagement.

MONICA:

Beh, coinvolgimento c'è, perché finalmente si vede materialmente l'insediamento che si scava, quindi non più semplicemente tagli nella bedrock ma strutture vere e proprie, quindi secondo me è sconvolgente perché ti lega ancora di più a questo contesto, agli spazi, al contesto produttivo preistorico in cui vivevano insomma queste persone, che alla fine doveva vedere degli spazi del genere, quindi come coinvolgimento è altissimo e.

INTERVIEWER:

Pensi che sia dovuto al fatto che è un contesto dove tu lavori e studi?

MONICA:

quello sicuramente sì, perché comunque uno va lì da tanto tempo, lo conosci, te lo immagini, sicuramente c'è un coinvolgimento maggiore. Però io penso anche per una

persona esterna vedere un modello del genere, qui di rendersi conto davvero che materialmente c'era un qualcosa, cioè non si parla solo di resti antichi preistorici che uno difficilmente riesce a figurare, ma vederli in questo modo davvero li rende veri, tangibili, molto più di una ricostruzione in 2D di pannelli o quello che solitamente viene utilizzato all'interno delle aree musealizzate...e in più ti permette di avere proprio una visione a 360 gradi quindi non è che uno vede, che ne so, la storage area come un'altra area ma riesce ad avere una visione molto più completa degli spazi.

INTERVIEWER:

Do you consider the 3D model as it is (level of interaction + information provided) suitable for both expert and non-expert users?

MONICA:

sì secondo me sì, è sfruttabile da entrambi, perché comunque l'esperto riuscirà sicuramente a trarre magari delle informazioni più puntuali e precise, però non so credo sia più interessante forse proprio per chi non è del settore. Perché un esperto fondamentalmente nella sua testa perché, anche non conoscendo il contesto in particolare, però comunque è all'interno di questo tipo di conoscenza...un visitatore invece non abituato, secondo me ricostruito in questo modo lo rende più vicino alla persona no? E anche questo fatto di poter indagare, di poter cliccare sui vari oggetti, distinguere le fasi, vedere i vasi in loco eccetera, senso me è sfruttabile per un pubblico più vasto, almeno io penso che sia...perché è proprio comprensibile, è semplice da vedere, è semplice da capire e non hai bisogno di chissà quali skill particolare per comprendere la funzione degli spazi, perché fondamentalmente è quello che manca, quindi avere un elevato, vedere delle stanze vere e proprie con immateriali all'interno...si rende la visione davvero più vicina alla persone...sì davvero questi avatar sono proprio fastidiosi in mezzo.

INTERVIEWER:

Do you think it is possible to identify a target audience for the site of Erimi-Laonin tou Porakou?

MONICA:

Ma io penso che sia fruibile ad ampio raggio, perché comunque l'esperto riuscirà...non avrà bisogno di una visione di insieme però può focalizzarsi su aspetti più particolari, dal tipo di costruzioni all'orientamento degli spazi, quindi l'assemblage che c'è all'interno...per i fruitori un pochino più, diciamo, generici funziona perché è semplice da utilizzare ed è di impatto...finalmente uno riesce a vedere davvero una visione

completa di un insediamento che appunto è quello preistorico, perché se si parlasse di un contesto più recente cambia la situazione perché si riesce a crearsi una visione interna degli spazi...per la preistoria è molto più difficile perché fondamentalmente non hai niente, hai davvero poco, quindi si io penso che sia sfruttabile davvero da entrambe le parti...e poi comunque è chiaro e semplice, ma è molto preciso...questo fatto di poter cliccare e capire, quindi anche per un visitatore, appunto, diciamo, comune non possa trovare difficoltà ad interagire con un modello del genere.

INTERVIEWER:

Do you think that the interaction with the model could benefit from a storytelling-based digital guide?

MONICA:

Uhm...no secondo me non tanto, perché ti perdi secondo me...perché qualcuno che ti racconta, quindi ti impone un percorso particolare secondo me no, perché perdi la concentrazione su singole stanze, sui singoli oggetti... e po' è una cosa predominata, quindi come fai ad impostare un percorso fondamentalmente? Li si parla di un insediamento, almeno per come la vedo io, con una storia comunitaria, quindi impormi un percorso no, no lo vedo come una forzatura...però non ti saprei dire invece per un visitatore inesperto, magari invece potrebbe rendere più agevole...però anche lì perdi un po' la visione generale, che è anche la cosa bella di questo modello...cioè è bello poter vedere l'insieme e poi concentrarti su determinate cose. Un racconto così, no secondo me ti fa perdere la concentrazione. È un po' come la guida al museo che sì, magari è anche interessante perché ti spiega delle cose in più, però va avanti a scaglioni, quindi quello che c'è prima e dopo si perde sempre un po', mentre secondo me è meglio interagire da solo. Poi, ti dico, questo è anche un contesto particolare, non ti saprei dire se una persona completamente inesperta forse magari glielo po' render più chiaro, io questo contesto lo conosco, quindi quello un po' frega diciamo perché conosco quel contesto...magari metter la possibilità di scegliere, mettere un avatar con una possibilità di storytelling oppure no, magari si eco quello si può fare...però sì la bellezza è quella di poter interagire così in solitaria...e poi anche, come dire, avere una persona virtuale che ti spieghi. No, no, oltre che proprio un'imposizione ti fa perdere la concentrazione, quindi non lo farei, non la vedo come una scelta che possa portare migliorie.

INTERVIEWER:

Bene se hai altri commenti, osservazioni che vuoi fare...

MONICA:

no, davvero è emozionante vederlo così costruito, con queste aree divise per fasi, è davvero emozionante...consigli da darti in questo momento no, a parte questi avatar che mi infastidiscono la vista, per il resto non saprei...migliorie non mi viene in mente niente, secondo me è davvero molto chiaro e molto semplice.

INTERVIEWER:

Procediamo con la quinta intervista. Io non ti dico nulla su come interagire, su 'help' troverai tutte le informazioni su come navigare.

MARICA:

(legge sottovoce i comandi) ...cosa devo fare ora?

INTERVIEWER:

naviga pure liberamente.

MARICA:

(Si prende un paio di minuti per interagire con il modello) ...bene chiedimi pure.

INTERVIEWER:

Do you have any previous knowledge and/or experience with the application of 3D modelling in archaeology?

MARICA:

no assolutamente, ma mi piacerebbe molto imparare.

INTERVIEWER:

Neanche in contesto museale?

MARICA:

No, purtroppo no.

INTERVIEWER:

Do you consider 3D modelling useful for the archaeological interpretation process? If yes, explain how.

MARICA:

Assolutamente sì, perché secondo me ti consente di avere un'idea effettivamente concreta di quella che è la ricostruzione che da archeologi si tenta di effettuare attraverso delle modalità che però molto spesso, secondo me, non si risolvono in maniera fruibile per i non esperti, i non addetti al campo. Invece secondo me questo tipo di sistema consente di comprendere quello che effettivamente si tenta di ridare, di

ricostruire attraverso l'indagine archeologica sul campo a persone perfettamente ignare del contesto anche storico, perché, voglio dire, questo tipo di ricostruzione secondo me non è legata al periodo storico del sito che si scava, ma è appunto un sistema che può essere applicato in larga scala a qualsiasi contesto che si vuole indagare, che si vuole restituire ecco.

INTERVIEWER:

bene se vuoi mentre mi parli puoi continuare a navigare.

MARICA:

(Naviga scoprendo alcune funzioni che prima non aveva notato) ...ah quindi queste sono le due visuali...bellissimo, davvero bellissimo.

INTERVIEWER:

Do you think 3D modelling helps broaden the understanding of the site? If yes, explain how.

MARICA:

Si, appunto come ti dicevo prima, portando avanti uno scavo prettamente archeologico senza una restituzione di questo tipo, difficilmente si riesce a realizzare, anche solo mentalmente, quello che effettivamente era la struttura in questo caso, ma il discorso si può applicare anche ai materiali se vogliamo, in antico. L'unica differenza secondo me è che i materiali in un certo senso hanno un loro ritorno a livello di documentazione attraverso l'immagine fotografica nel momento in cui noi, ad esempio, ricostruiamo il vaso. La cosa manca per quanto riguarda la struttura, perché ovviamente non è possibile avere una fotografia della struttura in origine, ecco attraverso queste ricostruzioni, secondo, me si riesce a rendere appieno quello che era l'effettivo peso, ampiezza e quant'altro della struttura in questione. Sono secondo me due punti di vista, due modi, quindi immagine fotografica, documentazione grafica in senso lato e questo tipo di sistema ti permettono di restituire due elementi diversi di uno stesso contesto.

INTERVIEWER:

Do you consider this model helpful in deepening the understanding of the function of structures and objects? If yes, explain how.

MARICA:

Ma sai la comprensione di strutture sì e no, nel senso che...immagino una persona che si debba interfacciare con un grafico di questo tipo, probabilmente non avendo conoscenze pregresse potrebbe non riuscirebbe comunque a capire a cosa effettivamente servissero i

vari spazi e le varie strutture. Io penso che quel tipo di livello di conoscenza non basti, il semplice modello, servono sicuramente degli approfondimenti ulteriori che comunque vedo il sistema dà in ogni caso tramite la parte scritta del testo. Ecco questo secondo me è fondamentale per capire la funzione della struttura; il sistema in sé è sicuramente molto utile perché dal punto di vista visivo è molto più immediata la questione, però secondo me la componente scritta è indispensabile per capire quella che era la funzionalità non solo dell'ambiente ma anche degli oggetti.

INTERVIEWER:

Do you consider avatars (human figures) necessary for a better understanding of the spaces and volumes in 3D models? Do you consider them necessary for a better understanding of the model overall? If so, explain how. If not, why not?

MARICA:

Allora sicuramente utili per il discorso dei volumi e delle dimensioni, perché è vero che tu hai una ricostruzione visivamente immediata della struttura, ma è anche vero che il nostro occhio secondo me è abituato a percepire gli spazi partendo proprio dalle misure del nostro corpo, quindi questo secondo me è fondamentale. Per quanto riguarda il discorso generale del modello non penso che sia fondamentale, perché non sono molto favorevole al discorso dell'avatar all'interno delle ricostruzioni, perché lo considero un attimino un di più che tendenzialmente a livello visivo preferirei evitare, però ripeto nell'ottica del discorso sugli spazi e i volumi mi sembrano assolutamente adatti, anzi per avere un'idea di quella che è la dimensione del volume e dello spazio.

INTERVIEWER:

How engaged do you feel with the model (if it all). Describe that engagement.

MARICA:

Sì, guarda...poi va beh scavando questo sito, ti emozioni al contesto ed avere un'idea visivamente così chiara, vedendolo attraverso questo modello è tutta un'altra cosa...è difficile crearsi un'immagine visiva semplicemente scavando il sito, quindi questo modo è davvero... l'immagine più immediata e reale che uno possa avere...in altro modo non si potrebbe mai concretamente avere, perché appunto manca la documentazione fotografica e quelle che sono le strutture perché è impossibile produrla, quindi questo secondo me è l'unico strumento che oggi abbiamo per avere questa immagine, quindi è assolutamente bellissimo...è un sistema che mi piace moltissimo, magari averlo per tutti i siti, per tutti i contesti, cioè secondo me sarebbe anche forse più facile per i non addetti al campo riuscire a capire bene come funzionavano le cose, come funzionavano gli

spazi, come agivano e si muovevano le persone all'interno degli spazi...questo solo il modello 3D riesce di fare e di avere. Quindi è assolutamente emozionante.

INTERVIEWER:

Ritieni che sia dovuto comunque ad un tuo coinvolgimento personale e lavorativo?

MARICA:

No, non solo. È chiaro che partecipare attivamente allo scavo dell'area favorisce poi il riconoscimento del prodotto finale, però penso che poi qualsiasi altra persona in ogni caso rimarrebbe, come, dire, un attimo impressionata da quello che si riesce a ricostruire e che si può vedere attraverso l'immagine. Quindi in realtà non è un discorso...sì chiaramente personale, ma non solo secondo me. Infatti, come ti dicevo, è un discorso che io applicherei a tutti i siti e anzi lo renderei disponibile ai non addetti ai lavori, perché quale migliore risorsa per riuscire a spiegare come funzionavano le cose.

INTERVIEWER:

Do you consider the 3D model as it is (level of interaction + information provided) suitable for both expert and non-expert users?

MARICA:

Sì, sì assolutamente.

INTERVIEWER:

E anche da non esperti?

MARICA:

Sì, sì assolutamente, perché comunque il testo è chiaro, io ho letto poche righe, ma il testo è chiaro e penso che, come ti dicevo prima, è fondamentale associare l'immagine al testo e chiunque, anche una persona non interessata nello specifico al contesto cronologico e geografico del sito, potrebbe tranquillamente avere piacere a leggere il testo e associare il testo all'immagine e viceversa, quindi penso, ti ripeto, che il testo sia assolutamente fondamentale...soprattutto appunto per persone che non conoscono bene il sito, sai perché se ci scavi il presupposto fondamentale è che tu queste nozioni già dovresti averle apprese e il modello ti dà quel di più che ti manca a livello visivo per avere l'idea generale di come funzionava l'area; mentre invece per una persona non coinvolta, che non ha lavorato nell'ambiente o che non è conoscitore del periodo storico e del contesto geografico potrebbe essere una chiara idea di quello che è emerso dallo scavo stesso.

INTERVIEWER:

Do you think it is possible to identify a target audience for the site of Erimi-Laonin tou Porakou?

MARICA:

In che senso?

INTERVIEWER:

Di fruitori.

MARICA:

Ma io non sono per l'idea di fare discorsi limitativi di esperto/ non esperto, cioè secondo me l'idea generale di tutta questa serie di ricostruzione, dal 3D alle semplici foto, dovrebbe proprio essere quella di favorire una conoscenza che non è soltanto legata all'addetto, perché l'addetto ha per l'appunto le sue conoscenze pregresse. Il concetto secondo me è che questi sistemi dovrebbero aiutare a capire tutti quelli che sono specialisti nel campo quella che effettivamente era la realtà del sito. Io appunto non farei discorsi legati al singolo target ma a tutti quelli che, anche semplicemente per passione, vorrebbero capire come si lavorava, ad esempio, nel workshop.

INTERVIEWER:

Do you think that the interaction with the model could benefit from a storytelling-based digital guide?

MARICA:

ma guarda come ti dicevo prima io non sono tanto per gli avatar in questo senso, perché...ecco secondo me , la parte positiva dell'avatar è quella di catturare l'attenzione di...ecco in questo senso ti posso parlare di target, di persone che non specificatamente coinvolte e legate al sito, quindi è ovvio che l'avatar potrebbe essere l'elemento che può attirare l'attenzione...per persone che potrebbe essere interessate alla nozione puramente archeologica del contesto, io penso che avatar o non avatar, non cambierebbe tanto. L'importante è avere il testo scritto se be associato all'immagine di riferimento, poi per il resto io non avrei nessun bisogno di associare altro tipo di immagini o avatar, però se si fa un discorso di fruibilità ud un grande pubblico di non esperti, l'avatar è quell'elemento che riesce a coinvolgere più gente, quindi più attrattivo dal punto di vista visivo, perché chiaramente è l'omino che cammina, quindi in questo senso sì. Ti ripeto non lo ritengo un elemento essenziale per il funzionamento del modello, cioè il modello è bello e funziona bene perché c'è associato l'immagine 3D al testo, che è l'elemento che mancava fino ad ora. L'avatar si può essere l'elemento carino in più, ma solo

un'aggiunta al programma, ma non il programma. L'avatar è elemento che ti può migliorare la visibilità del modello.

INTERVIEWER:

bene se ci sono altri commenti o osservazioni che vuoi fare sentiti pure libera.

MARICA:

Si c'è una cosa che ti volevo chiedere, però ti dico è solo una questione mia personale...si vedeva la bedrock che molto bianca, sembra quasi neve...cioè visivamente è vero che quello è il colore e quindi credo anche per correttezza metodologica, bisogna restituire gli stessi colori, eccetera, però ecco...non lo vedi tipo elemento di disturbo.

INTERVIEWER:

In realtà questa è la texture che è stata fatta dagli architetti, presa dalle foto del drone.

MARICA:

Ah ecco vedi queste cose io non le capisco...cioè mi disturba, mi sa di finta, non so come dirtelo...le prime immagini che avevo visto all'interno degli ambienti...visivamente mi dà l'effetto quasi finto, di una cosa costruita, poi magari è appunto un'impressione mia personale...il colore non mi torna rispetto al contesto, mi torna benissimo questo marrone che è stato dato alla struttura, è gradevole e non disturba nell'immagine...questa roba bianca che diventa quasi...però ripeto è una mia impressione personale...il programma è bellissimo e mi piace tantissimo. Ero ripeto quella roba degli ambienti interni molto bianchi, mi disturbava un attimo, ma solo a livello visivo, rispetto agli altri colori che ho visto è l'unico elemento che mi disturbava. Anche il discorso dei materiali mi è piaciuto molto, mi sta bene anche il colore che è stato dato al materiale, magari ecco puntare su delle scelte monocromatiche, perché in quel caso a me non interessa vedere il colore del singolo materiale. A me sta bene che venga dato lo stesso colore a tutti i materiali anche se in questo caso è u rosa, però mi sta bene perché in quel momento per me il colore è la caratterizzazione del materiale rispetto al piano.

INTERVIEWER:

Do you have any previous knowledge and/or experience with the application of 3D modelling in archaeology?

MARTA:

No, this is my first experience.

INTERVIEWER:

Do you consider 3D modelling useful for the archaeological interpretation process? If yes, explain how.

MARTA:

I really think so, because the possibility to observe a reconstructed space may provide a different perception of the built space. The archaeological space may potentially become more easily readable. For example, it is much easier to analyse dynamics concerning the use of the space and interaction between agents within a certain space, viewing a reconstructed model instead of a two-dimensional plan.

INTERVIEWER:

Do you think 3D modelling helps broaden the understanding of the site? If yes, explain how.

MARTA:

It can definitely help. Because it is easier to think about social dynamics, from construction to use of the structures, with a reconstructed model. It is easier to imagine social agents acting within the built space and the surrounding environment.

INTERVIEWER:

Do you consider this model helpful in deepening the understanding of the function of structures and objects? If yes, explain how.

MARTA:

I think so, since looking at architectonic installations and objects within their original, reconstructed context may support the interpretation on the use of space and may possibly enhance the analysis of socio-cultural dynamics, which created and impacted on the formation of archaeological context.

INTERVIEWER:

Do you consider avatars (human figures) necessary for a better understanding of the spaces and volumes in 3D models? Do you consider them necessary for a better understanding of the model overall? If so, explain how. If not, why not?

MARTA:

They would definitely help to have a broader perception of the space. For example their use would help to estimate how many people were able to work together in the same space, without limiting the accessibility to workstations and working structures within a certain building.

INTERVIEWER:

How engaged do you feel with the model (if it all). Describe that engagement.

MARTA:

I feel pretty engaged with the model. The perception of the reconstructed space is facilitated by the possibility to observe the reconstructed area in two different phases, simply selecting or deselecting one of the 'phase' buttons. The possibility to choose a view helps to focus on specific observation points; it is also very helpful the possibility to remove the roof in order to have an inside view within single buildings. The outputs are also very easy to use, and the windows with information are clear and easily readable. However, at the beginning, was slightly difficult to move around the model.

INTERVIEWER:

Do you consider the 3D model as it is (level of interaction + information provided) suitable for both expert and non-expert users?

MARTA:

I think so. The 3d model is easily accessible by everyone. However, I would suggest to make the informative panels easier, in case the user is a child.

INTERVIEWER:

Do you think it is possible to identify a target audience for the site of Erimi-Laonin tou Porakou?

MARTA:

It depends where the model will be eventually located (e.g. on the site area, in the local Museum, in the national Museum).

INTERVIEWER:

Do you think that the interaction with the model could benefit from a storytelling-based digital guide?

MARTA:

I really think so. Especially in case of non-specialist users and children/schools.

INTERVIEWER:

Do you have any previous knowledge and/or experience with the application of 3D modelling in archaeology?

CHIARA:

I have seen some documentaries where 3D modelling animations are shown, especially building reconstruction.

INTERVIEWER:

Do you consider 3D modelling useful for the archaeological interpretation process? If yes, explain how.

CHIARA:

Yes, I think 3D modelling can be useful for the archaeological interpretation process. To be able to visualize archaeological features and buildings in 3D can help to acquire a deeper awareness of spaces and distances and to stimulate interpretive hypotheses about their function.

INTERVIEWER:

Do you think 3D modelling helps broaden the understanding of the site? If yes, explain how.

CHIARA:

Yes, I think 3D modelling can be useful for the archaeological interpretation process. To be able to visualize archaeological features and buildings in 3D can help to acquire a deeper awareness of spaces and distances and to stimulate interpretive hypotheses about their function.

INTERVIEWER:

Do you consider this model helpful in deepening the understanding of the function of structures and objects? If yes, explain how.

CHIARA:

Yes, I think it can help broadening the comprehension of the site. I think it is especially useful to be able to see the architectural differences between the two phases (A and B) as a whole. This can be complicated. I think the model has the potential to deepen the understanding of the function of structures and objects though more information and details (like from photographs) would be needed to better characterize them. At the same time, too much reconstruction can result in invention and falsify the real data.

INTERVIEWER:

Do you consider avatars (human figures) necessary for a better understanding of the spaces and volumes in 3D models? Do you consider them necessary for a better understanding of the model overall? If so, explain how. If not, why not?

CHIARA:

Yes, I think avatars are useful for understanding the volumes in the 3D model. Besides, they help navigation offering different perspectives.

INTERVIEWER:

How engaged do you feel with the model (if it all). Describe that engagement.

CHIARA:

It is funny and stimulates imagination.

INTERVIEWER:

Do you consider the 3D model as it is (level of interaction + information provided) suitable for both expert and non-expert users?

CHIARA:

I think that for the model to suit the exigencies of non-professionals it would be useful to add more details, for example about the surrounding environment, and simplify descriptions. Also, in order to enrich explanations, it could be nice to hypothesise some further reconstruction for example of the hearth of phase B.

INTERVIEWER:

Do you think it is possible to identify a target audience for the site of Erimi-Laonin tou Porakou?

CHIARA:

I do not think there is a specific audience for the 3D model of Erimi-Laonin tou Porakou though I am convinced that the people who would greater benefit from it are non-professionals, i.e. people not familiar with prehistoric features and archaeology in general.

INTERVIEWER:

Do you think that the interaction with the model could benefit from a storytelling-based digital guide?

CHIARA:

I think a narrative path through the 3D model can be very enjoyable, especially for non-professionals. Besides, people tend to be lazy and a narrative path can help increase curiosity.

Transcript 1st focus group October 2016

INTERVIEWER:

allora cominciamo con il focus group. In generale ho notato, come prima cosa che a livello di interazione all'inizio ha dato qualche problema per la navigazione.

PARTICIPANTS:

(tutti insieme) Sì!

LORENZO:

Secondo me il grosso problema immediato è che non è chiaro il ruolo degli avatar e la visuale che loro hanno nel...cioè, come si potrebbe dire, la possibilità di selezionare il punto di vista del singolo avatar...

INTERVIEWER:

non è chiaro?

LORENZO:

No. Ti viene automaticamente da selezionare l'avatar che tu vedi e in realtà non lo puoi fare.

AIDA:

No, invece la cosa che mi è risultata più difficile era proprio il controllo del movimento...

PARTICIPANTS:

(tutti insieme) eh sì infatti anche per me.

AIDA:

no, in realtà l'avatar con il bottone è stato abbastanza immediato per me.

GRETA:

era come se ti scivolasse via.

MONICA:

si muove male, perdi un po' il controllo.

INTERVIEWER:

quindi devo migliorare un po' la parte di navigazione e renderla più fluida.

AIDA:

più controllata magari.

INTERVIEWER:

a livello invece di informazioni, quindi sulla parte descrittiva, mi sembra che non ci siano stati particolari problemi, nel senso che comunque tutti avete detto che era chiara, semplice e ben strutturata.

PARTICIPANTS:

(tutti insieme) sì assolutamente.

LORENZO:

anzi fra l'altro è uno degli aspetti più...informativi, al di là della ricostruzione sono i dati...

MONICA:

Ma anche i materiali intendi?

INTERVIEWER:

sì, tutta la parte descrittiva.

LORENZO:

manca credo la, ehm... mettere anche delle foto degli oggetti medesimi.

MONICA:

più che altro per differenziare un po' di più l'assemblage, che forse rimane un po' come un gruppo di oggetti, però poco differenziati.

LORENZO:

è un po' freddo, perché vedi i pithoi e tutti gli altri oggetti, ovviamente essendo una ricostruzione hanno lo stesso aspetto, diciamo, virtuale. Il fatto di caratterizzarli uno a uno con il loro aspetto reale rende più concreto l'effetto...se no sono un po' tutti...metti le architetture: non lo sai come sono in realtà, quindi hai la sensazione davvero di navigare nello spazio, gli oggetti ce li hai, quindi è chiaro che è più importante avere il referente oggettivo.

MONICA:

anche per fare uno studio più approfondito, forse è anche utile sapere con maggiore precisione i materiali ritrovati all'interno delle varie unit.

GRETA:

io invece sono d'accordo con questa visione dei materiali globale, perché molto spesso non si ha invece, perché i materiali si studiano uno ad uno e per questo ci sono i database, no non ci sono le ricostruzioni in 3D, invece la visione globale è molto

interessante e ti fa rendere conto anche, come dire, della spazialità delle diverse grandezze.

LORENZO:

questo è verissimo per il rapporto oggetto-spazio architettonico...

INTERVIEWER:

per quanto riguarda il testo invece, se ho capito bene è meglio avere descrizioni separate per almeno gruppi di materiali.

GRETA:

quello sì, perché ovviamente se ti non conosci un pithos o non conosci una fusaiola e magari ne vuoi sapere di più, è giusto che qualcuno ti spieghi cos'è quell'oggetto e a cosa serviva. E anche il fatto di metterci una foto, io probabilmente la metterei evidenziando la parola e potendoci cliccare sopra, non aggiungere altro perché se non diventa una cosa sovrabbondante e troppo impattante. Invece se tu ci clicchi sopra hai già il meccanismo mentale 'ok ne voglio sapere di più' 'ok è quello'.

LORENZO:

cioè la descrizione del singolo oggetto ma anche la classe...

INTERVIEWER:

è possibile avere entrambe.

LORENZO:

perché secondo me sarebbe meglio, oltre alla descrizione del singolo oggetto, avere la possibilità di un grado di lettura più generale in cui parli dei pithoi.

GRETA:

ecco sì, se mi posso permettere, poi dipende anche a che pubblico ti rivolgi, se ti rivolgi ad un gruppo di non specialisti, mi importerebbe sapere di più sui pithoi in generale e non su singolo pithos.

MONICA:

sì, si possono fare vari focus...

GRETA:

perché è talmente specifica come informazione, che io utente di un sito archeologico...cioè lascia un po' il tempo che trova, mentre se mi informo su che cos'è un pithos, a cosa serviva eccetera in generale...

LORENZO:

sarebbe interessante poter avere la scelta...

GRETA:

no secondo me invece bisogna incanalare l'utente non specializzato verso un tipo di informazione, prendere noi la decisione perché se no si perde fundamentalmente e rischia di, come dire, annoiarsi; mentre ovviamente lasciare allo specialista la scelta, cioè tutta la gamma di informazioni a disposizione.

LORENZO:

questo fisicamente non lo puoi fare, cioè tu quando entri in SAI e arrivi sul fondo ti deve comparire qualcosa che ti guidi, non so vai verso la direzione pithoi generale oppure vai verso la descrizione del singolo pithos; quindi, magari, potrebbe essere quando ci va sopra all'oggetto, potrebbe comparire una finestra che ti identifica questo come pithos, poi se tu apri la finestra ti viene una descrizione più generale, non so come dire...la scelta deve avvenire immediatamente quando sei nello spazio fisico, architettonico, non deve essere una cosa che avviene dopo.

INTERVIEWER:

però non è così semplice veicolare una scelta. Ad esempio, alcuni di voi, ognuno di voi ha notato aspetti diversi del modello, perché nessuno di voi ha fatto le stesse cose, ha avuto lo stesso tipo di interazione, ha cliccato sugli stessi hotspot e quindi non la puoi guidare, a meno che non decidi tu di fare un percorso guidato, quindi l'utente deve prima o poi passare per forza di lì. Perché ci sta che una persona interagisca con il modello e sui pithoi di SAI non ci clicchi mai.

LORENZO:

diciamo, cerco di spiegarmi, se i pithoi sono di SAI, caso fortunato sono tutti in fondo alla stanza, se tu inquadri l'intera gamma dei pithoi e ci clicca sopra ti viene la spiegazione di cosa sono; se tu vai, con uno zoom più profondo, vai sul pithos di SA VI; per esempio, e clicchi su quello ti viene la descrizione di SA VI.

INTERVIEWER:

sì, però le descrizioni le puoi vedere nel momento in cui clicchi sull'oggetto che è stato destinato come hotspot.

LORENZO:

eh, ma potresti avere un hotspot più ampio su SA I

INTERVIEWER:

ci si può provare, però l'hotspot è associato ad un box, che è associato all'oggetto. Più grande fai il box, più rischi di cliccare su quell'hotspot anche andando a cliccare su un'altra parte., e comunque è lo stesso discorso, se uno non è minimamente interessato o va oltre è un'informazione che non avrà.

MONICA:

ma non puoi fare una finestra all'interno della descrizione, per poter cliccare da lì sulle descrizioni singole?

AIDA:

sì, tipo collegamento ipertestuale.

INTERVIEWER:

non lo so, devo vedere se è fattibile, perché per ora è stato possibile farlo solo associandolo al modello e all'oggetto.

AIDA:

tipo tu derivi quel pithos e magari vedi di infilarci la parola pithoi che è un collegamento dal generale al particolare.

MONICA:

no, io invece farei da pithoi al singolo oggetto.

AIDA:

sì, forse è meglio.

GRETA:

sarebbe carino fare come dice Monica, d'altra parte tu presenti la situazione così come è, banalmente così come è anche il nostro percorso mentale di archeologi: noi troviamo un pithos, lo descriviamo e poi lo associamo ai pithoi e non è il contrario, non possiamo fare il contrario che sarebbe il percorso più logico di insiemi concentrici, perché noi troviamo il particolare, esattamente come loro trovano il particolare e non la categoria in generale.

MONICA:

sì, ma questo dipende dall'informazione che vuoi dare, nel senso sarebbe più logico dare prima un'idea generale e poi andare nello specifico.

GRETA:

certo lo sarebbe, ma ora tu stai cliccando su quel pithos, non potrai mai cliccare sui pithoi, quindi lo potrai sapere solo dopo ce cos'è fondamentalmente, prima saprai che cos'è lo specifico e poi a cosa serve...perché è il modello che ti obbliga a fare così.

MARICA:

a me visivamente disturberebbe molto il fatto di aver spiegazione generale e poi avere ulteriore casella sotto...cioè a me piace proprio il discorso di poter cliccare sull'oggetto e che ti compare la finestra con scritto è quello, serve a quello. questo rimando di cartelle...

AIDA:

sì, però tu profano che te ne fai della descrizione di un pithos.

GRETA:

sì, infatti io nella versione per non specialisti metterei soltanto la voce pithoi.

INTERVIEWER:

collegandoci a questo discorso, a livello anche di registro, ritenete che sia meglio avere un solo modello e adattarlo ad un pubblico più vasto possibile o presentare due versioni a seconda di chi è l'utente finale?

LORENZO:

a livello teorico è meglio la prima ipotesi, però mi sembra molto difficile...

INTERVIEWER:

perché dà come state parlando sono sempre molto distinte...ci sono due macrocategorie di fruitori.

LORENZO:

eh sì, anche perché io credo nell'elaborazione è ovvio che è più facile per te dove c'è l'hotspot decidere di essere generica sia nell'ampliare, sia nella descrizione...cioè se tu vai in fondo a SA I se clicchi non ti viene il singolo pithos ma pithoi di SA I...non so ci metti informazioni più accattivanti tipo la capacità in termini di litri, che cosa poteva essere contenuto, la relazione rispetto a altre categorie di oggetti che sono là dentro, ma non ci scrivi Red Polished o Coarse Ware...e come dire staccare questa informazione dall'altra, come dire, è più facile fare due modelli secondo me che cercare di...

MONICA:

sì o tu vai di focus in focus, come dire, così puoi focalizzarti sempre di più su un'informazione o ne fai due diversi.

GRETA:

infatti, ovviamente la struttura è diversa però nel senso il concetto che sta alla base è che la parte grafica è fruibile da tutti, ma è la parte scritta il problema, come sempre, quindi sì anche secondo me bisognerebbe adottare due versioni differenti.

INTERVIEWER:

la scelta è se adottare un registro comprensibile da tutti, però venendo meno al dettaglio che può interessare l'esperto o...

LORENZO:

secondo me non è un fatto di livello di approfondimento, è un fatto di centrare le cose che sono più o meno interessanti per il pubblico, perché magari all'archeologo che si occupa di ceramica non interessa ricostruire la capacità in litri per esempio, mentre ad un pubblico generico interessa di più sapere ' ah, ma lì ci stava 300 litri di cose' capito?

GRETA:

ma soprattutto più semplifichi e meno rendi dispersiva l'informazione, più loro capiscono effettivamente quali attività noi abbiamo ricostruito lì, se invece tu cominci a descrivere tutto puntualmente potrebbero non capire che noi abbiamo identificato come main activities alcune cose e non...cioè se cliccano su, che ne so, coppetta per dire e le cliccano tutte, ma non cliccano su fusaiole o su pithoi non capiscono.

INTERVIEWER:

sempre parlando di potenziali fruitori di questo modello, avete avuto idee differenti sull'identificazione o meno di una target audience alla quale ci si può rivolgere per il nostro sito.

LORENZO:

a mio modo di vedere è un discorso di diversi piani di lettura. Si possono identificare gruppi differenti di utenti che possono usufruire dello stesso modello, con le specifiche di differenti focus di descrizione, quindi secondo me ciò che va differenziato eventualmente sdoppiando o triplicando il modello è la componente descrittiva quindi il testo associato alla navigazione. quando tu diversifichi il testo, secondo me il lavoro che potresti fare è identificare dei grossi gruppi. Io penso che ce ne possano essere tre di gruppi, ovviamente non raggruppati sulla base di preparazione, ma sulla base anche del tipo di visita che fanno: se tu pensi che questo modello possa essere navigato in rete, quindi in assenza di ogni tipo di relazione con i materiali e il sito, quello è un gruppo. Un secondo gruppo è quello che visita il sito avendo il supporto del modello e il terzo gruppo è quello che visita il museo dove ci sono gli oggetti con il modello in mano.

Secondo me questi tre gruppi non sono tanto appunto gli archeologi, gli appassionati di archeologia o il visitatore distratto, ma proprio è molto importante stabilire la relazione che ce fra il modello virtuale e quello che di concreto abbiamo.

AIDA:

cioè il mezzo che rappresenta tu dici? Perché in quel caso cambierebbe.

LORENZO:

certo cambia molto, perché se tu hai quello e sei sul workshop complex hai un tipo di approccio.

AIDA:

si cambia la funzione del modello.

LORENZO:

se sei al museo hai un altro tipo di approccio, se sei nel niente dell'indifferente Internet ne hai un altro.

GRETA:

sì, perché se sei al museo, per esempio, ti aiuta a contestualizzare, mentre su sito ti aiuta ad interpretare quello che vedi, è ovvio.

LORENZO:

sul sito sarai più attratto dalla ricostruzione in elevato delle architetture, perché le vedi giù e quindi l'attenzione va molto più su quello. Gli oggetti lì non li vedi perché non ci sono più, quando sei invece al museo, secondo gruppo, li vedi invece gli oggetti restaurati e allora la tua attenzione sa sull'oggetto e non sullo spazio. Le due cose se navighi su internet devono essere corroborate l'una con l'altra in un qualche modo.

AIDA:

quindi il target lo individui con questo con la tipologia di visitatore?

LORENZO:

secondo me è anche un modo più innovativo di interpretare la visita virtuale, interattiva, proprio avendo un rapporto vero e onesto, dichiarato all'origine, fra ciò che di virtuale viene ricostruito e ciò che di concreto esiste.

GRETA:

anche se comunque per onestà intellettuale bisogna mettere che tu stai sempre considerando la distinzione specialista non-specialista come soggetti e target diversi, perché se ha prescindere tu fai due modelli diversi vuol dire che tu l'hai già considerata questa cosa.

LORENZO:

no secondo me no...tre modelli io farei, per tre gruppi ma sulla base non della tipologia del visitatore ma sulla base della tipologia di vista.

GRETA:

ho capito, però allora cosa serve...allora c'è solo un modello, non ce ne sono due uno con la specifica per lo specialista e l'altro più generale dove l'informazione...

LORENZO:

quello secondo me riguarda più il rapporto testo-modello.

GRETA:

però se tu distingui la parte scritta tra specialisti e non specialisti, tu comunque come target già a monte consideri un target differenziato altrimenti non faresti questo tipo di operazione.

LORENZO:

ok, allora io ho cambiato idea mentre parlavamo, mi sono innamorato di questa seconda idea di suddividere per tipo di visita e non per tipo di visitatore, sul piano di tipologia e quantità di informazioni, perché secondo me c'è un modo per enfatizzare l'oggetto nel suo contesto per la visita al museo, l'architettura nel suo spazio fisico per la visita sul sito e entrambi...in generale per la visita on-line io metterei una quantità sovrabbondante di informazioni, perché tanto il livello di astrazione è inferiore, cioè il livello di cortocircuito tra la realtà e il modello non c'è, mentre negli altri due casi c'è modo di enfatizzare le cose. Per esempio, la descrizione dei pithoi in quanto tali è molto più importante nella visita al museo che non nella visita sul sito.

AIDA:

io invece farei al contrario, nel senso che trovandomi al museo con i pithoi davanti...comunque un'idea di come è fatto ce l'hai, io piuttosto enfatizzerei il contesto nel quale si trova, per una sorta di compensazione, enfatizzerei ciò con cui non ho un contatto immediato.

INTERVIEWER:

invece per quanto riguarda la comunità locale?

GRETA:

è io quello te lo avevo già detto, questo potrebbe essere davvero fondamentale per far capire loro effettivamente che non si tratta qualcosa di strano di vecchio, ma qualcosa di molto simile a quello che percepiscono come vita quotidiana, cioè che quello era

veramente un luogo di vita e non è soltanto un luogo esterno al loro villaggio o un campo dove noi andiamo fare cose strane, ma se tu lo vedi come è ricostruito e lo senti simile o più vicino a quella che è la tua realtà quotidiana. comprendi l'importanza di quello che noi facciamo.

LORENZO:

secondo me, sulla base di quella che è la mia esperienza sono due gli elementi che avvicinano il contesto in cui lavoriamo e la comunità attuale ed entrambi si basano sullo stesso meccanismo, che è quello dell'orgoglio che la comunità ha nei confronti del suo passato. E come si manifesta l'orgoglio: attraverso due canali di autorappresentazione: uno è la ricchezza che questa comunità ha, la seconda è proprio l'aspetto industriale, cioè è molto per loro accattivante, il fatto che non sia solo un sito dove c'erano solo case dove vivevano, ma producevano ad un livello oltre household, il che vuol dire che erano intraprendenti, imprenditoriali e questa cosa qui è l'elemento che attira il loro interesse. Quindi. per esempio, la componente workshop, nel senso di productive site, che ovviamente è essenziale nel nostro caso, è un'ottima carta da poter giocare, quindi, per esempio, già nella presentazione del modello questo elemento va utilizzato.

GRETA:

sì, la mia analisi era su un piano più di base, nel senso che il modello ti dà l'idea di cosa c'era e che non è solo un taglio nel banco, è un oggetto e l'oggetto avvicina molto il non specialista, ti fa scattare quella molla che ti dice 'ok allora stanno facendo qualcosa di importante, la loro ricerca ha un senso'.

AIDA:

sì, ti fa dire 'allora non stanno scavando solo fossi'. No, io una cosa sulla quale punterei molto è l'identificazione, cioè riuscire a cercare dei punti in comuni, anche banali negli oggetti nella forma degli oggetti, Non so come di preciso, perché non conosco molto bene la cultura cipriota moderna, ma io punterei molto sull'identificazione, su 'usavate le stesse cose, avevate le stesse abitudini', ammesso e non concesso che si possa creare.

LORENZO:

se posso fare una nota su questo: è molto interessante, però è anche un'arma a doppio taglio, perché quello che per loro è il passato folkloristico dei loro nonni, per come si è sviluppata la società cipriota nell'arco degli ultimi 50 anni, non è una cosa di cui vanno molto orgogliosi...cioè se tu gli dici 'guarda questo è come ce lo avete voi' lui ti dirà 'no, guarda questo lo aveva mia nonna, io ora ho l'iphone'...quindi secondo me è meglio

fargli capire che loro erano all'avanguardia, se vogliamo creare un ponte dobbiamo fare dei passi verso di loro e non pretendere che loro ne facciano verso di noi.

GRETA:

ma infatti scegliamo una chiave di lettura che sia adatta alla società contemporanea, dovesse cambiare noi cambiamo chiave di lettura, non è un problema abbiamo entrambe le cose, nel senso un workshop all'avanguardia e degli oggetti che sono etnograficamente simili a quelli che avevano i loro nonni, quindi decidiamo cosa enfatizzare sulla base del nostro utente.

INTERVIEWER:

passiamo invece all'argomento avatar. Ad alcuni sono piaciuti, alcuni li hanno trovato fastidiosi, altri avrebbero preferito una maggiore caratterizzazione anatomica...cosa ne pensate?

AIDA:

allora lo scopo degli avatar è quello di darti una visuale diversa e più dettagliata delle stanze. Io li toglierei se ci fosse un altro modo abbastanza chiaro per accedere a quella visuale. In quel caso li toglierei senza ombra di dubbio, ma se non c'è un modo chiaro e immediato tanto quanto loro per accedere a quella visuale allora vanno necessariamente lasciati.

MONICA:

sì, sono d'accordo.

GRETA:

secondo me invece l'avatar va assolutamente lasciato perché è la misura, è l'uomo, se tu togli l'uomo e noi misuriamo tutto a misura nostra, se tu non hai la sagoma dell'omino ti chiederai sempre quanto è alto, se ci stava o non ci stava...

AIDA:

sì, ma tu hai comunque la visuale ad altezza uomo...

MARICA:

sì, ma non è la stessa cosa...

GRETA:

non lo capisci finché non inserisci un tuo simile nello spazio...

LORENZO:

però l'obiettivo dell'avatar è quello di calarti nel suo...cioè se clicchi nell'avatar non lo vedi più, sei tu l'avatar...

GRETA:

sì e questo è positivo ma bisogna vere entrambe le visioni. Tu vedi l'avatar e ti dà l'idea di come si contestualizza l'uomo in quel contesto, dopodiché tu assumi la sua visuale e ti vedi gli ambienti.

LORENZO:

ma non potremmo inserire delle figure all'interno degli ambienti, delle figure umane.

INTERVIEWER:

ma umano come?

LORENZO:

caratterizzate, realistiche, così sai quanto è alto un uomo rispetto ad un pithos e quindi la dimensione, però all'interno, non che sei tu col tuo punto di vista. Se tu entri in un ambiente e vedi un uomo che ha una testa enorme è ovvio che tu cerchi di allontanarti, cerchi di creare lo spazio tra te e quella figura umana. Mentre non sai quanto è grande il pithos, ma sai quanto è grande un uomo ti ci allontani finché la prospettiva è quella tua, cioè quella di un uomo che guarda un uomo. Secondo me la figura umana nello spazio architettonico...chiaramente il rischio...

MONICA:

quindi come metro di misura comunque?

LORENZO:

sì, come metro di misura, anche un po' come caratterizzazione dello spazio, perché sembra deserto questo luogo, sembra un workshop abbandonato, oppure un modellino dell'Ikea.

AIDA:

a quel punto però viene a mancare l'immediatezza, perché comunque tu vedi gli avatar essai che cliccando su di loro...cioè dove devi cliccare per vedere il punto di vista ad altezza umana per girovagare nelle stanze?

MONICA:

beh, comunque devi cliccare sul tastino sotto.

AIDA:

ah già è vero non clicchi sugli avatar.

INTERVIEWER:

quindi avere una visione tu con la visione ad altezza uomo più vedere altre figure?

AIDA:

sì, non sarebbe male, però anche io sono d'accordo sul caratterizzare un pochino in più.

MONICA:

secondo me non è così essenziale.

AIDA:

sono d'accordo, però non so come potrebbe essere l'effetto.

LORENZO:

potrebbe venire una cosa tipo museo etnografico.

INTERVIEWER:

ci sono anche pochi dati a livello antropologico per poter caratterizzare una figura umana.

MONICA:

se ci fossero più dati anche sul numero degli abitanti allora farei una caratterizzazione maggiore, ma così fondamentalmente è una tua interpretazione.

MARICA:

scusate ma secondo voi quindi le figure umane dovrebbero rimanere fisse, oppure sempre col tastino eliminarle? Perché secondo me il rischio di mettere tanta roba dentro...

LORENZO:

no, le puoi togliere. Tu entri un ambiente, poi se vuoi navigare con un dettaglio maggiore...

MARICA:

ah, ok io questo dicevo.

INTERVIEWER:

nascondere come si possono nascondere adesso quindi?

LORENZO:

sì, io li metterei come si ricostruisce il pithos in altezza, così io ci metterei una figura.

INTERVIEWER:

quindi avere la possibilità di navigare con la visione ad altezza uomo e in più poter vedere figure umane caratterizzate che popolano gli spazi.

MONICA:

secondo me questo non è essenziale, l'importante è vedere ad altezza uomo.

LORENZO:

sì, però l'uomo dentro allo spazio ti dà la misura dell'avvicinarsi e dell'allontanarsi. Ma poi davvero questa vuotezza di un ambiente pieno di gente.

MONICA:

forse piuttosto di dà la misura dello spazio in sé, cioè vedi una persona oltre l'oggetto e capisci davvero quanto è grosso lo spazio.

AIDA:

sì, hai la proporzione che altrimenti non hai.

INTERVIEWER:

personalmente sono per i modelli popolati, perché trovi stranianti i modelli ricostruiti deserti.

AIDA:

sì, sembrano quasi queste isole di niente.

LORENZO:

però il problema è che se non li metti caratterizzati

INTERVIEWER:

c'è anche l'opzione di usare figure non anatomicamente realistiche, ma più a disegno. Ci sono varie scuole di pensiero su questo, personalmente quello mi fa titubare sull'anatomicamente caratterizzato è la scarsità di dati che abbiamo.

GRETA:

io vorrei far notare che oltre a non avere abbastanza dati per caratterizzare anatomicamente le persone, non ne abbiamo neanche per caratterizzarne l'aspetto.

INTERVIEWER:

l'abbigliamento infatti era il secondo motivo, come li vesto?

MONICA:

esatto.

AIDA:

è vero.

INTERVIEWER:

e a mio parere è più estraniante su una figura anatomicamente caratterizzata che non su una figura disegnata.

GRETA:

secondo me qua è anche una scelta che devi compiere. Puoi fare una scelta di tipo accattivante, ma tu sai che non è filologicamente corretta, oppure puoi rimanere atarassico, non esprimere nessunissimo parere, no?

LORENZO:

secondo me l'atarassia va bene, ma quindi silhouette?

AIDA:

anche l'idea del disegno non è male.

INTERVIEWER:

sì a m' di disegno, come le vedi magari nella ricostruzione, nel disegno di un villaggio paleolitico...

LORENZO:

ma stanno bene quelle dentro al modello?

AIDA:

sicuramente meglio delle silhouette che ci sono adesso, che sono completamente anonime, sembrano quasi delle presenze, dei fantasmi così evanescenti. Non si contestualizzano bene secondo me.

GRETA:

io non ho particolari problemi con le silhouette. Mi danno l'idea che sia un uomo, quindi la presenza umana me la danno, non è assolutamente caratterizzata quindi al massimo mi posso immaginare come fosse, ma nessuno mi sta suggerendo che è in un modo o in altro.

AIDA:

ma perché tu comunque guardi comunque il grado di precisione dell'informazione, dici quello che mi dà è quello che mi serve senza dirmi niente di più, che non avrebbe senso. però se guardi all'impatto emotivo della cosa o all'impressione che quella silhouette ti dà secondo me...

LORENZO:

è un alieno.

AIDA:

esatto. il contesto è troppo realistico rispetto a loro. Ecco è questo dislivello che ti...ovviamente il contesto meno realistico non può essere quindi hai una sola opzione.

INTERVIEWER:

per voi a cui dà un effetto straniante per come sono sviluppati adesso, a parte Lorenzo che ha dato la sua opinione su come dovrebbero essere, come dovrebbero essere secondo voi, quale caratterizzazione e livello di dettaglio dovrebbero avere?

MONICA:

non, io sono d'accordo con Lorenzo, perché un livello di dettaglio non ha senso perché non abbiamo informazioni. Una sagoma o un qualcosa di completamente estraneo, ma un pochino più a tutto tondo rispetto a queste sagomine rende più l'idea ed anche più utile per una visione, come dire, per una comprensione migliore degli spazi.

MARICA:

per me il discorso dell'immagine figura umana è solo legata alla dimensione degli spazi. Mi sta bene il discorso di capire come lavorassero, ma deve essere una mia scelta personale. A me questa cosa di aggiunte che non si sa bene se sono effettivamente quelle non mi sono mai piaciute. Mi sta il bene il discorso di dire 'ok l'ambiente era popolato, metto tot numero di figure' mi va bene ma deve essere una mia scelta se vederle o meno.

GRETA:

io sarei molto più interessata ad un omino che cammina all'interno del workshop, piuttosto che ad un omino caratterizzato. Mi spiego meglio: io come utente del modello me lo posso rigirare come voglio, posso anche volare, ma loro non volevano. Avere uno che mi fa rendere conto che per arrivare, che ne so, ad un WA io devo passare intorno a tutto il resto, oppure per passare da SA I a SA II devo semplicemente passare da una porta e aprirne un'altra, forse è anche più utile e ricostruibile. perché abbiamo i dati per farlo.

LORENZO:

ma tu dici una persona che fa sempre lo stesso gesto?

GRETA:

una persona che magari riesce a muoversi, nel senso se tu la attivi c'è questa opzione che è quella della mobilità dell'omino all'interno del workshop. Tipo gli dici 'omino vai in WAV' e ti rendi conto dei percorsi che può fare per arrivarci.

MONICA:

ma che tu decidi dove farlo andare?

AIDA:

oppure puoi anche stabilire un percorso preciso.

GRETA:

a me piacerebbe.

INTERVIEWER:

ma con la visione in prima persona o vederlo dall'altro?

PARTICIPANTS:

ehhhh...dall'alto.

GRETA:

sarebbero più interessanti entrambe, però dall'alto sarebbe più immediato

AIDA:

sì, esatto. Oppure più che altro per evitare il fatto che magari si saltino passaggi o stanze, c'è già un percorso prestabilito Tu sell l'opzione 'omino muoviti' e lui fa il suo percorso tutto che ti faccia vedere come avvenivano tutti gli spostamenti possibili.

MONICA:

però poter scegliere è decisamente meglio.

AIDA:

sì, però rischi di saltare... tu puoi decidere quando vederlo, non è in loop, puoi vederlo una volta oppure dieci ma in questo modo non rischi di saltare nessun collegamento.

GRETA:

lì secondo me dipende sempre dal tipo di fruizione...

MONICA:

però devi decidere un percorso, quindi dipende anche che informazioni vuoi avere da questa cosa. Se segui un percorso preordinato, devi aspettare che questo faccia tutto il suo percorso...

LORENZO:

allora si potrebbe fare anche questa cosa qui. oltre alla circolazione per esempio, c'è anche la fruibilità degli spazi in termini di persone che ci possono entrare dentro, allora uno potrebbe scegliere l'opzione 'popolami SA I': allora a quel punto tu potresti fare una ricostruzione delle varie attività che si svolgono nei vari ambienti.

MONICA:

questo sarebbe interessante.

INTERVIEWER:

l'idea che avevo avuto era di usare degli avatar alcuni di loro impostati nell'atto di compiere alcune attività, come ad esempio chinate macinare o attingere dai pithoi.

MONICA:

più che altro per capire quanto spazio occupavano svolgendo le attività.

LORENZO:

secondo me questa cosa del movimento e del popolamento mi piace.

INTERVIEWER:

invece per quanto riguarda il processo interpretativo del dato archeologico, ho notato che più o meno tutti voi avete detto che utile, sicuramente per una migliore comprensione dei volumi e degli spazi, magari non tutti concordi sull'utilità per la comprensione di strutture oggetti. Ne vogliamo discutere insieme per mettere a confronto le vostre opinioni?

GRETA:

probabilmente un modello di questo tipo nasce dall'esigenza di interpretare gli spazi e gli oggetti, in realtà chi studia materiali rischia di tralasciare il contesto, che invece è qualcosa di estremamente vario che ti possono aiutare nell'interpretazione dello strumento stesso, per cui vederli collocati è estremamente importante

INTERVIEWER:

per quanto riguarda invece l'utilità nel processo interpretativo, mi pare di aver capito, almeno per alcuni di voi, che sia visto come un momento finale, non come uno step che è parte integrante dell'intero processo.

LORENZO:

finale nel senso?

INTERVIEWER:

di verifica dell'interpretazione fatta.

LORENZO:

il modello secondo me, nasce dall'analisi integrata di dati di natura differente, ma è ovviamente il frutto di un'interpretazione di questi dati, quindi il modello è un terzo step, è la visualizzazione dell'interpretazione, quindi viene dopo.

AIDA:

però secondo me è anche vero che è uno step che viene dopo, che è un ultimo passo, ma è anche il primo, nel senso che tu vedi il modello, ne parli e da lì scaturiscono altre ipotesi. Quindi è l'ultimo step, ma anche il primo di un secondo livello interpretativo.

MONICA:

però è il punto di partenza.

AIDA:

sì, è sul punto di arrivo ma anche di partenza allo stesso tempo.

GRETA:

sì, perché come ogni interpretazione, c'è l'interpretazione di base, che sono ad esempio gli alzati e le strutture, e su un secondo livello che si basa magari sulla mobilità. Sì, penso che tutti la vediamo così il modello ti può sicuramente aiutare per questo secondo livello di interpretazione, ovviamente il primo è quello che è strettamente più connesso con il dato archeologico, è impossibile da far passare attraverso il modello perché è esso stesso che costituisce il modello.

MONICA:

sì, ma infatti tu parti già dà un'interpretazione, quello ti serve in più, cioè quindi tu parti già dal modello, ce l'hai già ricostruito con i tuoi oggetti eccetera, ti serve per andare oltre.

INTERVIEWER:

faccio l'ultima domanda e mi collego al concetto della narrazione. Ho notato che tutti voi non siete stati molto propensi all'idea dello storytelling, quindi della fruizione guidata attraverso un percorso narrativo. Ad esempio, alcuni di voi hanno posto come obiezione che potrebbe risultare forzato e impedire la libera fruizione del modello. Siete tutti d'accordo sì questo concetto o avete altri punti di vista ed opinioni?

MONICA:

io la vedo come un'imposizione, decidi tu il punto di vista. Ma poi oltretutto come fai a fare uno storytelling su un contesto che fondamentalmente unitario.

AIDA:

no, è limitante perché deciderebbe lui che domande porti, quali cose evidenziare, perché ovviamente se tu hai quel filone narrativo ti concentri su quelli, quindi hai meno fantasia da un certo punto di vista. Fai quel tipo di domande perché ti viene in mente

quell'argomento. Almeno per come la vedo io, che già di mio non ho molta fantasia, avere un percorso già stabilito mi inibirebbe parecchio su come guardare il modello.

MONICA:

no, è che secondo me si ricollega di nuovo al fruitore, nel senso il fruitore x che non sa niente del contesto eccetera, magari lo storytelling gli può anche servire perché non sa dove andare a guardare e rimane tutto un po' sul vago, mentre seguire un filone preciso fa sì che tu ti avvicini di più.

LORENZO:

secondo me se il modello è il complesso artigianale lo storytelling può essere banalmente il titolo 'a textile workshop in bronze age Cyprus'.

GRETA:

sì, non ho capito con lo storytelling cosa volete dire.

MONICA:

un percorso guidato.

GRETA:

ah, un percorso guidato. No, perché stiamo già raccontando qualcosa. Ah, no quello sì. da un punto di vista dello specialista è la cosa più deleteria che ti possa capitare.

AIDA:

sì, esatto. Che poi io non ero d'accordo sullo storytelling come unica opzione. Se poi fosse un'aggiunta dopo che io mi sono girata il sito, ho quest'opzione che è anche un po' chiarificatrice se vogliamo allora sì, ma in sostituzione del mio navigare a modo mio nel modello no.

Second Focus Group August 2017

Questions

Q1. Did the interaction with the 3D model alter your perception of the site) If so, to what extent?

Q2. Has the interaction with the 3D model been affecting your interpretation of archaeological evidence?

Themes

1. ACCESS AND CIRCULATION WITHIN BUILDINGS:

Discussion around how the interaction with the 3D model improved participants' understanding of access control and people's movements within the workshop complex.

2. USE OF SPACES:

Discussion around how the interaction with the 3D model improved participants' understanding of the different use of open and closed spaces within the workshop complex.

3. EMBODIMENT:

Embodiment, the process in which the body, and its spatial and material relation with the environment, influences mind, thinking and cognitive processes (Lakoff and Johnson 1999; Clark 2003; Malafouris 2004).

Theme 1

Reference 1

GRETA:

Su di me ha avuto un impatto molto forte e devo dire che nel corso del mio percorso di ricerca quest'anno mi sono sempre posta il problema, e non solo ad Erimi ma anche in altri posti, degli spazi e della viabilità e della circolazione tra gli spazi, cosa che prima mi ponevo un po' meno e che il modello sicuramente mi ha aiutato a fare

Reference 2

LORENZO:

a mio modo di vedere influisce in modo notevole, perché chiaramente l'impatto visivo dell'alzato, che solo il modello può fornire, influenza naturalmente la tua percezione dello spazio fisico in cui ti muovi e quindi uno spazio che è transitabile, perché nell'azione di scavo noi diciamo attraversiamo i muri, facciamo questa azione costante di attraversare gli spazi...nel mio modo di vedere li attraversavo con maggiore prudenza, mi rendevo conto di essere in un pieno e non in un vuoto, proprio pensando all'immagine che il modello ci ha offerto, quindi secondo me è molto utile in questo senso... nella pratica appunto di camminare su un base di una unit è molto meno passerella ed è molto più spazio solido rispetto a come me lo figuravo prima. Il vuoto e il pieno è la dicotomia che secondo me è più influenzata dal modello nella nostra percezione dello spazio.

Reference 3

MARTA:

tra l'altro un esempio di cui discutevamo qualche giorno fa, guardando il modello

abbiamo cominciato a parlare della strada, perché se tu non hai una visione concreta di quello che poteva essere il fronte dei vari building, effettivamente ti figuri meno quello che poteva essere il passaggio esterno e infatti appunto guardando il modello abbiamo cominciato a dire: " ah guarda qui poteva passare la strada, la strada poteva avere questa ampiezza, sembra esserci un fronte continuo..." e abbiamo discusso anche sul ruolo di WAV che era una parte probabilmente semichiusa e... quindi, ecco, aiuta sicuramente nel ricostruire tanti elementi che poi insieme contribuiscono ad arricchire il quadro di quello che riusciamo ad ottenere e pensare solo guardando la pianta e basta. La ricostruzione in questa ti amplifica enormemente, ti spinge anche a concepire lo spazio come qualcosa di più concreto, c'è un accesso preciso. lo spazio interno è quello, l'utilizzo degli spazi è quello come si diceva e quindi è molto più chiaro.

Reference 4

AIDA:

sì a livello di esperienza, uno delle prime cose che fai quando torni qui è figurarti il modello, cosa che prima non succedeva. Un'altra cosa anche mi è successa e che prima non mi succedeva è di immaginarmi realmente della gente lì dentro, come se il tutto prendesse vita, mentre prima era una cosa più asettica. Mentre invece mi sono trovata a farmi domande tipo: "ma quanta gente poteva starci realmente qua dentro, in quali posizioni, stavano vicino ai muri...", cioè delle domande che prima non mi facevo. Purtroppo, quello che mi manca lavorando alle tombe è l'esperienza dell'interpretazione sul campo perché non c'è.

Theme 2

Reference 1

MARTA:

penso che per noi ha un impatto molto importante, ma è molto importante secondo me anche per creare un anello di congiunzione tra noi che lo abbiamo scavato e le persone che non conoscono il sito, perché effettivamente la modalità in cui il sito è stato costruito a volte non rende chiara quella che poteva essere la struttura in sé o l'organizzazione dello spazio. Anche per me nel corso dell'ultimo anno quando ho presentato il sito o nella tesi si è parlato del modello ed effettivamente è un validissimo mezzo per aiutare le persone a concepire meglio e ad avere un'idea più chiara di quella che era l'area. Personalmente, ovviamente avendone parlato tanto con te per me è stato graduale avendo discusso con te di molte cose. Una cosa che mi ha colpito tanto, che ha attirato la mia attenzione, oltre ovviamente alla questione della circolazione interna che

comunque è qualcosa a cui avevo sempre pensato, è la questione della luce che secondo me è fondamentale, perché abbiamo queste aree così grandi che dovevano essere illuminate in un qualche modo; avere la possibilità di visualizzare i punti luce è veramente molto utile per capire quali sono gli spazi più illuminati all'interno, quali sono gli spazi meno illuminati e quindi capire la diversificazione anche nelle attività...ed è per questo che anche l'angolo NE è l'angolo dello storage perché probabilmente è l'angolo meno illuminato visto che la porta si trova esattamente, se prendiamo il caso di SAI, dall'altra parte. Anche mettendo un lucernario io penso che comunque la luce principale entri dalla porta...quindi ecco io penso che questo (riferito al modello) ha aiutato tantissimo anche nello sviluppare ancora di più l'idea, la concezione dell'utilizzo dello spazio interno nelle stanze.

Reference 2

GRETA:

sì a me ha aiutato tanto a riflettere sulla dicotomia chiuso/aperto e perché alcune attività, che fra l'altro di base dovevano essere più o meno le stesse perché abbiamo un basin al chiuso ad esempio in SAI e un sacco di basins all'aperto. Ora togliendo le varie questioni di odore e non-odore, io pensavo in realtà se veramente come penso che sia, noi interpretiamo SAI come il luogo della tintura, questa fase molto particolare che è veramente la chiave del procedimento, che è veramente ciò che è il valore aggiunto del prodotto finale, è logico che stia al chiuso, ben chiuso da una porta con cardini; mentre quando invece si lava e ci sono attività che oltretutto coinvolgono anche più persone, mentre ovviamente quando vai a tingere basta una persona, è logico che invece stiano all'aperto. Quindi è bello ragionare sugli spazi chiusi e aperti perché in realtà sottintendono non solo una differenza tra attività, quindi una che vuoi tenere chiusa non solo perché ti serve ma perché proprio la vuoi tenere chiusa e invece altre che possono essere esposte, ma proprio perché appunto sottintende in realtà un passo forse successivo che è appunto di differenziazione dei ruoli.

Reference 3

LORENZO:

a mio modo di vedere influisce in modo notevole, perché chiaramente l'impatto visivo dell'alzato, che solo il modello può fornire, influenza naturalmente la tua percezione dello spazio fisico in cui ti muovi e quindi uno spazio che è transitabile, perché nell'azione di scavo noi diciamo attraversiamo i muri, facciamo questa azione costante di attraversare gli spazi...nel mio modo di vedere li attraversavo con maggiore prudenza,

mi rendevo conto di essere in un pieno e non in un vuoto, proprio pensando all'immagine che il modello ci ha offerto, quindi secondo me è molto utile in questo senso... nella pratica appunto di camminare su un base di una unit è molto meno passerella ed è molto più spazio solido rispetto a come me lo figuravo prima. Il vuoto e il pieno è la dicotomia che secondo me è più influenzata dal modello nella nostra percezione dello spazio.

Reference 4

LORENZO:

sì, poi un'altra cosa che ha fatto il modello che è molto importante, è la percezione della luce. Questa è un'altra cosa che per me è stata exciting, perché dentro gli SA a me è capitato parecchie volte di mettermi in un angolino e pensare: "qui era un buio pesto" e non ci avevo mai pensato prima.

Reference 5

MARTA:

ma infatti quello che dicevo, anche il fatto di mettere la parte dello storage nell'angolo che probabilmente era il più buio, perché tanto alla fine ci dovevi solo mettere roba, mentre appunto il focolare stesso si trova nell'angolo che probabilmente prendendo il lucernaio e prendendo la porta veniva maggiormente illuminato, al di là dell'area di passaggio che comunque restava vuota, però appunto è interessante, Un'altra cosa per me è anche una maggiore concezione dello spazio chiuso e spazio aperto, dello spazio aperto come spazio più comunitario, mentre una, se vogliamo, selezione all'interno delle aree (chiuso) con un gruppo di persone sicuramente più definito, più specializzato...questo è quello che mi sono figurata io.

Theme 3

Reference 1

LORENZO:

secondo me c'è anche proprio una forma, questo nella percezione di ognuno di noi, di maggior rispetto dello spazio antico, per cui a me per esempio viene molto di più da passare dalla soglia di quanto mi succedesse prima e la mia percezione è motivata unicamente dal fatto che visto il modello, perché prima era un'immagine che non producevo nella mia mente, quindi sì per me questo è molto forte.

Reference 2

GRETA:

penso che in un certo senso lo trasporti leggermente più dal piano della razionalità a

quello un pochettino più del...non so come dire, lo rende più personale nel senso che se tu passi dalla porta...più experience ecco che rational.

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Transcripts

INTERVIEWER:

cominciamo il focus group. In realtà sarà abbastanza non-strutturato, nel senso che io ho solo una domanda che voglio farvi, una questione che voglio affrontare con voi poi vedremo se ci sono altri aspetti che vogliamo approfondire. Quello che volevo sapere da voi è se l'interazione con il modello ha in un qualche modo alterato la vostra percezione del sito e se ha in un qualche modo influito, cambiato anche l'approccio interpretativo che avete quando siete sul sito. Se sì, in qualche modo?

GRETA:

Su di me ha avuto un impatto molto forte e devo dire che nel corso del mio percorso di ricerca quest'anno mi sono sempre posta il problema, e non solo ad Erimi ma anche in altri posti, degli spazi e della viabilità e della circolazione tra gli spazi, cosa che prima mi ponevo un po' meno e che il modello sicuramente mi ha aiutato a fare. Il mio approccio alla ricerca e alcune domande archeologiche che mi faccio quando mi approccio ad un certo tipo di problema sono state sicuramente influenzate, io penso positivamente, dalla visione del modello, che mi ha aiutata sicuramente, e devo dire che non ho potuto fare a meno quando ho presentato ad una conferenza a Varsavia di inserire il tuo modello, sicuramente un supporto fondamentale per l'interpretazione.

MARTA:

penso che per noi ha un impatto molto importante, ma è molto importante secondo me anche per creare un anello di congiunzione tra noi che lo abbiamo scavato e le persone che non conoscono il sito, perché effettivamente la modalità in cui il sito è sito è costruito a volte non rende chiara quella che poteva essere la struttura in sé o l'organizzazione dello spazio. Anche per me nel corso dell'ultimo anno quando ho presentato il sito o nella tesi si è parlato del modello ed effettivamente è un validissimo mezzo per aiutare le persone a concepire meglio e ad avere un'idea più chiara di quella che era l'area. Personalmente, ovviamente avendone parlato tanto con te per me è stato graduale avendo discusso con te di molte cose. Una cosa che mi colpito tanto, che ha attirato la mia attenzione, oltre ovviamente alla questione della circolazione interna che comunque è qualcosa a cui avevo sempre pensato, è la questione della luce che secondo me è fondamentale, perché abbiamo queste aree così grandi che dovevano essere illuminate in un qualche modo; avere la possibilità di visualizzare i punti luce è veramente molto utile per capire quali sono gli spazi più illuminati all'interno, quali sono gli spazi meno illuminati e quindi capire la diversificazione anche nelle attività...ed

è per questo che anche l'angolo NE è l'angolo dello storage perché probabilmente è l'angolo meno illuminato visto che la porta si trova esattamente, se prendiamo il caso di SAI, dall'altra parte. Anche mettendo un lucernario io penso che comunque la luce principale entri dalla porta...quindi ecco io penso che questo (riferito al modello) ha aiutato tantissimo anche nello sviluppare ancora di più l'idea, la concezione dell'utilizzo dello spazio interno nelle stanze.

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INTERVIEWER:

scusate interrompo un attimo, si unisce a noi Lorenzo. La questione che stiamo discutendo adesso, ho posto la seguente domanda: se e se sì in quale modo, l'interazione con il modello ha alterato non solo la vostra percezione dell'area A, ma se ha in qualche modo alterato anche il vostro approccio interpretativo quotidiano sul campo, nel quotidiano dello scavo.

LORENZO:

l'approccio interpretativo dell'architettura, della stratigrafia o dell'attività?

INTERVIEWER:

quando nel corso di scavo, in quei momenti in cui ci si ferma a ragionare su quello che si sta facendo, se in qualche modo l'interazione con il modello ha cambiato il modo in cui vi approcciate all'interpretazione anche quella estemporanea del lavoro sul campo.

LORENZO:

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MARTA:

tra l'altro un esempio di cui discutevamo qualche giorno fa, guardando il modello abbiamo cominciato a parlare della strada, perché se tu non hai una visione concreta di quello che poteva essere il fronte dei vari building, effettivamente ti figuri meno quello che poteva essere il passaggio esterno e infatti appunto guardando il modello abbiamo cominciato a dire: " ah guarda qui poteva passare la strada, la strada poteva avere questa ampiezza, sembra esserci un fronte continuo..." e abbiamo discusso anche sul ruolo di WAV che era una parte probabilmente semichiusa e... quindi, ecco, aiuta sicuramente nel ricostruire tanti elementi che poi insieme contribuiscono ad arricchire il quadro di quello che riusciamo ad ottenere e pensare solo guardando la pianta e basta. La ricostruzione in questa ti amplifica enormemente, ti spinge anche a concepire lo spazio come qualcosa di più concreto, c'è un accesso preciso. lo spazio interno è quello, l'utilizzo degli spazi è quello come si diceva e quindi è molto più chiaro.

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GRETA:

penso che in un certo senso lo trasporti leggermente più dal piano della razionalità a quello un pochettino più del...non so come dire, lo rende più personale nel senso che se

tu passi dalla porta...più experience ecco che rational.

LORENZO:

sì, poi un'altra cosa che ha fatto il modello che è molto importante, è la percezione della luce. Questa è un'altra cosa che per me è stata exciting, perché dentro gli SA a me è capitato parecchie volte di mettermi in un angolino e pensare: "qui era un buio pesto" e non ci avevo mai pensato prima.

MARTA:

ma infatti quello che dicevo, anche il fatto di mettere la parte dello storage nell'angolo che probabilmente era il più buio, perché tanto alla fine ci dovevi solo mettere roba, mentre appunto il focolare stesso si trova nell'angolo che probabilmente prendendo il lucernario e prendendo la porta veniva maggiormente illuminato, al di là dell'area di passaggio che comunque restava vuota, però appunto è interessante, Un'altra cosa per me è anche una maggiore concezione dello spazio chiuso e spazio aperto, dello spazio aperto come spazio più comunitario, mentre una, se vogliamo, selezione all'interno delle aree (chiuso) con un gruppo di persone sicuramente più definito, più specializzato...questo è quello che mi sono figurata io.

INTERVIEWER:

Non so se c'è qualcuno che vuole aggiungere qualcosa...

AIDA:

sì a livello di esperienza, uno delle prime cose che fai quando torni qui è figurarti il modello, cosa che prima non succedeva. Un'altra cosa anche mi è successa e che prima non mi succedeva è di immaginarmi realmente della gente lì dentro, come se il tutto prendesse vita, mentre prima era una cosa più asettica. Mentre invece mi sono trovata a farmi domande tipo: "ma quanta gente poteva starci realmente qua dentro, in quali posizioni, stavano vicino ai muri...", cioè delle domande che prima non mi facevo. Purtroppo, quello che mi manca lavorando alle tombe è l'esperienza dell'interpretazione sul campo perché non c'è.

LORENZO:

faccio una piccola parentesi. Hai detto una cosa che mi hai ricordato, i ragionamenti circa la quantità, il movimento di solito vengono fatti dal punto più alto quando il lift arriva in alto...vi siete accorti che ne parliamo sempre quando siamo là, perché quello era, finché non c'era il tuo modello, il nostro elevato in qualche modo e quindi il punto

di vista differente. Perché quando tu sei giù e cammini nella tua area di scavo è più forte la delimitazione del quadrato, della tua area di scavo.

GRETA:

il modello riesce a congiungere le due visioni, perché te ne dà una dall'alto e quindi ti alza il punto di vista, ma contemporaneamente ti fa rendere conto dell'alzato come se stessi camminando perché in un certo senso ti immedesimi nell'omino, quindi riesce forse un po' a congiungere le due visioni.

LORENZO:

questo proprio dal punto di vista della percezione dell'archeologo, alla Hodder diciamo, è molto significativo il fatto che questo tipo di ragionamento che stiamo facendo e che stiamo sviluppando, adesso con il modello abbiamo uno strumento per farlo, in realtà è semplicemente lo spostamento del tuo punto di vista da archeologo...se tu lo sposti muti anche la domanda che ti fa, perché cambia lo spazio percepito e quindi anche il tuo orizzonte.

Information sheet

Title of the study

Digital visualisation and interpretation of archaeological sites. A case study from Bronze Age Cyprus

Researcher

Francesca Dolcetti, PhD Researcher, Archaeology Department, University of York, York. North Yorkshire. YO1 7EP. Mobile phone: 07768402306; email: fd648@york.ac.uk.

Description

This research is focused on evaluating the impact that 3D modelling has upon archaeological research, academic and public dissemination. The main aim is to understand how different audiences (experts, non-experts, students) perceive digital visualisation of archaeological sites, interact and learn through them.

This study is based upon data from *Erimi-Laonin tou Porakou* (2200-1600 Before Christ), a Middle Bronze Age site located in the southern coast of Cyprus

I will present to different user groups, composed of specialists and non-specialists, an interactive 3D model that shows the site at its actual state and its hypothetical reconstruction, then I will collect and analyse their feedback using both qualitative (interviews) and quantitative (questionnaires) methods.

Audience feedback will be used to evaluate the efficacy of 3D models as learning and educational tools and improve their comprehensibility in order to identify the best way to present digital visualisations to different audiences.

Methods

Twenty-minute interviews for the qualitative analysis; twenty-minute questionnaires for the quantitative analysis. Participants will be asked to answer questions while viewing and interacting with a 3D model.

Confidentiality and anonymity

Participants may withdraw from the study and withdraw their consent at any stage up until the date of submission of the thesis (30 September 2019). All data will be treated anonymously and stored in a secure place. Nothing will be used without the consent of the participants. All quotes and responses obtained from participants will be anonymised in any publication resulting from the study.

Result of the study

A written report with the preliminary results of the study will be available for participants to read. If requested, participants will be provided with an electronic copy of this report.

If you have any questions, please do not hesitate to contact me (fd648@york.ac.uk) or my PhD supervisor, Dr Sara Perry (sara.perry@york.ac.uk).

Consent form

Digital visualisation and interpretation of archaeological sites. A case study from Bronze Age Cyprus: Participant's Consent Form

Francesca Dolcetti, PhD Researcher, Archaeology Department, University of York.

Mobile phone: 07768402306; email: fd648@york.ac.uk.

Please read the points below, check the boxes to acknowledge agreement, sign and return the form to the researcher.

- I agree to participate, by being interviewed, in this research project.
- I have read the participant information sheet for the project.
- I understand that my personal data will be treated anonymously.
- I understand that my quotes will be anonymised so I cannot be identified from the report and any following publication.

- I understand that I am free to withdraw from the interview at any time.
- I give consent for the text of the interview to be used and quoted in research and publications produced after this study.

(in case of face-to face interview)

- I give consent for the interview to be audio-recorded.

NAME:

SIGNATURE:

Appendix C

Survey February 2017 - January 2018

Questions

- Q1. What is your gender?
- Q2. What is your age?
- Q3. In what field are you employed?
- Q4. Do you have any previous knowledge and/or experience with the application of 3D modelling in archaeology?
- Q5. If yes, how often do you use 3D archaeological visualisations for research/work?
(1 never-7 very frequently)
- Q6. The model improved my understanding of the site overall (1 strongly disagree-7 strongly agree)
- Q7. The text descriptions improved my understanding of the site overall (1 strongly disagree-7 strongly agree)
- Q8. The model improved my understanding of activities carried out within the Workshop Complex (1 strongly disagree-7 strongly agree)
- Q9. The text descriptions improved my understanding of activities carried out within the Workshop Complex (1 strongly disagree-7 strongly agree)
- Q10. The possibility to visualise both phases of occupation improved my understanding
of the chronological evolution of the Workshop Complex (1 strongly disagree-7 strongly agree)
- Q11. The text descriptions improved my understanding of both phases of occupation
of
the Workshop Complex (1 strongly disagree-7 strongly agree)
- Q12. The ability to see avatars improved my understanding of the model overall (1 strongly disagree-7 strongly agree)
- Q13. The ability to see avatars improved my understanding of the use of spaces (1 strongly disagree-7 strongly agree)
- Q14. Avatars provided a sense of people living in the space (1 strongly disagree-7 strongly agree)
- Q15. appreciated the possibility to navigate the model through a first-person perspective (1 strongly disagree-7 strongly agree)

- Q16. The possibility to navigate the model through a first-person perspective improved my understanding of spaces (1 strongly disagree-7 strongly agree)
- Q17. The text descriptions were clear and comprehensive (1 strongly disagree-7 strongly agree)
- Q18. If not, please explain why
- Q19. It was easy to interact with the model (1 strongly disagree-7 strongly agree)
- Q20. If not, please explain which elements made the interaction hard to manage
- Q21. How would you evaluate this experience? (1 not at all-7 extremely)
- It was engaging
 - I felt bored
 - It was stimulating
 - It was a waste of time
 - It was useful for learning
 - It evoked a sense of another culture
 - It fostered curiosity in learning more about the site and its history
 - It fostered curiosity in learning about Cypriot history and culture.
- Q22. What do you remember about this experience? Please list at least 3 things
- Q23. What did you like about this experience?
- Q24. What didn't you like about this experience?
- Q25. Other comments

Themes

1. COMPREHENSIBILITY:

Users' opinion on the clarity and comprehensiveness of text description and level of information provided.

2. USABILITY:

Users' opinion on UI's features and usability.

1. IMMERSIVITY:

Users' opinion on navigation, interaction modalities, avatars and first-person perspective.

2. ENGAGEMENT:

Users' comments on their personal experience interacting with the UI, what they liked, disliked, learned or remembered.

Theme 1

Experts

Reference 1

The text is very much focussed on prehistory archaeologists. It gives too much archaeological detail on one hand (it's not a publication), but very little interpretation on the other hand (I did not have a sense of presence). So do try to make the text more accessible to a wider audience (of specialists),

Reference 2

The text descriptions were very descriptive, focusing on the structure and layout of the building, or form of the object. This actually tells me very little more than what I can already see in the model! From a public-engagement perspective, the lack of use-examples and additional graphical detail would mean many people would struggle to engage.

Reference 3

I personally found that there was a lot to read that was separated from the model itself which meant I was having to move out of the model to then look at the text and then try relate that to what I was seeing in the model. IE: the text itself was clear, but a little removed from the model.

Reference 4

Text was clear but I would have liked more information about the material and the locations of recovery.

Reference 5

I was put off by large blocks of text. The text also uses terms I'm not necessarily familiar with.

Reference 6

Comprehensive yes, but often a bit wordy. Shorter English would improve readability.

Reference 7

The text descriptions were comprehensive, but quite full of "academic-ese". They could be made clearer by simplifying the language. So much of this also depends on the audience of this model as well. The language is too heavily academic for a lay audience. Even if the intended audience is professional archaeologists, it's still quite thick academic language. Something as simple as paragraph breaks and better connecting the

text details to the visual the viewer is interacting with would have improved the clarity of the text.

Reference 8

They were too academic and tiring.

Reference 9

about; wanting there to be pictures alongside the text when clicking features (not just creative visualisations, but photographs;

Reference 10

And finally, I thought the text was quite dense. The model offers such a great opportunity for exploration and explanation, and I think simplifying the text would go a long way to making the model more useful, even for professionals

Reference 11

The language in the text is unnecessarily dense and academic. I didn't like that I couldn't identify the intended audience - the text as written seems almost exclusively useful for an academic audience, due to the cumbersome and profession-specific language. For example, on the "Workshop" tab, the descriptions are laden with archaeology-specific terminology. A member of the public, even an educated member of the public, would likely find this text difficult and uninteresting. An archaeological professional might even find the language unnecessarily complicated and untethered. By "untethered", I mean the text almost seems written without relation to the model; it hangs out by itself without referencing the image to the right. An example of how the text and model could connect much better would be a simple change of phrasing; for example, "The model to your right depicts the Workshop Complex at on the top of the hill of the Erimi-Laonin tou Porakou archaeological site. The space you see here is functionally organized into 11 units (as currently excavated)... As you can see from the model, there are five open working spaces characterized... etc." When you have text that is clearly meant to describe a model that a person is looking at on the same website, it makes more sense for the text to explicitly connect to the model. As it stands now, the text is overly dense and feels disconnected from what the viewer is seeing and interacting with.

Reference 12

I am not sure that the term MATERIALS (show materials) for the selection of the finds is the easiest one for the user.

Reference 13

I have a personal hang up about wanting to know the role of the archaeologist / level of certainty in the depictions, so it would be great to have a layer which went into that. Also codifying some of the text to be visual, or presented as part of the model rather than disjointed I think would be a little more cohesive.

Reference 14

Incorporating the wordy-stuff into codified visuals would really help with the design and the ability to understand and interrogate it from all perspectives without the break in having to move out of the model to read.

Reference 15

Expanding the information points to include real-world photographs of objects, artists impressions of use, etc, would help the public understand that space much better

Reference 16

think this shows real promise as an educational tool. I think to use this you would already have to have an interest in the subject or area beforehand due to the high amounts of information.

Reference 17

Also the texts are too academic, long boring. There could have been sound instead of texts.

Non-experts

Reference 1

some terminology and references were unfamiliar

Reference 2

The lack of explanation of the key words for those who are not archaeologists.

Reference 3

I would've appreciated more information and descriptions

Reference 4

It would be nice to add some more information or images about the use of the rooms and the objects inside, showing how the people worked inside it.

Students

Reference 1

more user friendly summaries could have been included.

Theme 2

Experts

Reference 1

From a public-engagement perspective, the lack of use-examples and additional graphical detail would mean many people would struggle to engage.

Reference 2

personally found that there was a lot to read that was separated from the model itself which meant I was having to move out of the model to then look at the text and then try to relate that to what I was seeing in the model. IE: the text itself was clear, but a little removed from the model.

Reference 3

The text descriptions were comprehensive, but quite full of "academic-ese". They could be made clearer by simplifying the language. So much of this also depends on the audience of this model as well. The language is too heavily academic for a lay audience. Even if the intended audience is professional archaeologists, it's still quite thick academic language. Something as simple as paragraph breaks and better connecting the text details to the visual the viewer is interacting with would have improved the clarity of the text.

Reference 4

no walking around with arrow keys, camera view points not at human height

Reference 5

the right click with inverted camera was a little cumbersome

Reference 6

I'm bad with mouse controls, and felt like using the arrow keys was inelegant for movement. It left me slightly disoriented and worried that I was missing content.

Reference 7

The click-areas were good, allowing a simple click-and-learn interface, but the camera navigation was difficult (even for experienced gamers!) - very few non-tech-literate people would find this intuitive.

Reference 8

For example, I didn't know exactly what would be best to click on next - and the lack of direction was a bit more confusing rather than liberating. I think I would have appreciated the option of a "story" I could navigate as well as the option of free

exploration. By "story" I mean a recommended path of exploration, perhaps offered by the tutorial

Reference 9

navigation was very difficult and cumbersome

Reference 10

the visualisation sticks too much to the archaeological excavation, and gives very little visualisation/interpretation of the real spaces as you think they were 2. This application is for specialists, not at all for the wider public, nevertheless, layer your information, provide links to external sources, for additional information

Reference 11

sun/light control

Reference 12

The different phases of the site and how the latter has changed over time;

Reference 13

How the workshop's rooms/spaces were affected by the light exposure during the day.

Reference 14

Seeing the change in structure over time.

Reference 15

difficulty navigating from first-person camera

Reference 16

The difference between the amount of objects in Phase A compared to Phase B which surprised me

Reference 17

model; Clear descriptions

Reference 18

the sunlight controls,

Reference 19

the two phases

Reference 20

the different phases

Reference 21

1. I remember thinking that this specific model could be an excellent tool for an archaeologist standing at a podium and verbally walking a professional audience through the stratigraphy / findings about the site. 2. I also remember thinking that the model is far too cumbersome for a lay audience, that I hope the intended audience of this model is purely for professional archaeologists and students of archaeology. 3. And finally, I thought the text was quite dense. The model offers such a great opportunity for exploration and explanation, and I think simplifying the text would go a long way to making the model more useful, even for professionals

Reference 22

sunlight control, the phase shifts,

Reference 23

I really liked that you could view both phases of the site history, and that it felt seamless to move between them.

Reference 24

to switch between phases.

Reference 25

Also liked the way you can alter the sun position to see texture.

Reference 26

the visualization of the two phases

Reference 27

I am personally very attracted to visual representations of archaeological sites. I particularly like the idea of this model as a tool for archaeologists - as it stands now, it seems more useful as a supplement to a lecture, conference session, or lesson.

Reference 28

I was interested about the relationships between things and the feeling of lived space but having to jolt out to read text, and move between fixed avatar points meant breaking that connection and that feeling of embeddedness in the space frequently.

Reference 29

I would have liked to see the site built into the landscape

Reference 30

Difficult first-person navigation

Reference 31

Nothing, although maybe an improvement could be to see the landscape around the site (e.g. so you could look out of a door to see your surroundings). The text describes the area well, but it would be good to see the river/sea in relation to the site (I appreciate this would take a lot of work!).

Reference 32

Probably the position of the avatar (when you use the avatar camera) it's not clear. Maybe have a location map would be useful

Reference 33

By "untethered", I mean the text almost seems written without relation to the model; it hangs out by itself without referencing the image to the right. An example of how the text and model could connect much better would be a simple change of phrasing; for example, "The model to your right depicts the Workshop Complex at on the top of the hill of the Erimi-Laonin tou Porakou archaeological site. The space you see here is functionally organized into 11 units (as currently excavated). As you can see from the model, there are five open working spaces characterized... etc." When you have text that is clearly meant to describe a model that a person is looking at on the same website, it makes more sense for the text to explicitly connect to the model. As it stands now, the text is overly dense and feels disconnected from what the viewer is seeing and interacting with.

Reference 34

issues with WebGL. A stand-alone option would be nice

Reference 35

I think it was difficult to control the model which made exploration of it frustrating

Reference 36

To improve the navigation in the different room/spaces of the workshop I would create bounding boxes for the walls.

Reference 37

It is very difficult to understand where you are, when you move between the rooms/spaces. I would suggest to create a 2D map that allows to select the rooms/spaces favouring the 'teleportation' from one room/space to the others.

Reference 38

Also codifying some of the text to be visual, or presented as part of the model rather than disjointed I think would be a little more cohesive.

Reference 39

Incorporating the wordy-stuff into codified visuals would really help with the design and the ability to understand and interrogate it from all perspectives without the break in having to move out of the model to read.

Reference 40

Overall I think this approach to present archaeological sites has great advantages. However, the model/interface here is very much geared to the academic researcher - there is very little to engage the non-archaeologically-literate. Expanding the information points to include real-world photographs of objects, artists' impressions of use, etc, would help the public understand that space much better.

Reference 41

I think this shows real promise as an educational tool. I think to use this you would already have to have an interest in the subject or area beforehand due to the high amounts of information.

Non-experts**Reference 1**

being able to change the light (time of day)

Reference 2

that the materials were only visible in phase A

Reference 3

The affect of the sun throughout the day

Reference 4

their use and the difference between the two phases

Reference 5

found the combo of text and interactive map to be a great way to learn

Reference 6

the lighting and

Reference 7

that I wasn't entirely sure which avatar's perspective I was viewing from. Is there a way to add, perhaps, a small inset map with an indication of which avatar's "eyes" are being used and which direction it is facing?

Reference 8

also not being able to see the view over the countryside to set the site in the landscape

Reference 9

I wanted more scope and surrounding view.

Reference 10

The avatars were good but it would have been useful to number them otherwise you just jumped from room to room

Students**Reference 1**

The information about the hotspots.

Reference 2

information about the site.

Reference 3

being impressed with the sun/light control, but then I struggled to see the interpretive value, as it didn't seem to affect many of the spaces

Reference 4

differences between phase A and phase B

Reference 5

The potential it contains. Use in early years education would give younger children a chance to see that history can be 'experienced' in a sense.

Reference 6

the view of both the phases

Reference 7

the inclusion of phase visualization

Reference 8

day-night cycles

Reference 9

The use of modelling like this alongside the interpretive data could be used to great effect in early education to give children a more 'hands-on' approach to history without having to resort to logistically difficult (albeit fun) groundwork. Adapting this for VR could benefit those in later stages of education, remotely accessing sites or taking part in historical events. Those with dyslexia could benefit because of the more visual aspect. I feel that the possibilities are almost endless.

Reference 10

the view of both phases improves my understanding.

Reference 11

I maybe wanted to see some vegetation like plants etc.

Theme 3

Experts

Reference 1

I would also have liked to move in a first-person sense from the avatar views with the arrow-keys.

Reference 2

Likewise the ability to walk as an avatar would have been awesome

Reference 3

Interesting first person perspective of the site

Reference 4

I really loved being able to stand in the room and get a better sense of scale and lived space. I constantly felt like I wanted to explore more like this - and more importantly to see the spaces being lived in. The architecture and objects were awesome to see, but being in the space made me want to go deeper, to see how it operated as a space, not just as some architecture.

Reference 5

the lack of people

Reference 6

I would have liked to move around using my mouse.

Reference 7

lacking a sense of the 'first-person-experience'

Reference 8

I didn't like the avatars. It took me a while to work out what they were and I don't feel they added to the experience. That

Reference 9

The possibility to visualise static avatars in the rooms/spaces helps to understand the use of the space in the whole area only in part. I would suggest to create predefined paths that the avatars follow in loop and/or animations that simulate the different activities in the workshop. This would definitely improve the understanding of how the spaces of the workshop were used in the past.

Non-experts

Reference 1

First person movement.

Reference 2

particularly when used in conjunction with the avatar views

Reference 3

The chance to use the avatar function

Reference 4

first person navigation

Students

Reference 1

The possibility to see from avatar point of view

Reference 2

The First-person viewpoint of the avatars

Reference 3

the first-person view and the avatars (and their view)

Reference 4

I didn't find the avatars to be of great use, it was relatively easy to just position the camera at head height in one of the rooms without using the avatar cameras.

Reference 5

It would have been useful to have been able to click on the avatars to see through their view

Theme 4

Experts

Reference 1

(I did not have a sense of presence).

Reference 2

The sense of being in the rooms. The placement of objects in relation to me

Reference 3

The interest in being able to see the rooms as if you were standing there.

Reference 4

It's a great experiment to visualise archaeological data in a 3D interactive way

Reference

A good diversion and I always enjoy exploring models

Reference 6

more importantly to see the spaces being lived in.

Reference 7

I was interested about the relationships between things and the feeling of lived space but having to jolt out to read text, and move between fixed avatar points meant breaking that connection and that feeling of embeddedness in the space frequently.

Reference 8

I think at the core this is a brilliant idea - I am super in love with being able to shift between different perspectives and times of day - it adds a level of time and interaction which is rarely seen in these architectural reconstruction models.

Reference 9

Very good 3D model with clear descriptions, was easy to use and very engaging

Reference 10

I really enjoyed the model, I can see that a lot of work has gone into making it and interpreting the excavation results. I think it helps to visualise the site well. I know very little about Cypriot archaeology, and this has made me curious. Thanks!

Non-experts

Reference 1

Sense of space

Reference 2

The sense of navigation of the spaces, the feeling of getting into the site, the imagination of being there during the bronze age.

Reference 3

The overall sense of what the site actually looked like in antiquity.

Reference 4

The fun of having the possibility to explore a space like it really exists now.

Reference 5

I really enjoyed it, as it helped me to develop a broader perception of the space

Reference 6

Fascinating and a great start.

Reference 7

I feel that this is a fantastic tool that allows people the ability to immerse themselves into an ancient environment.

Students**Reference 1**

Use in early years education would give younger children a chance to see that history can be 'experienced' in a sense.

Reference 2

Was a very interactive learning experience, was much easier to visualise the site by seeing the reconstruction and moving around it than by reading descriptions alone.

Reference 3

The use of modelling like this alongside the interpretive data could be used to great effect in early education to give children a more 'hands-on' approach to history without having to resort to logistically difficult (albeit fun) groundwork. Adapting this for VR could benefit those in later stages of education, remotely accessing sites or taking part in historical events. Those with dyslexia could benefit because of the more visual aspect. I feel that the possibilities are almost endless.

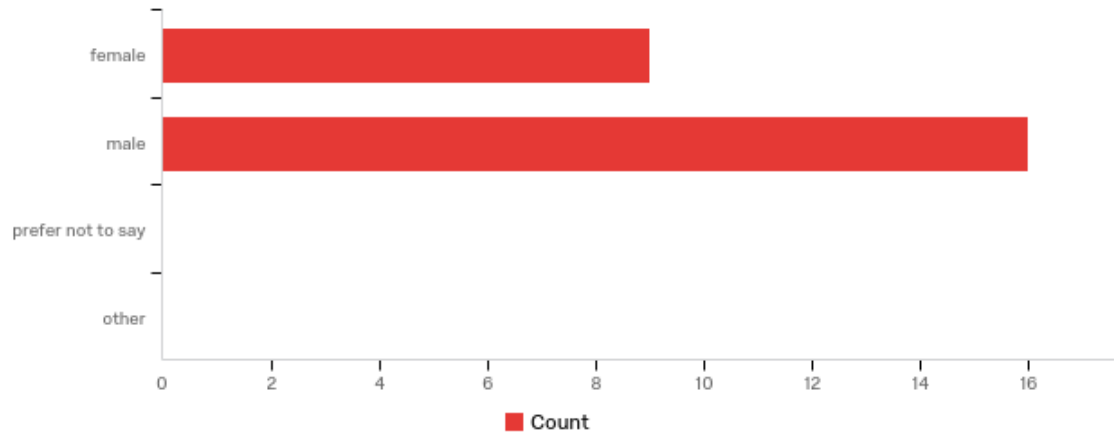
Reference 4

A fantastic model, thank you for letting others experience this, inspiring for somebody who wishes to one day do this themselves.

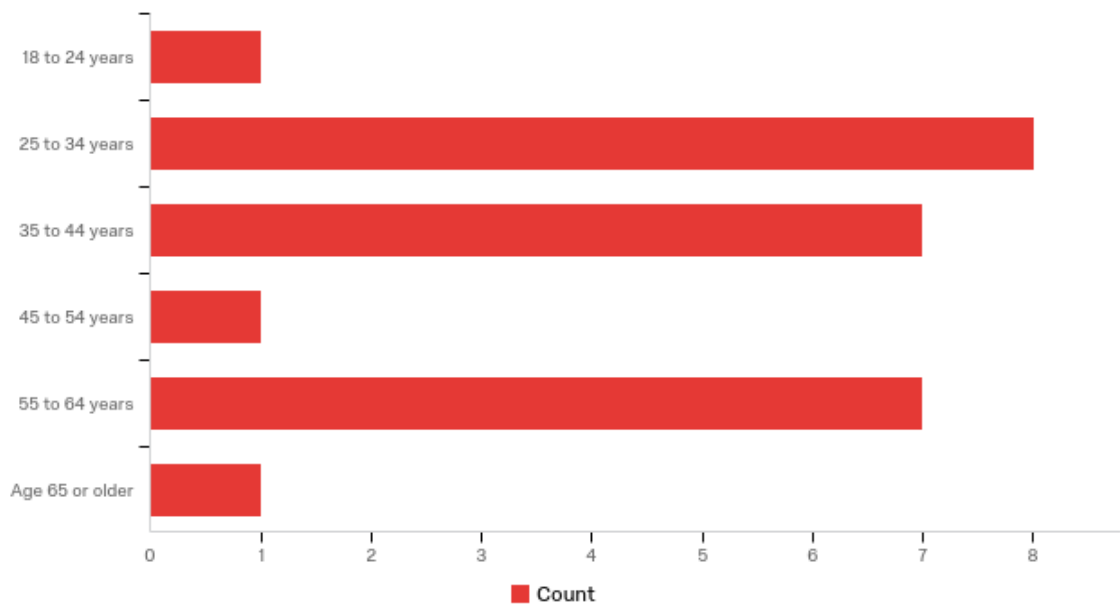
Results

EXPERTS

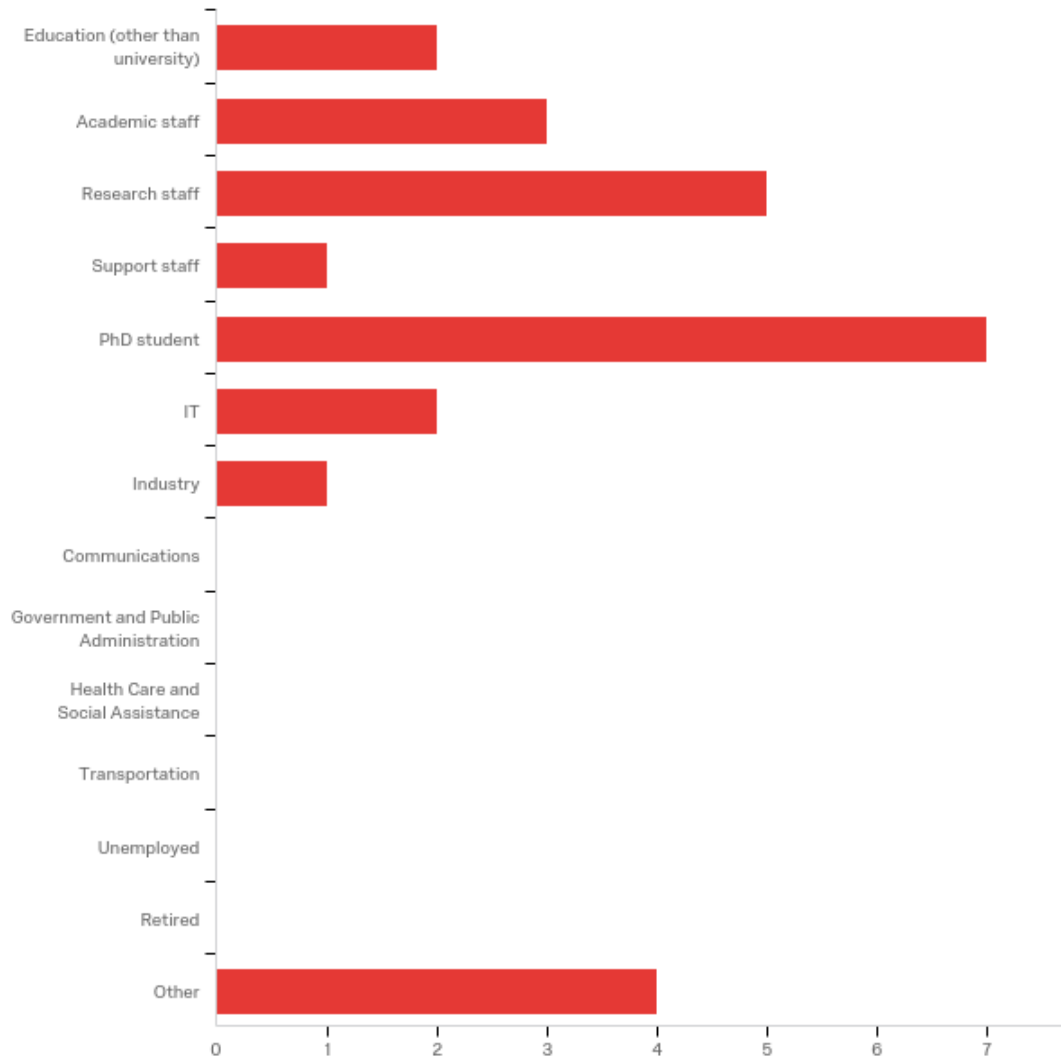
Q1 - What is your gender?



Q2 - What is your age?



Q3 - In what field are you employed?



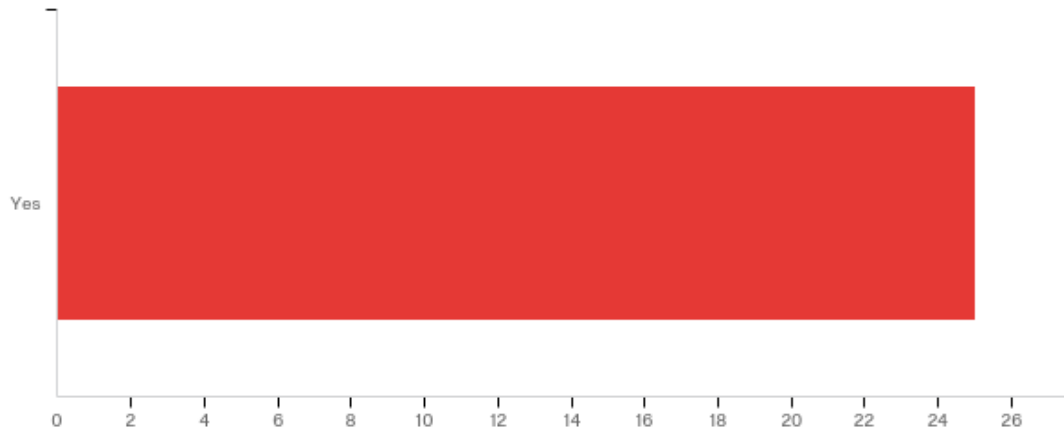
Other

Engineering

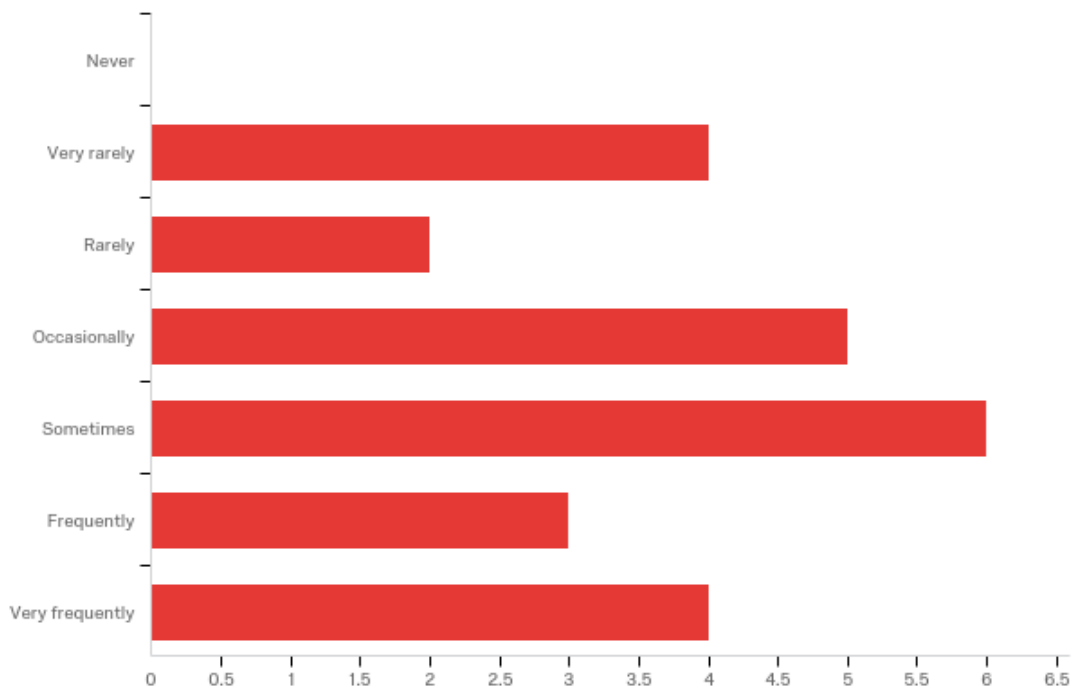
project management IT

MSc Student

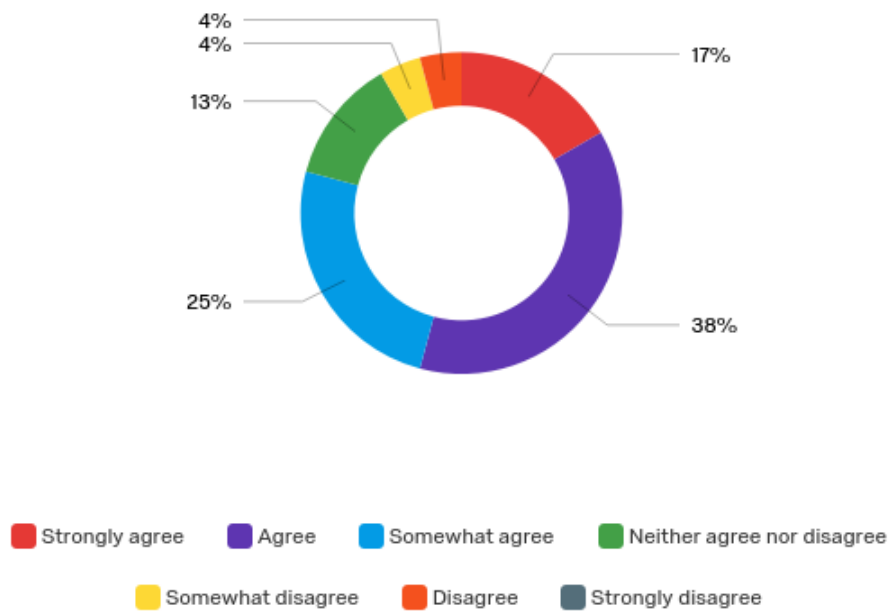
Q4 - Do you have any previous knowledge and/or experience with the application of 3D modelling in archaeology?



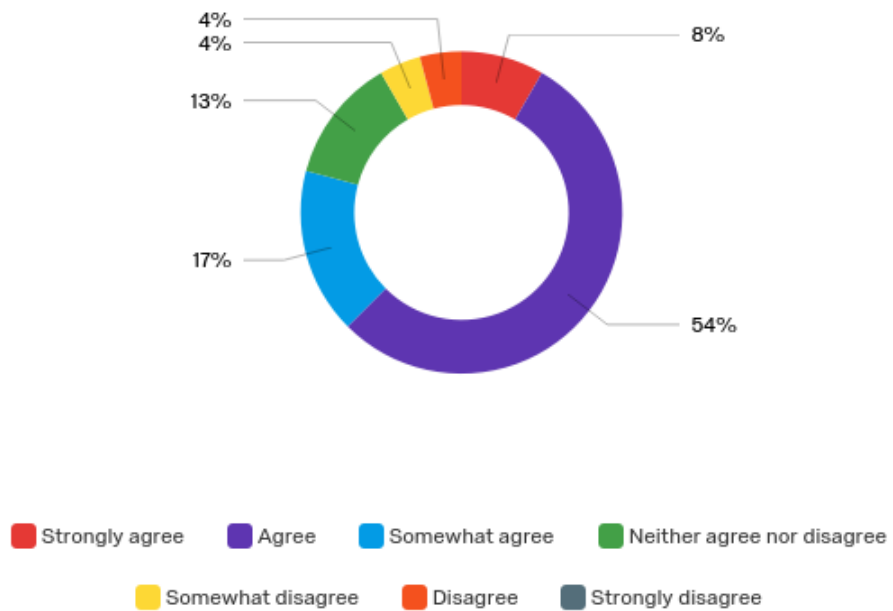
Q5 - If yes, how often do you use 3D archaeological visualisations for research/work?



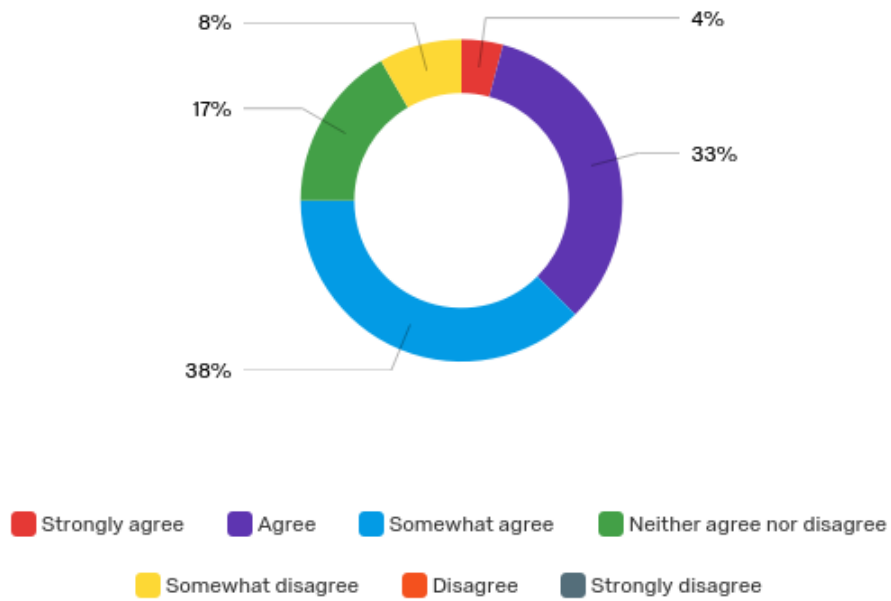
Q6 - The model improved my understanding of the site overall.



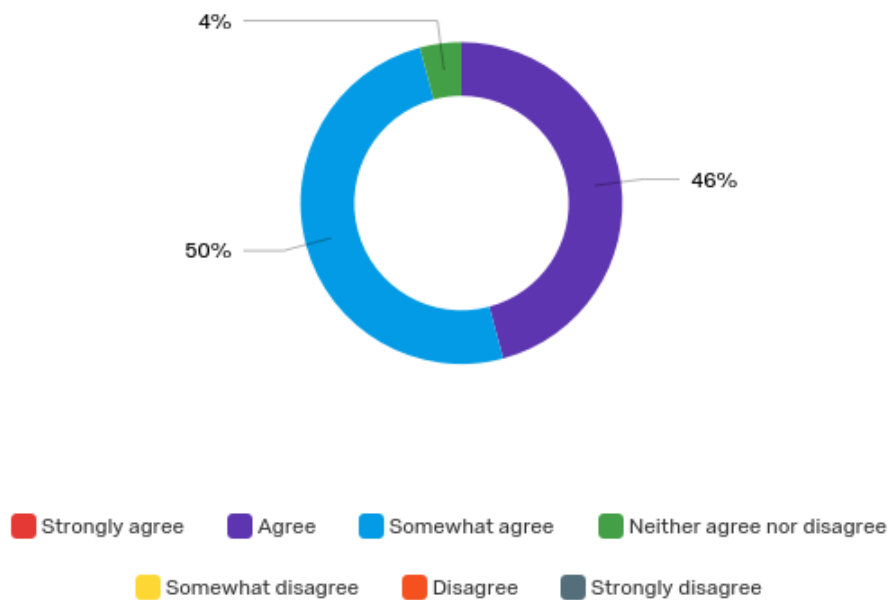
Q7 - The text descriptions improved my understanding of the site overall.



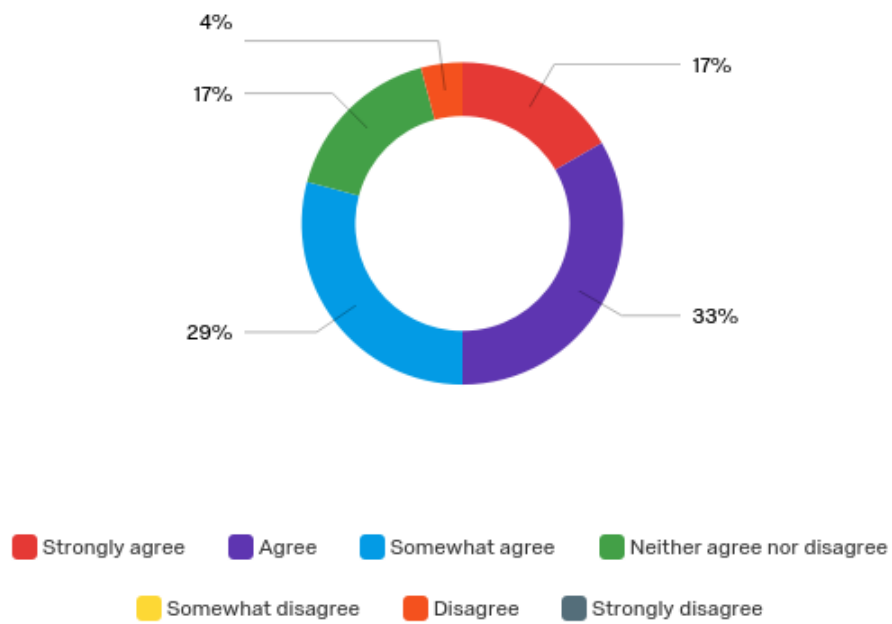
Q8 - The model improved my understanding of activities carried out within the Workshop Complex.



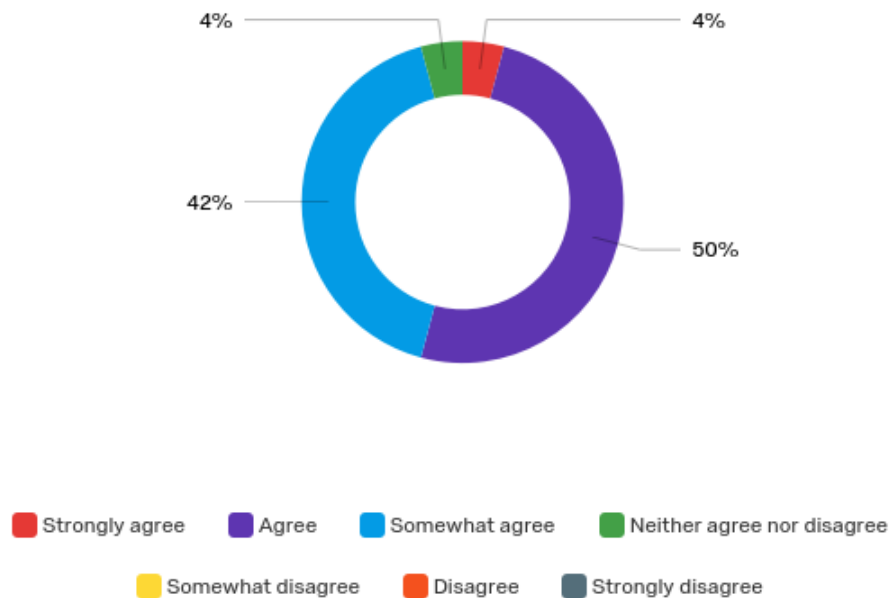
Q9 - The text descriptions improved my understanding of activities carried out within the Workshop Complex.



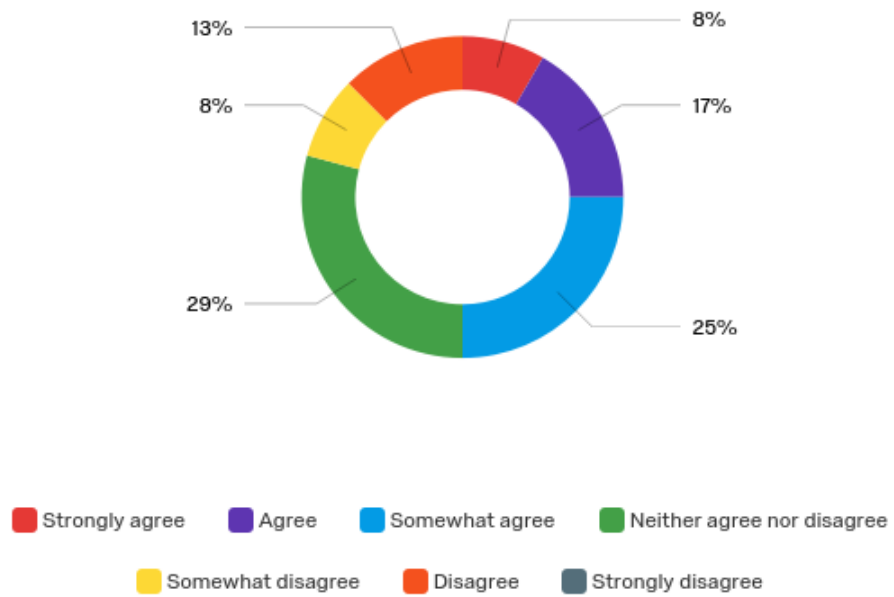
Q10 - The possibility to visualise both phases of occupation improved my understanding of the chronological evolution of the Workshop Complex.



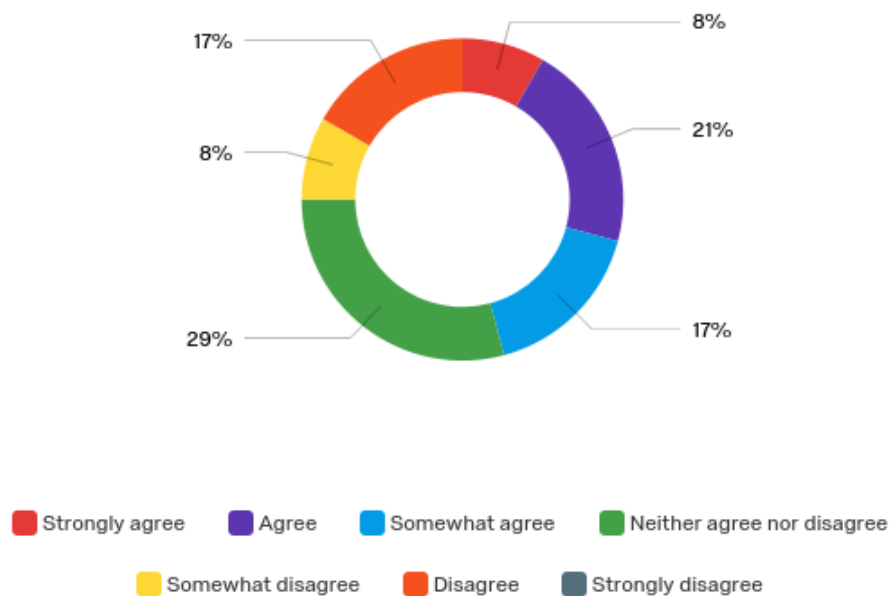
Q11 - The text descriptions improved my understanding of both phases of occupation of the Workshop Complex.



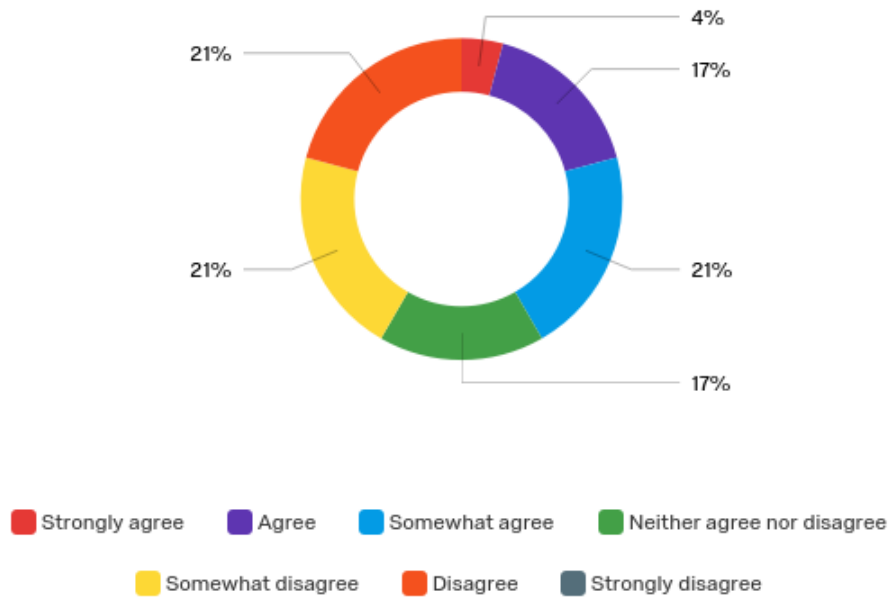
Q12 - The ability to see avatars improved my understanding of the model overall.



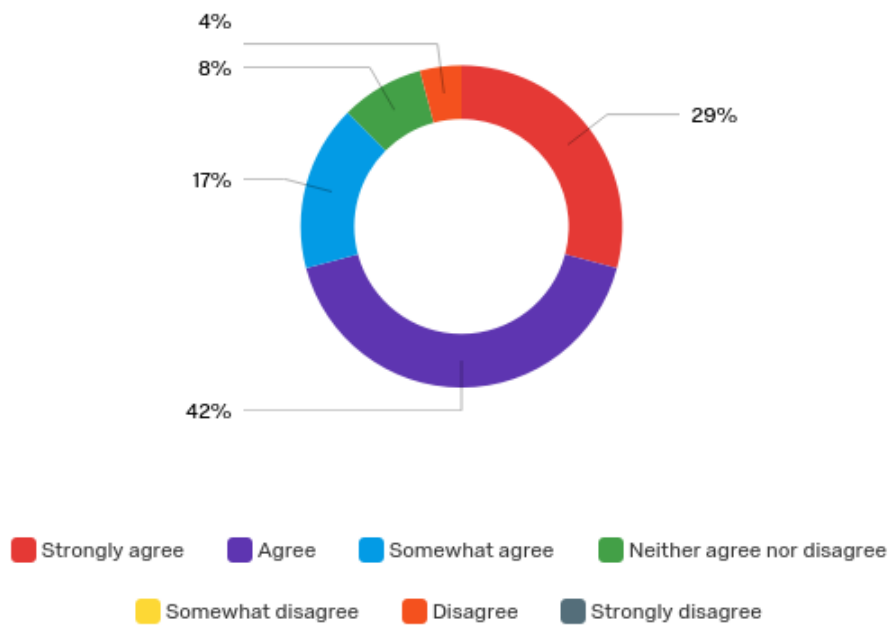
Q13 - The ability to see avatars improved my understanding of the use of spaces



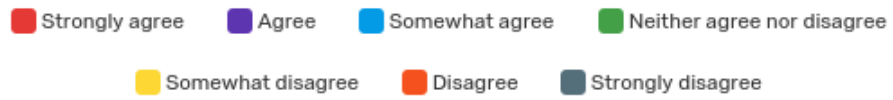
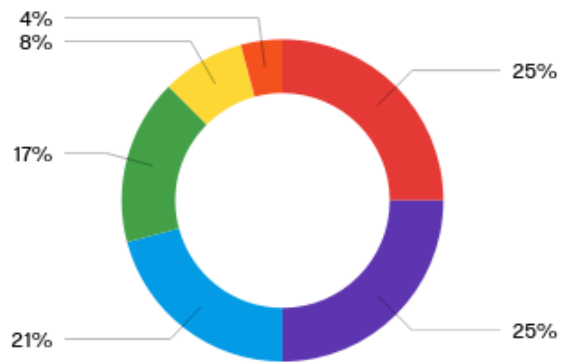
Q14 - Avatars provided a sense of people living in the space.



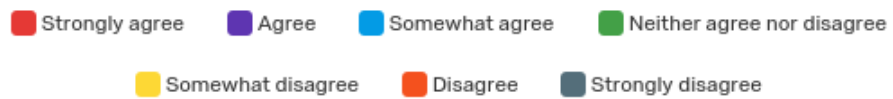
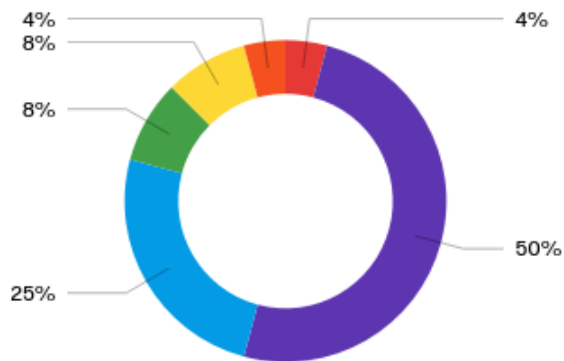
Q15 - I appreciated the possibility to navigate the model through a first-person perspective.



Q16 - The possibility to navigate the model through a first-person perspective improved my understanding of spaces.



Q17 - The text descriptions were clear and comprehensive.



Q18 - If not, please explain why.

They were too academic and tiring.

The text is very much focussed on prehistory archaeologists. It gives too much archaeological detail on one hand (it's not a publication), but very little interpretation on the other hand (I did not have a sense of presence). So do try to make the text more accessible to a wider audience (of specialists), for example do not use Latin names of plants with the normal name, explain what are things for (for example: is the mezzanine for sleeping?)

The text descriptions were very descriptive, focusing on the structure and layout of the building, or form of the object. This actually tells me very little more than what I can already see in the model! From a public-engagement perspective, the lack of use-examples and additional graphical detail would mean many people would struggle to engage.

The text descriptions were comprehensive, but quite full of "academic-ese". They could be made clearer by simplifying the language. So much of this also depends on the audience of this model as well. The language is too heavily academic for a lay audience. Even if the intended audience is professional archaeologists, it's still quite thick academic language. Something as simple as paragraph breaks and better connecting the text details to the visual the viewer is interacting with would have improved the clarity of the text.

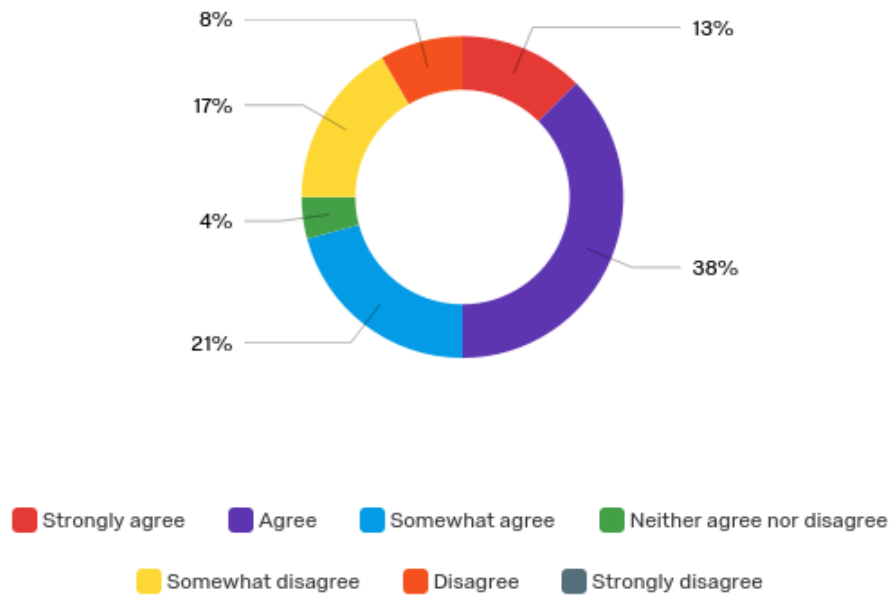
The text descriptions provided a wealth of information - but I personally found that there was a lot to read that was separate from the model itself which meant I was having to move out of the model to then look at the text and then try relate that to what I was seeing in the model. IE: the text itself was clear, but a little removed from the model.

Text was clear but I would have liked more information about the material and the locations of recovery.

Perhaps because I had come to see a visual model I was put off by large blocks of text. The text also uses terms I'm not necessarily familiar with.

Comprehensive yes, but often a bit wordy. Shorter English would improve readability.

Q19 - It was easy to interact with the model.



Q20 - If not, please explain which elements made the interaction hard to manage.

I had to switch to a new browser because the model didn't load properly on my laptop (chrome on a MacBook Air). It was impossible to access the top row of buttons until I switched computers. Once I switched to my desktop (chrome on a windows desktop computer), the buttons became accessible, but the navigation path was a bit unclear. For example, I didn't know exactly what would be best to click on next - and the lack of direction was a bit more confusing rather than liberating. I think I would have appreciated the option of a "story" I could navigate as well as the option of free exploration. By "story" I mean a recommended path of exploration, perhaps offered by the tutorial.

navigation was very difficult and cumbersome

controls were awkward

no walking around with arrow keys, camera view points not at human height

counter intuitive movement

I would have like to be able to zoom in and out with the mouse-scroller. I would also have liked to move in a first-person sense from the avatar views with the arrow-keys. I also found myself wanting to move through the model by holding down the left mouse-button and dragging the mouse.

Personal preference, but the right click with inverted camera was a little cumbersome - especially in first person mode. I would have found it easier to navigate more organically

with mouse following for camera mode (perhaps with click to lock / unlock the camera). Likewise the ability to walk as an avatar would have been awesome - I often found myself wanting to get closer to look at something or move to a different perspective which I couldn't do with the fixed position.

I'm bad with mouse controls, and felt like using the arrow keys was inelegant for movement. It left me slightly disoriented and worried that I was missing content.

The click-areas were good, allowing a simple click-and-learn interface, but the camera navigation was difficult (even for experienced gamers!) - very few non-tech-literate people would find this intuitive.

The controls seemed slightly too sensitive

Q21 - How would you evaluate this experience?

Statement	Not at all		A little		Mildly		Moderately		Somewhat		Very		Extremely		Total
	%	n	%	n	%	n	%	n	%	n	%	n	%	n	
It was engaging	3%	1	3%	1	3%	1	26%	8	13%	4	42%	13	10%	3	31
I felt bored	45%	14	29%	9	6%	2	10%	3	6%	2	3%	1	0%	0	31
It was stimulating	6%	2	6%	2	10%	3	13%	4	26%	8	35%	11	3%	1	31
It was a waste of time	77%	24	10%	3	3%	1	3%	1	6%	2	0%	0	0%	0	31
It was useful for learning	3%	1	10%	3	10%	3	13%	4	19%	6	35%	11	10%	3	31
It evoked a sense of another culture	10%	3	19%	6	13%	4	10%	3	29%	9	19%	6	0%	0	31
It fostered curiosity in learning more about the site and its history	0%	0	16%	5	13%	4	16%	5	26%	8	26%	8	3%	1	31
It fostered curiosity in learning about Cypriot history and culture	3%	1	19%	6	6%	2	13%	4	35%	11	19%	6	3%	1	31

Q22 - What do you remember about this experience? Please list at least 3 things.

1. I remember thinking that this specific model could be an excellent tool for an archaeologist standing at a podium and verbally walking a professional audience through the stratigraphy / findings about the site. 2. I also remember thinking that the model is far too cumbersome for a lay audience, that I hope the intended audience of this model is purely for professional archaeologists and students of archaeology. 3. And finally, I thought the text was quite dense. The model offers such a great opportunity for exploration and explanation, and I think simplifying the text would go a long way to making the model more useful, even for professionals.

The way info is presented, sense of scale, chronological aspect

a ladder going to the roof, I am not sure why it was there, the avatars, I had difficulties navigating

sunlight control, the phase shifts, the text

1. the visualisation sticks too much to the archaeological excavation, and gives very little visualisation/interpretation of the real spaces as you think they were 2. This application is for specialists, not at all for the wider public, nevertheless, layer your information, provide links to external sources, for additional information 3. Although I'm not a specialist in prehistory, I do see some details that can be improved. It's also not clear what is archaeological feature and what is the reconstructed space (for ex. is the floor the excavated bedrock or the real floor)

Speed at which I learnt how to navigate. Floors- where they really that type of surface; I liked the ladders and access points in the roof

difficulty loading visualisation, counter intuitive control, Cyprus

Colour, texture and pots

I remember the top view because that is what made most sense to me. The avatar views were not really like 3D, they were just like photo shots from different positions.

phases-pithos-sun/light control

1. The different phases of the site and how the latter has changed over time; 2. The use of the space in the workshop complex; 3. How the workshop's rooms/spaces were affected by the light exposure during the day.

an alien space, the colour brown, a lot of food preparation going on

Liking visualisations of features that I can click to read more about; wanting there to be pictures alongside the text when clicking features (not just creative visualisations, but photographs; enjoying the sense of interactive exploration and choosing my own way through the data; appreciating the map and general site information.

The sense of being in the rooms. The placement of objects in relation to me. Seeing the change in structure over time.

The pithos, the description of mortar/grinding tools, the textures on the surfaces.

Minimalist (good!) visual interface; difficulty navigating from first-person camera; good quality of base scan

The interest in being able to see the rooms as if you were standing there. The difference between the amount of objects in Phase A compared to Phase B which surprised me. The ease with which different layers like the map and other features put rooms into context.

Easy to navigate the model; Clear descriptions and Interesting first person perspective of the site

The textures on the walls, the sunlight controls, the two phases

The location, the different phases the construction techniques employed

Q23 - What did you like about this experience?

I am personally very attracted to visual representations of archaeological sites. I particularly like the idea of this model as a tool for archaeologists - as it stands now, it seems more useful as a supplement to a lecture, conference session, or lesson. But the basic structure of this model is lovely, and the detailed connection to the site excavation details is great.

It is similar to my own work

the concept of presenting the site in different phases, through the eyes of different avatars same as above

It's a great experiment to visualise archaeological data in a 3D interactive way

A good diversion and I always enjoying exploring models

current research into a key area of disseminating information

Being able to explore a space and see it change over time

The top-down view gave a good impression of the site.

interaction

possibility to watch the area

three-dimensionality, moving around the image

See above

I really loved being able to stand in the room and get a better sense of scale and lived space. I constantly felt like I wanted to explore more like this - and more importantly to see the spaces being lived in. The architecture and objects were awesome to see, but being in the space made me want to go deeper, to see how it operated as a space, not just as some architecture.

I really liked that you could view both phases of the site history, and that it felt seamless to move between them. I know that may not always work, if you're dealing with large changes in the built heritage, but for this type of site composition, it's very effective.

Click-areas were well-utilised; the interface allowed several views and parameters to be changed.

I liked the way you could move around the space and query objects

Very clear and easy to use visualization of the study site

I think it helped to visualise the site very well, and it was good to be able to switch the roof on and off, and to switch between phases. Also liked the way you can alter the sun position to see texture.

The hotspots the visualization of the two phases

Q24 - What didn't you like about this experience?

The language in the text is unnecessarily dense and academic. I didn't like that I couldn't identify the intended audience - the text as written seems almost exclusively useful for an academic audience, due to the cumbersome and profession-specific language. For example, on the "Workshop" tab, the descriptions are laden with archaeology-specific terminology. A member of the public, even an educated member of the public, would likely find this text difficult and uninteresting. An archaeological professional might even find the language unnecessarily complicated and untethered. By "untethered", I mean the text almost seems written without relation to the model; it hangs out by itself without referencing the image to the right. An example of how the text and model could connect much better would be a simple change of phrasing; for example, "The model to your right depicts the Workshop Complex at on the top of the hill of the Erimi-Laonin tou Porakou archaeological site. The space you see here is functionally organized into 11 units (as currently excavated)... As you can see from the model, there are five open working spaces characterized... etc." When you have text that is clearly meant to describe a model that a person is looking at on the same website, it makes more sense for the text to explicitly connect to the model. As it stands now, the text is overly dense and feels disconnected from what the viewer is seeing and interacting with.

Issues with WebGL. A stand alone option would be nice.

the implementation of the model and navigation. the text were very boring

I think it was difficult to control the model which made exploration of it frustrating

The information communication process through 3D is new and challenging, I can help you to improve it

Not enough "texture" to the model and the lack of people

control of interaction

I could not move around the site as an avatar or move my avatar viewpoint - maybe my laptop OS cannot do this or it is not built into the model?

The colours didn't seem natural. I didn't feel a strong avatar experience. I would have liked

to move around using my mouse. Maybe it was possible but I couldn't see how to do it.

quality of images

I would like to be able to move as an avatar around the whole site

See above

That the space was purely architectural and additionally that the text / interpretation was dissociated from the visual (i.e.: it was in a different area of the screen). I was interested about the relationships between things and the feeling of lived space but having to jolt out to read text, and move between fixed avatar points meant breaking that connection and that feeling of embeddedness in the space frequently.

I would have liked to see the site built into the landscape, though I recognize the resources inherent in doing so. There was a visual disconnect with the structure set largely out in the middle of a colourless sky and plain.

Difficult first-person navigation; lacking a sense of the 'first-person-experience' - this was better when viewing rooms with the roof on, but no collision-detection in the model meant it was easy to fly through walls!

I didn't like the avatars. It took me a while to work out what they were and I don't feel they added to the experience. That being said, maybe if they were more 3D, like the objects, then they would add more presence.

Some of the artifacts being discussed were not clear in the 3D model. Some typographical errors in the descriptions that need to be reviewed

Nothing, although maybe an improvement could be to see the landscape around the site (e.g. so you could look out of a door to see your surroundings). The text describes the area well, but it would be good to see the river/sea in relation to the site (I appreciate this would take a lot of work!).

Probably the position of the avatar (when you use the avatar camera) it's not clear. Maybe have a location map would be useful

Q25 - Other comments

I am glad to see this is finally being looked at. I began 3D modelling for archaeological sites in 2011 but could not find a university that would support my research. I am now using BIM methods to inform the 3D models for sustainable data management.

the concept is fine, the implementation quality however makes it very very difficult to interact with it. We are used today with a different quality of interaction and graphics. Also the texts are too academic, long boring. There could have been sound instead of texts. This

is not an appropriate example to test the value of 3D representations in cultural heritage.

I am sure you know of sketchfab... integrating that type of control... zoom and manoeuvrability with your text and the ability to shift phases and light would make in my opinion an user friendly model while enhancing the experience

make larger text boxes, do test your own questionnaire and application first and on multiple platforms

Maybe I missed something, this did not seem like 3D to me, just images from different positions.

I would suggest the following improvements: 1. Avoid the simultaneous visualisation of the windows Map and Help, when they are selected in sequence by the user (e.g. if the user selects the window Map, the window Help, previously selected, should disappear). 2. To improve the navigation in the different room/spaces of the workshop I would create bounding boxes for the walls. This would avoid the user to cross the walls (i.e. ghost effect). If you decide to create bounding boxes for the walls, I would leave the door of the different rooms/spaces open. 3. It is very difficult to understand where you are, when you move between the rooms/spaces. I would suggest to create a 2D map that allows you to select the rooms/spaces favouring the 'teleportation' from one room/space to the others. 4. The possibility to visualise static avatars in the rooms/spaces helps to understand the use of the space in the whole area only in part. I would suggest to create predefined paths that the avatars follow in loop and/or animations that simulate the different activities in the workshop. This would definitely improve the understanding of how the spaces of the workshop were used in the past. 5. I am not sure that the term MATERIALS (show materials) for the selection of the finds is the easiest one for the user.

I think at the core this is a brilliant idea - I am super in love with being able to shift between different perspectives and times of day - it adds a level of time and interaction which is rarely seen in these architectural reconstruction models. I have a personal hang up about wanting to know the role of the archaeologist / level of certainty in the depictions, so it would be great to have a layer which went into that. Also codifying some of the text to be visual, or presented as part of the model rather than disjointed I think would be a little more cohesive. Overall I was really impressed by the feeling that it gave, the ability to start thinking on different scales and to pursue wider picture observations on the ground. Incorporating the wordy-stuff into codified visuals would really help with the design and the ability to understand and interrogate it from all perspectives without the break in having to move out of the model to read.

I'm so glad you're doing this research. We keep using visualizations and we really don't know if they work at all, and I'm interested in finding out what you find out.

Overall I think this approach to present archaeological sites has great advantages. However, the model/interface here is very much geared to the academic researcher - there is very little to engage the non-archaeologically-literate. Expanding the information points to include real-world photographs of objects, artists' impressions of use, etc, would help the public understand that space much better. It is accepted that the time and effort involved in recreating archaeological space as 3D visualisations is difficult (take it from someone who does it as a job!)

I think this shows real promise as an educational tool. I think to use this you would already have to have an interest in the subject or area beforehand due to the high amounts of information.

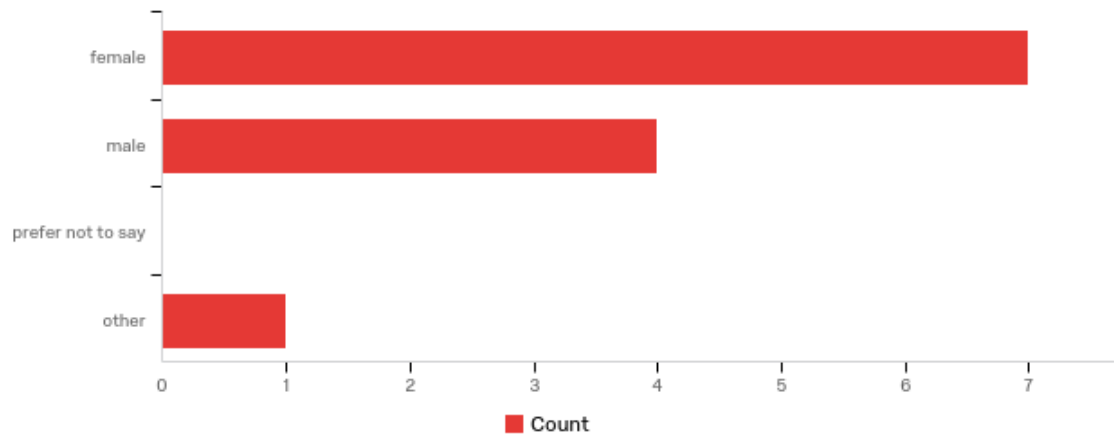
Very good 3D model with clear descriptions, was easy to use and very engaging

I really enjoyed the model, I can see that a lot of work has gone into making it and interpreting the excavation results. I think it helps to visualise the site well. I know very little about Cypriot archaeology, and this has made me curious. Thanks!

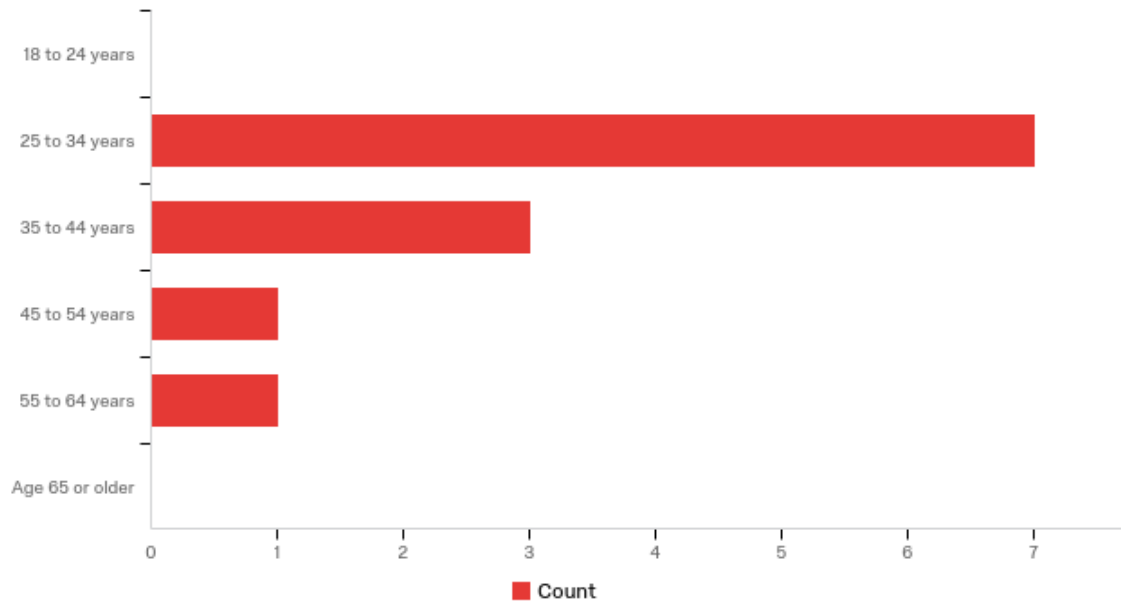
Have the possibility to select the text in the information panels would be really useful. (to find out more info on goggle etc)

NON-EXPERTS

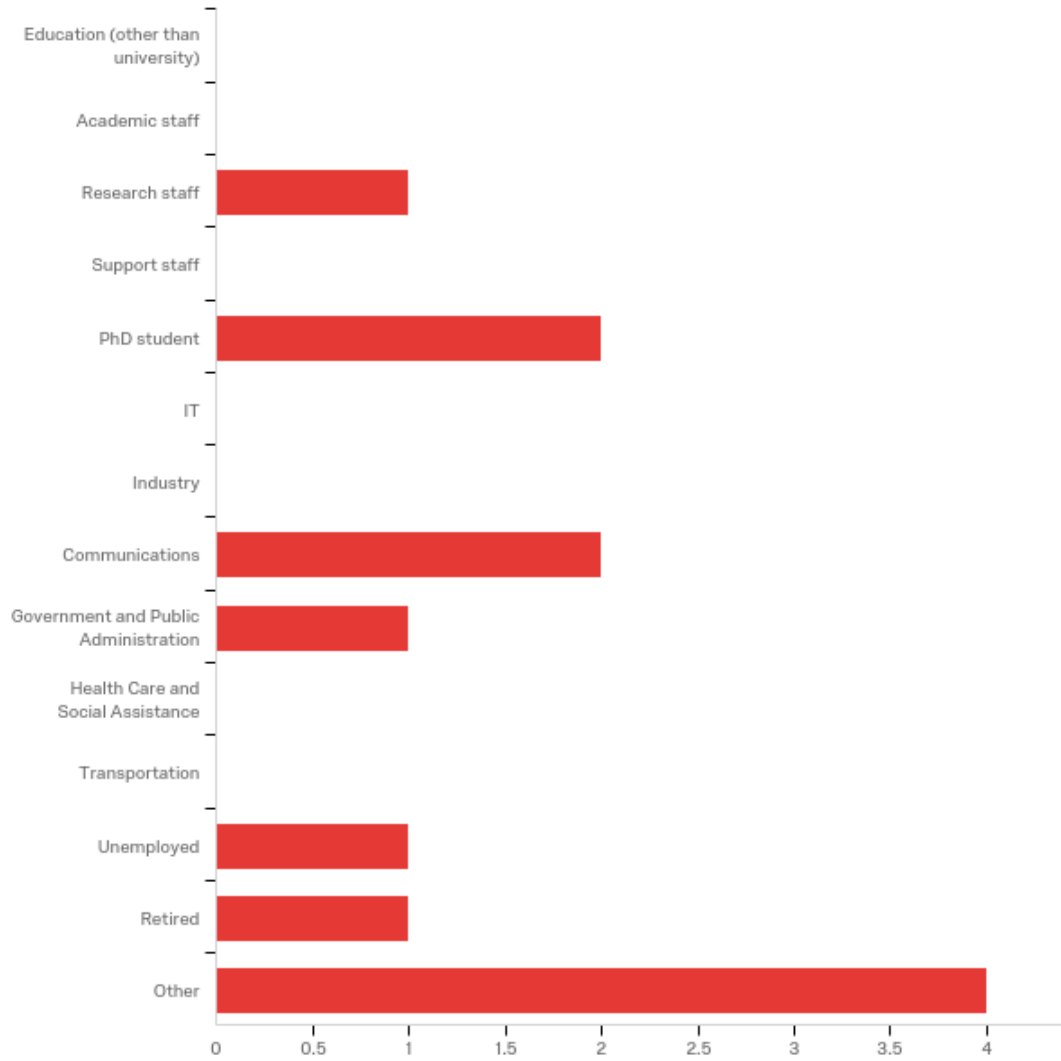
Q1 - What is your gender?



Q2 - What is your age?



Q3 - In what field are you employed?



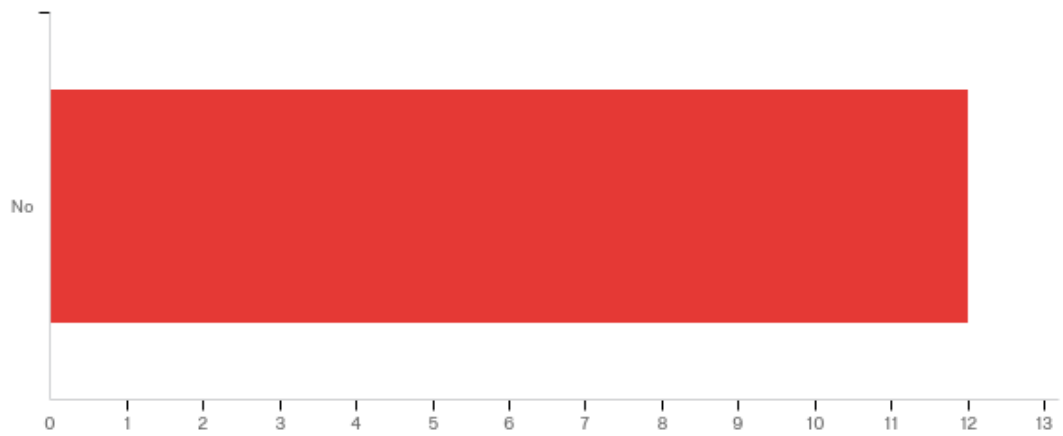
Other

Chef

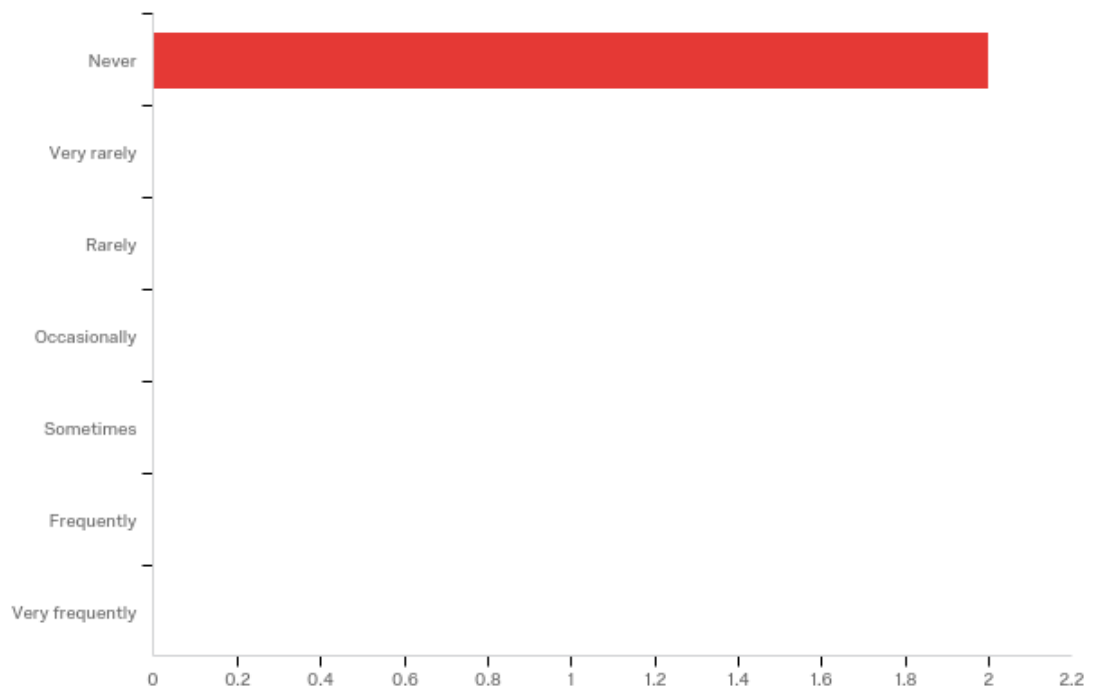
IT Director

manager

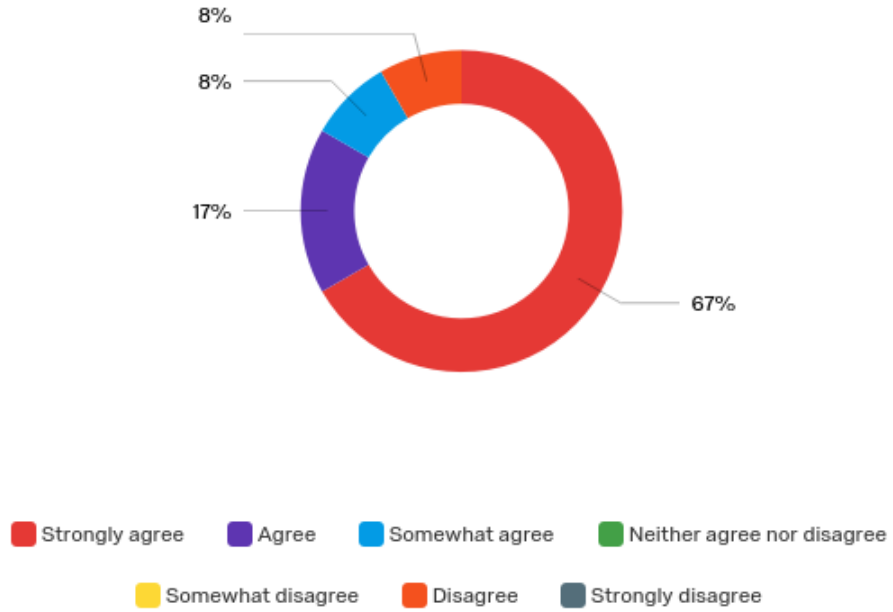
Q4 - Do you have any previous knowledge and/or experience with the application of 3D modelling in archaeology?



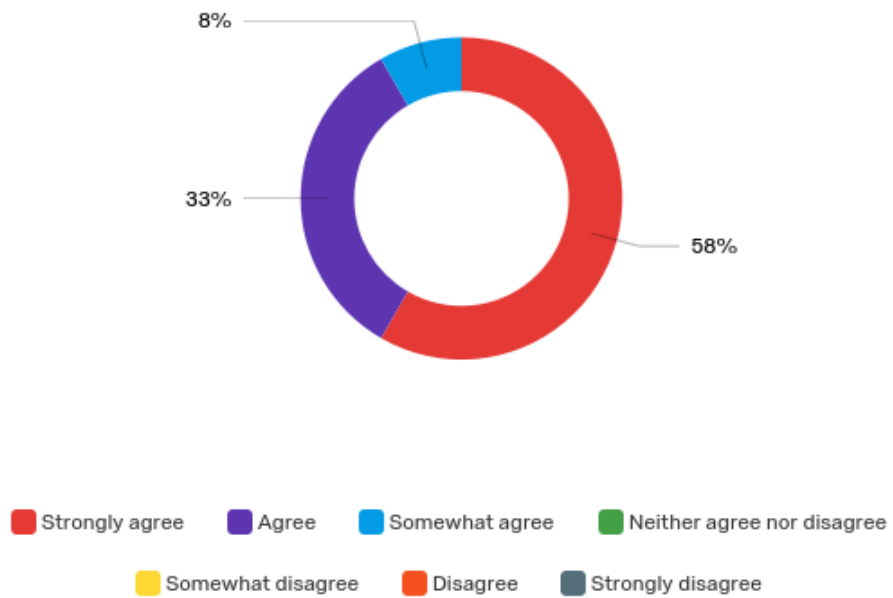
Q5 - If yes, how often do you use 3D archaeological visualisations for research/work?



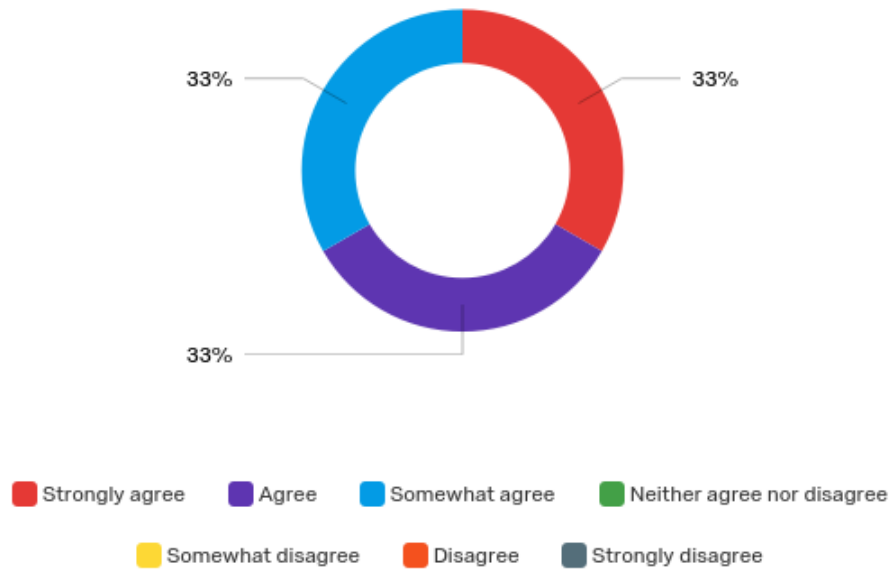
Q6 - The model improved my understanding of the site overall.



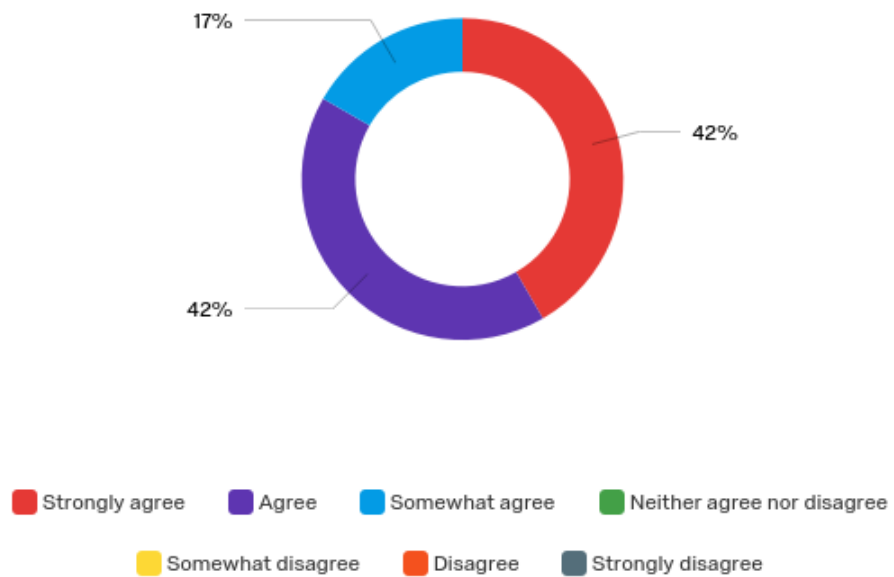
Q7 - The text descriptions improved my understanding of the site overall.



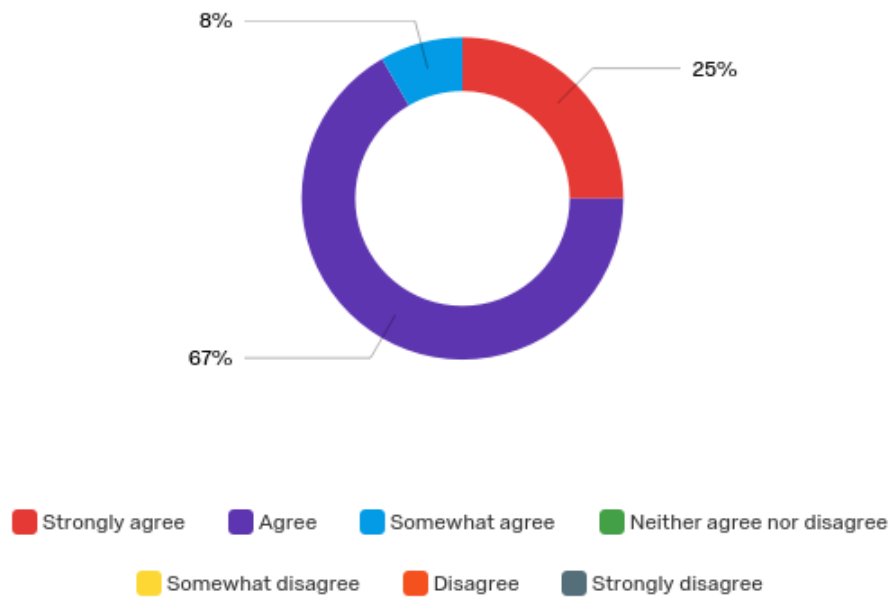
Q8 - The model improved my understanding of activities carried out within the Workshop Complex.



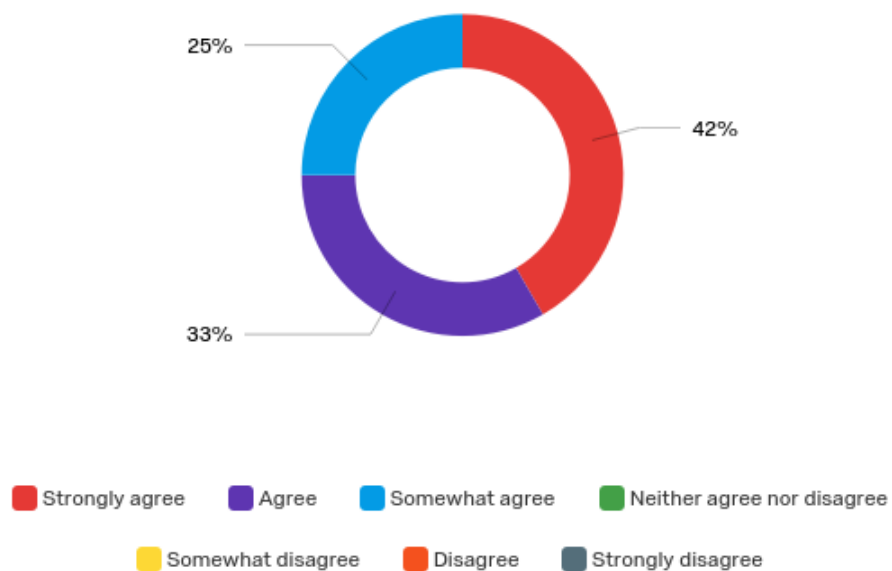
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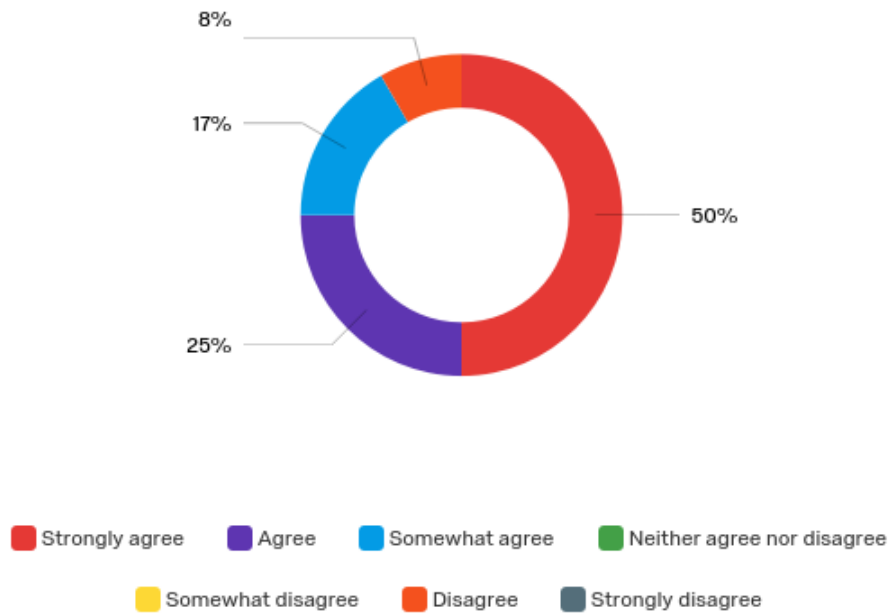
Q10 - The possibility to visualise both phases of occupation improved my understanding of the chronological evolution of the Workshop Complex.



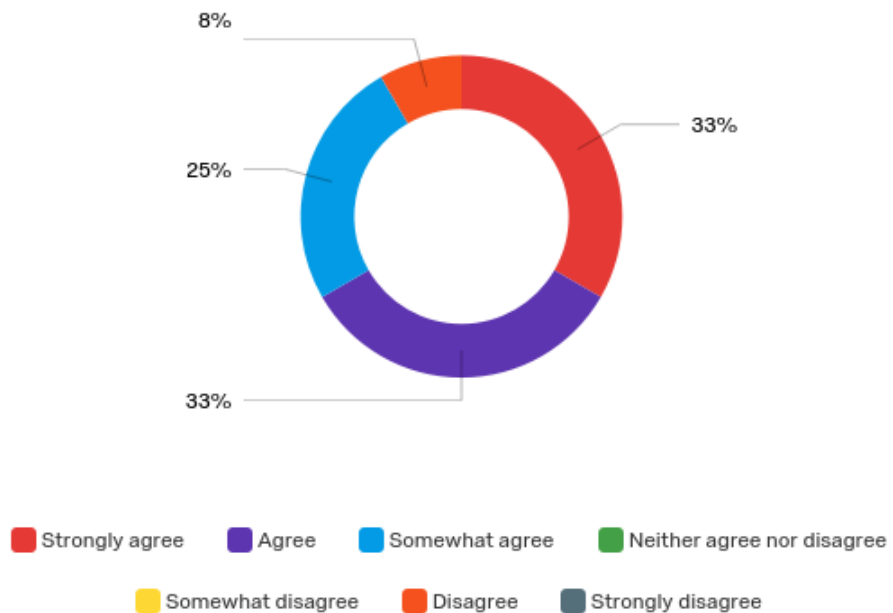
Q11 - The text descriptions improved my understanding of both phases of occupation of the Workshop Complex.



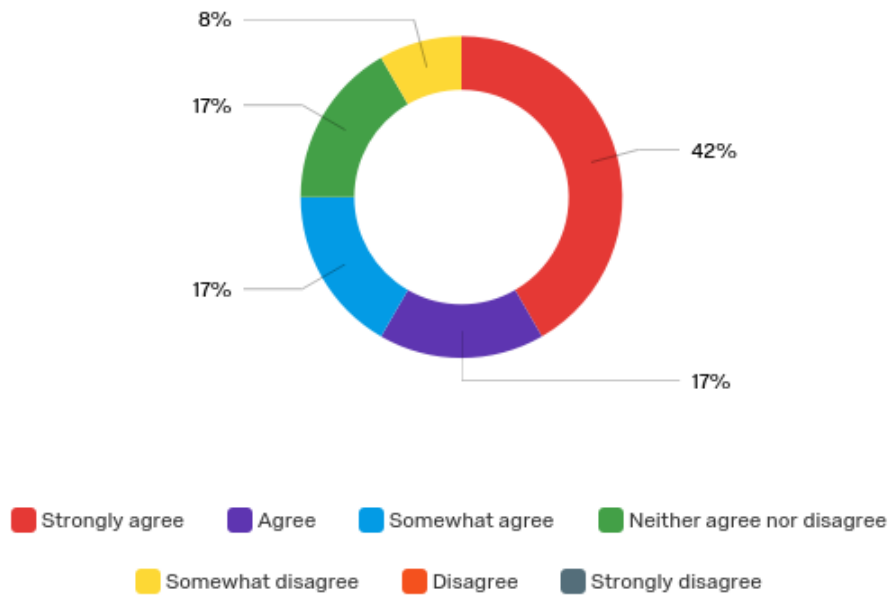
Q12 - The ability to see avatars improved my understanding of the model overall.



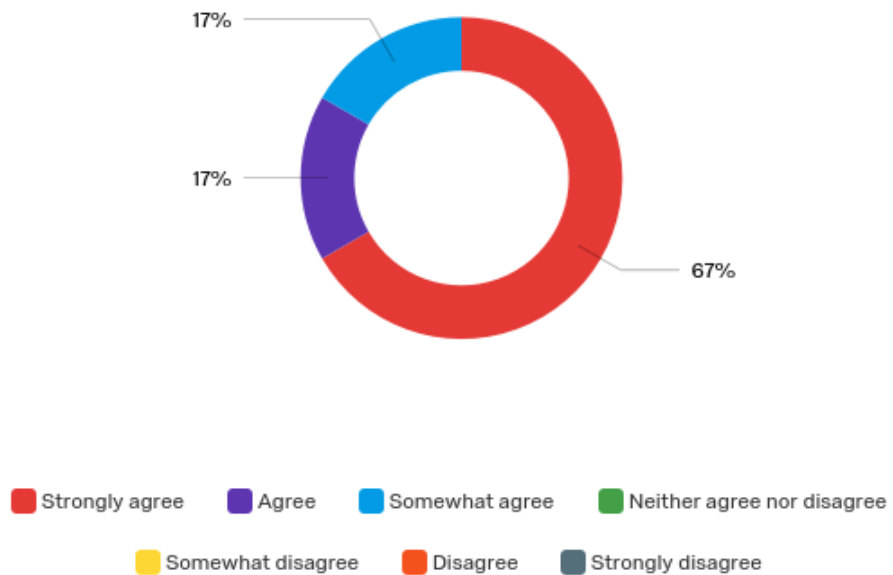
Q13 - The ability to see avatars improved my understanding of the use of spaces



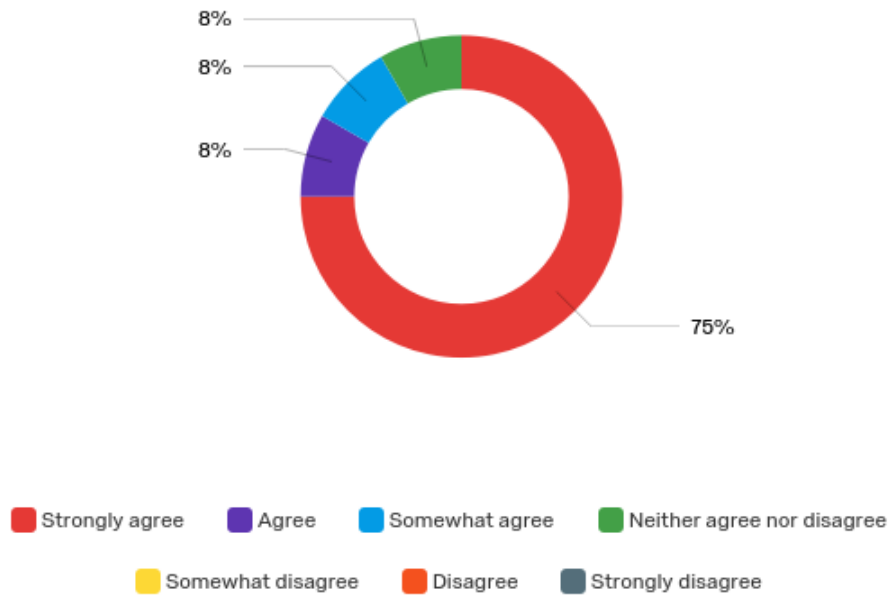
Q14 - Avatars provided a sense of people living in the space.



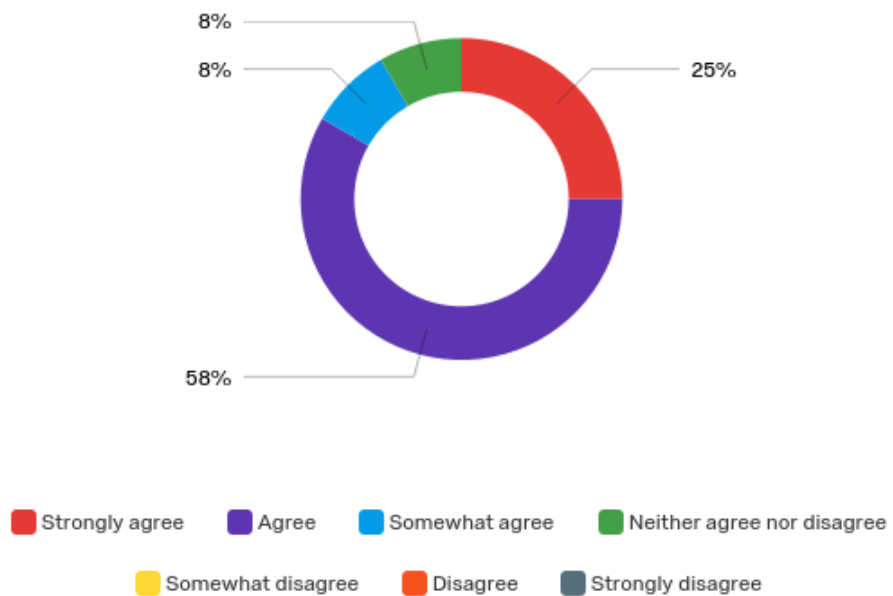
Q15 - I appreciated the possibility to navigate the model through a first-person perspective.



Q16 - The possibility to navigate the model through a first-person perspective improved my understanding of spaces.



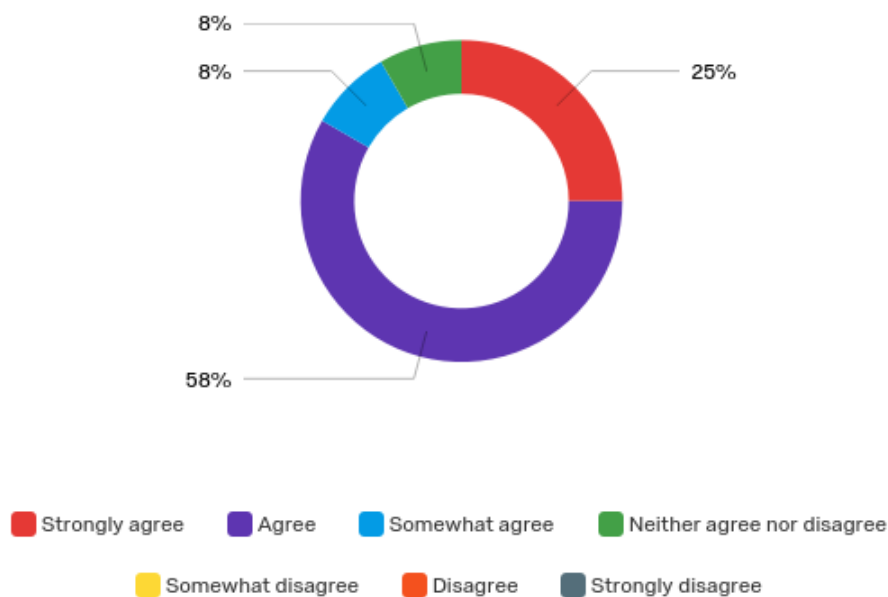
Q17 - The text descriptions were clear and comprehensive.



Q18 - If not, please explain why.

some terminology and references were unfamiliar, but I'm also coming in with zero knowledge of the site and work

Q19 - It was easy to interact with the model.



Q20 - If not, please explain which elements made the interaction hard to manage.

Q21 - How would you evaluate this experience?

Statement	Not at all		A little		Mildly		Moderately		Somewhat		Very		Extremely		Total
	%	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%	Count	
It was engaging	0%	0	0%	0	0%	0	8%	1	25%	3	50%	6	17%	2	12
I felt bored	83%	10	8%	1	0%	0	0%	0	8%	1	0%	0	0%	0	12
It was stimulating	0%	0	0%	0	0%	0	25%	3	17%	2	42%	5	17%	2	12
It was a waste of time	92%	11	8%	1	0%	0	0%	0	0%	0	0%	0	0%	0	12
It was useful for learning	0%	0	0%	0	17%	2	8%	1	0%	0	50%	6	25%	3	12
It evoked a sense of another culture	0%	0	0%	0	8%	1	8%	1	25%	3	33%	4	25%	3	12
It fostered curiosity in learning more about the site and its history	0%	0	8%	1	8%	1	8%	1	17%	2	33%	4	25%	3	12
It fostered curiosity in learning about Cypriot	0%	0	0%	0	17%	2	17%	2	8%	1	42%	5	17%	2	12

history and culture

Q22 - What do you remember about this experience? Please list at least 3 things.

What do you remember about this experience? Please list at least 3 things.

structures, pots, sunlight

seeing the artifacts, being able to change the light (time of day) and learning a little about the time periods these spaces were used

that walls were built onto their basements, that the materials were only visible in phase A, and that I wondered what the "hotspots" indicated.

The phases of Construction the ability to see it with or without a roof The affect of the sun throughout the day

First person movement.

The organization of the rooms in the workshop, their use and the difference between the two phases

Very interesting

sense of space, curiosity, interaction

Some technical name for example Pithos, the 2 different phases, and the Historical period

materials, text descriptions, navigation

The sense of navigation of the spaces, the feeling of getting into the site, the imagination of being there during the bronze age.

Q23 - What did you like about this experience?

sunlight

I like maps and I found the combo of text and interactive map to be a great way to learn

the lighting and roof options, particularly when used in conjunction with the avatar views

The ability to look in the rooms

The overall sense of what the site actually looked like in antiquity.

The chance to use the avatar function

The possibility to see all the close and open ambient

The possibility to interact with the 3D model and observe a reconstructed space

The way that you can interact and the fact that there were the name of the materials and the explanation

first person navigation and point and click

The fun of having the possibility to explore a space like it really exists now.

Q24 - What didn't you like about this experience?

GUI

Maybe there could be hover text about what the different buttons do? it wasn't clear to me at first that I was looking through the "eyes" of the avatars

that I wasn't entirely sure which avatar's perspective I was viewing from. Is there a way to add, perhaps, a small inset map with an indication of which avatar's "eyes" are being used and which direction it is facing?

The floor surface was distracting it made we want to know more about what the features were and also not being able to see the view over the country side to set the site in the landscape, The Pottery added was a distraction it looked too big and randomly placed - although I appreciate it was where it was found on the Dig

I wanted more scope and surrounding view.

slowness of web site

The lack of explanation of the key words for those who are not archaeologist

Nothing

I really enjoyed it, as it helped me to develop a broaden perception of the space

I would've appreciated more information and descriptions

the colours. it may have more real colours.

Q25 - Other comments

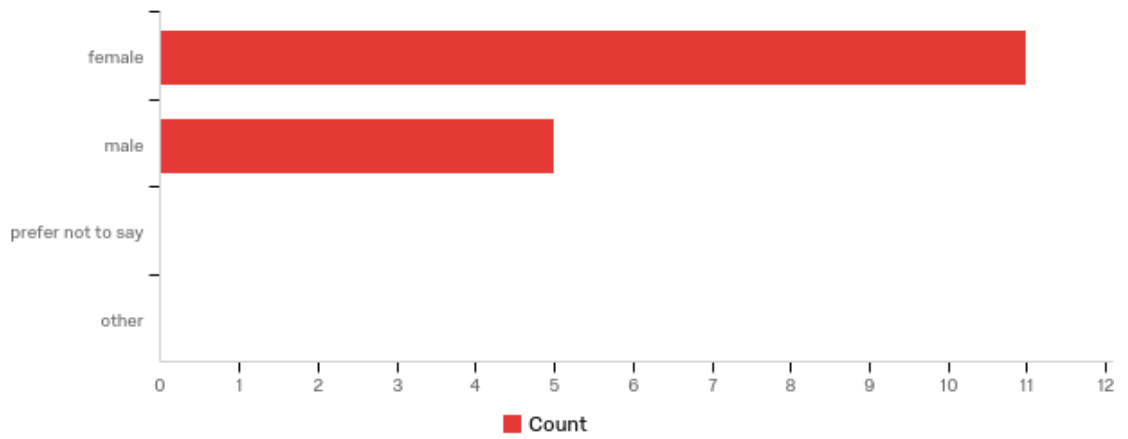
Fascinating and a great start. The avatars were good but it would have been useful to number them otherwise you just jumped from room to room

I feel that this is a fantastic tool that allows people the ability to immerse themselves into an ancient environment. I think this along with larger 3-D mapping projects will lead to fully immersive virtual cities. I have been to Pompeii, Akrotiri, and even Amarna, it is my dream to be able to walk their streets (even if it is virtually) during the heights of their existence.

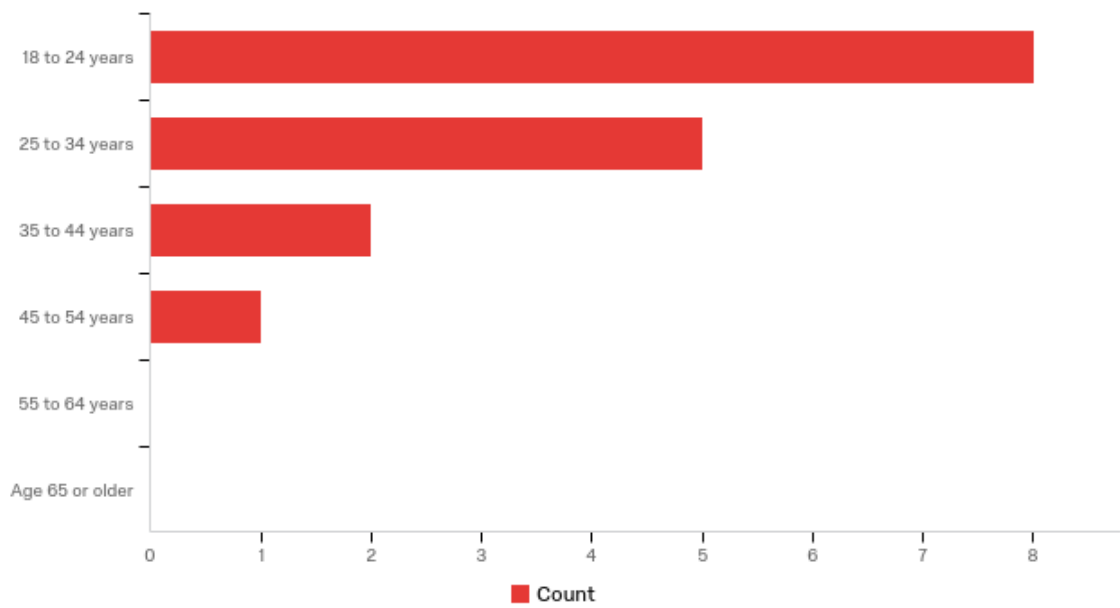
It would be nice to add some more information or images about the use of the rooms and the objects inside, showing how the people worked inside it.

STUDENTS

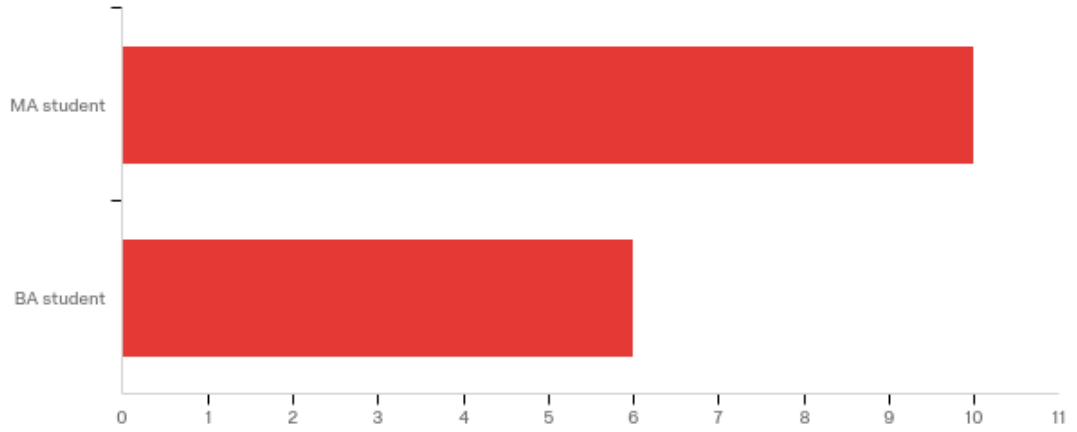
Q1 - What is your gender?



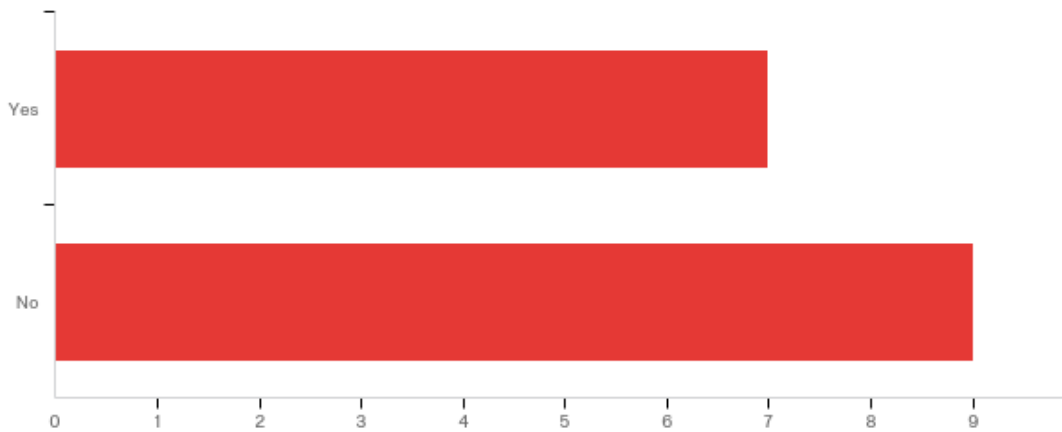
Q2 - What is your age?



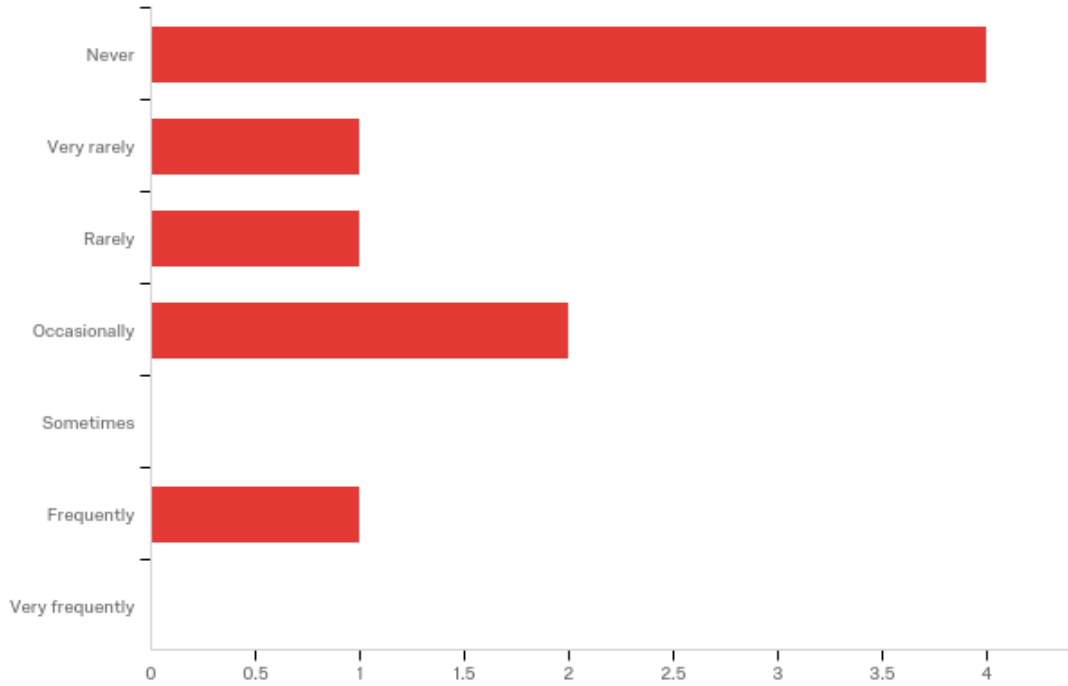
Q3 - In what field are you employed?



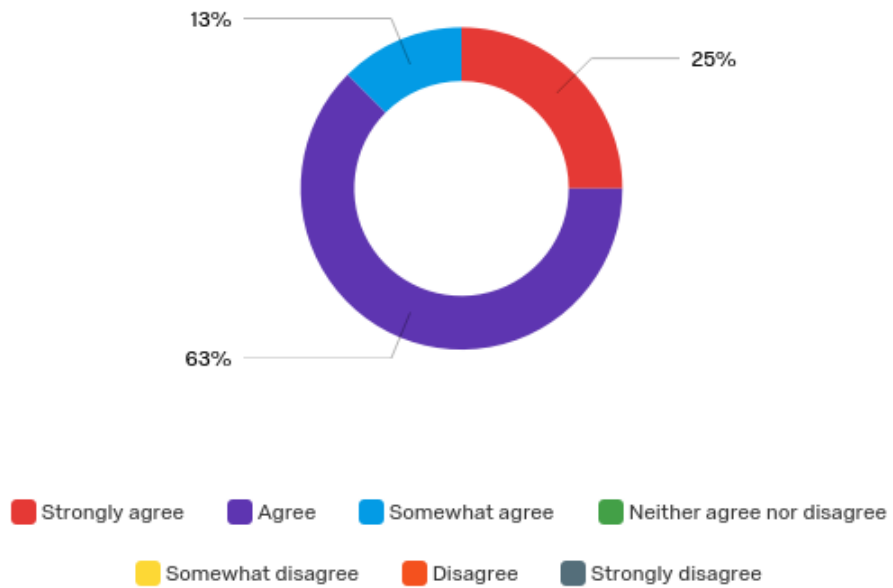
Q4 - Do you have any previous knowledge and/or experience with the application of 3D modelling in archaeology?



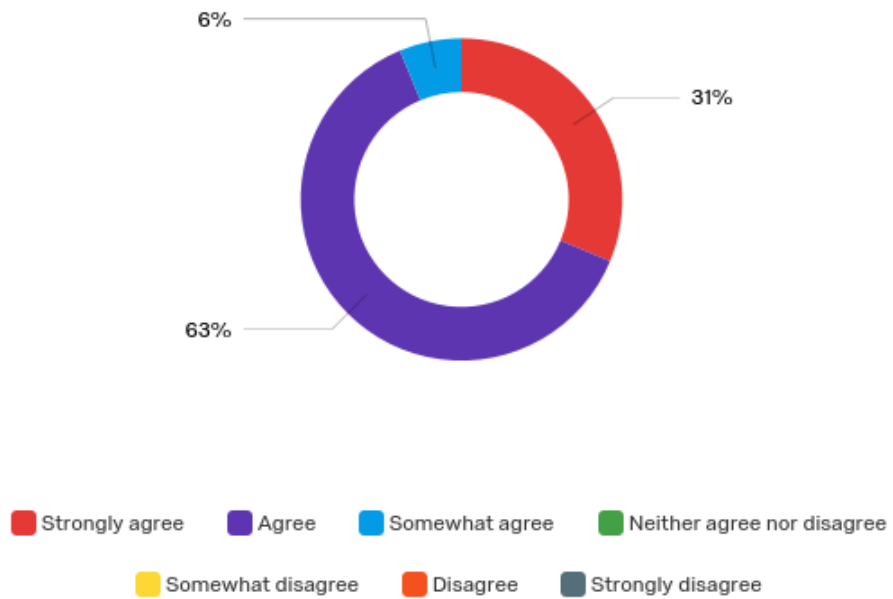
Q5 - If yes, how often do you use 3D archaeological visualisations for research/work?



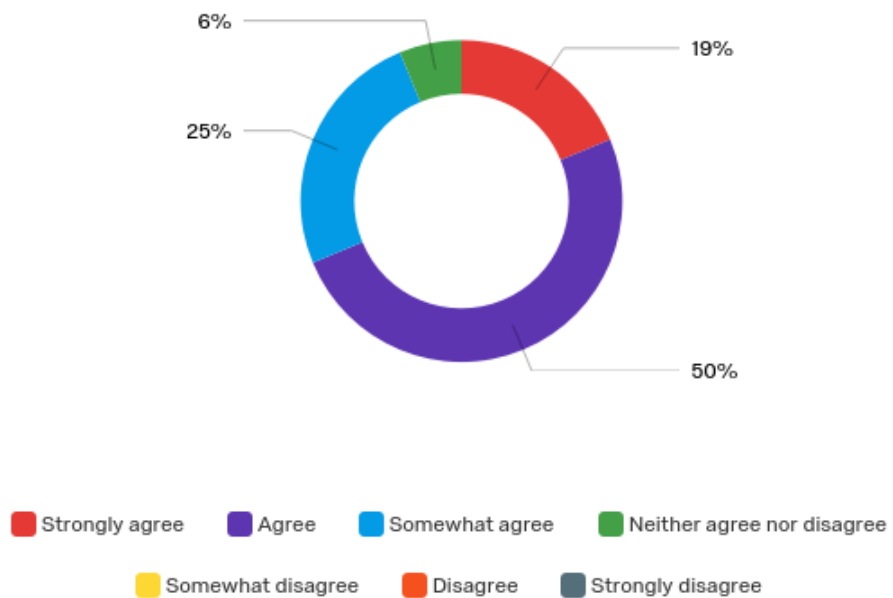
Q6 - The model improved my understanding of the site overall.



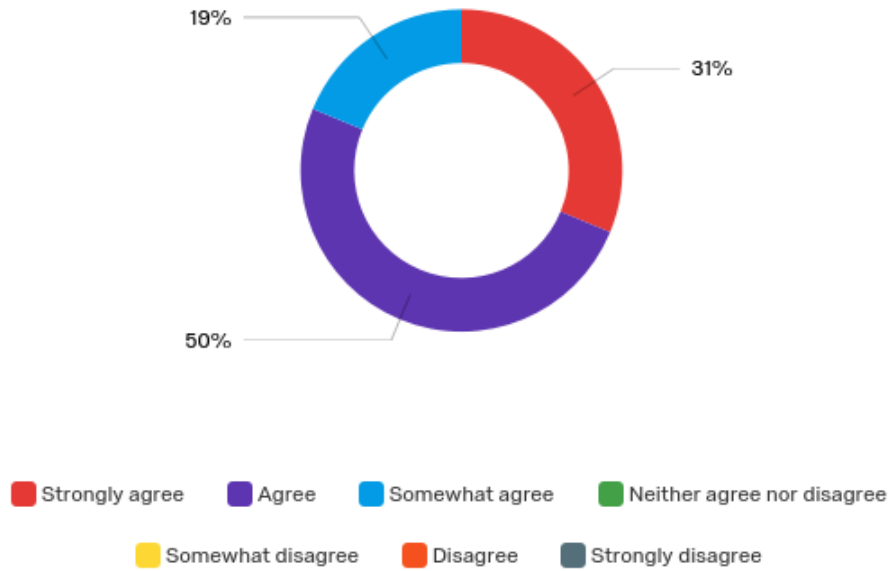
Q7 - The text descriptions improved my understanding of the site overall.



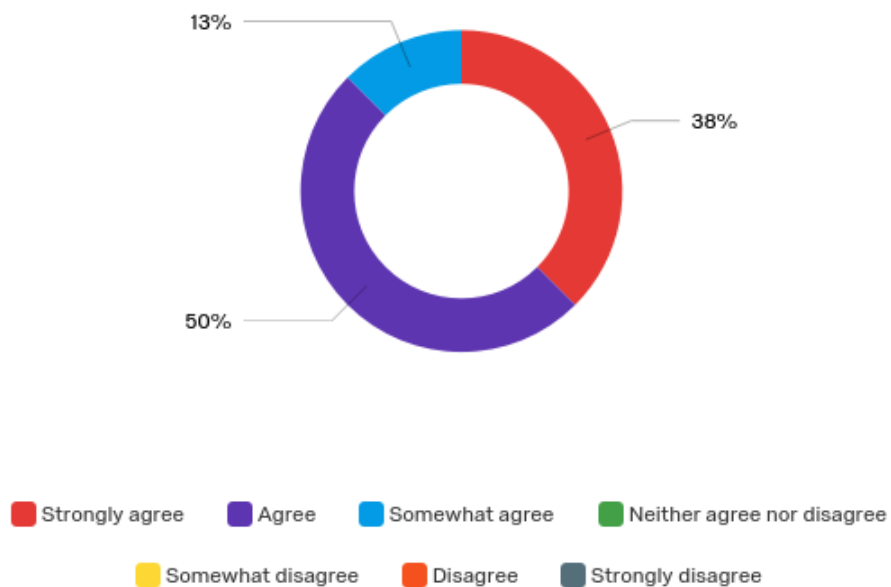
Q8 - The model improved my understanding of activities carried out within the Workshop Complex.



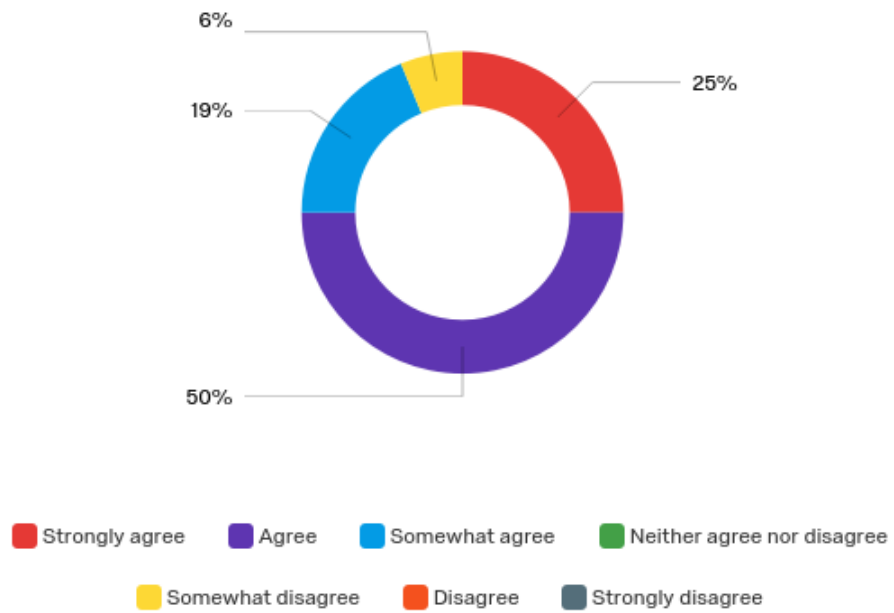
Q9 - The text descriptions improved my understanding of activities carried out within the Workshop Complex.



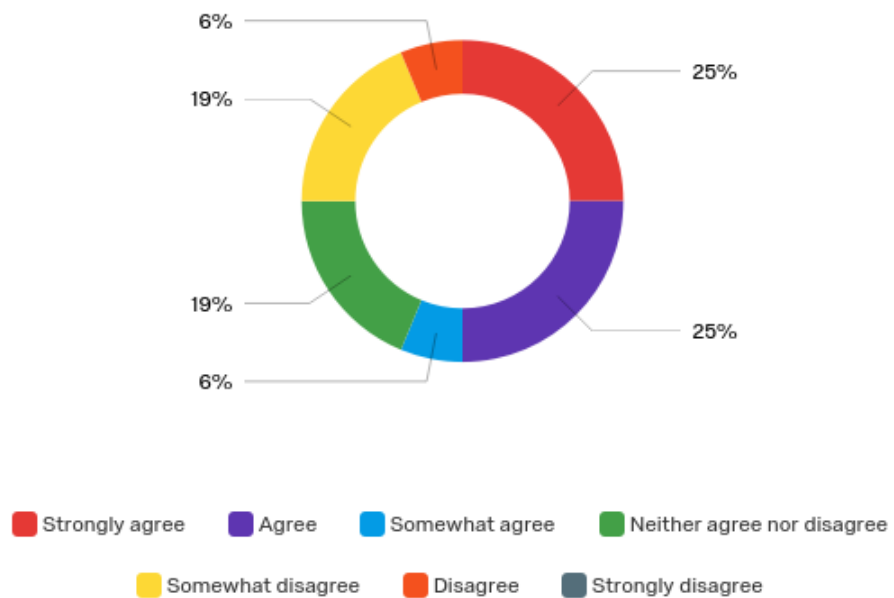
Q10 - The possibility to visualise both phases of occupation improved my understanding of the chronological evolution of the Workshop Complex.



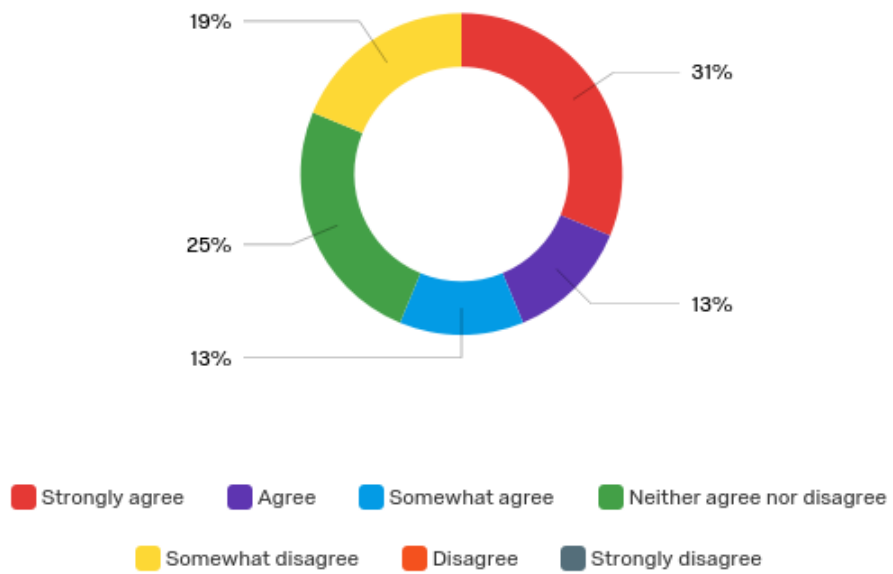
Q11 - The text descriptions improved my understanding of both phases of occupation of the Workshop Complex.



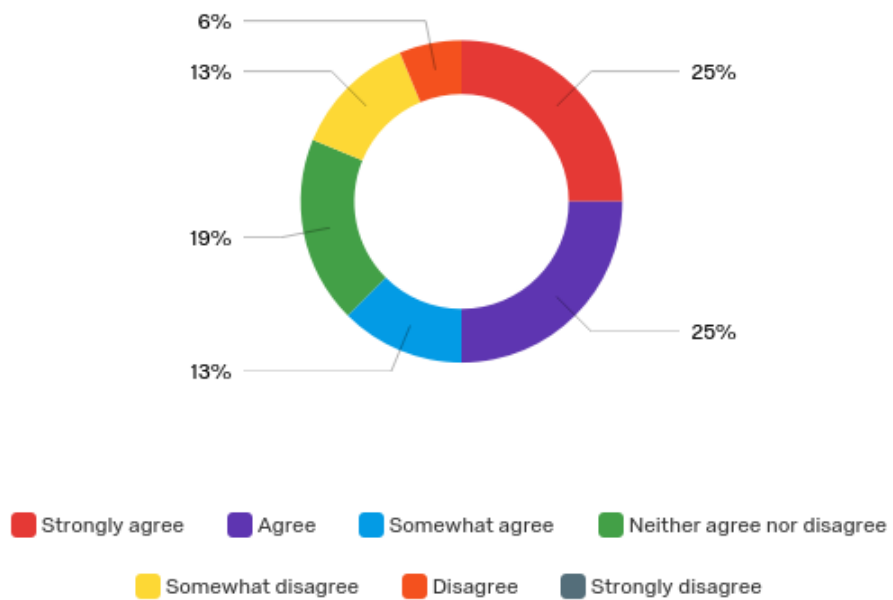
Q12 - The ability to see avatars improved my understanding of the model overall.



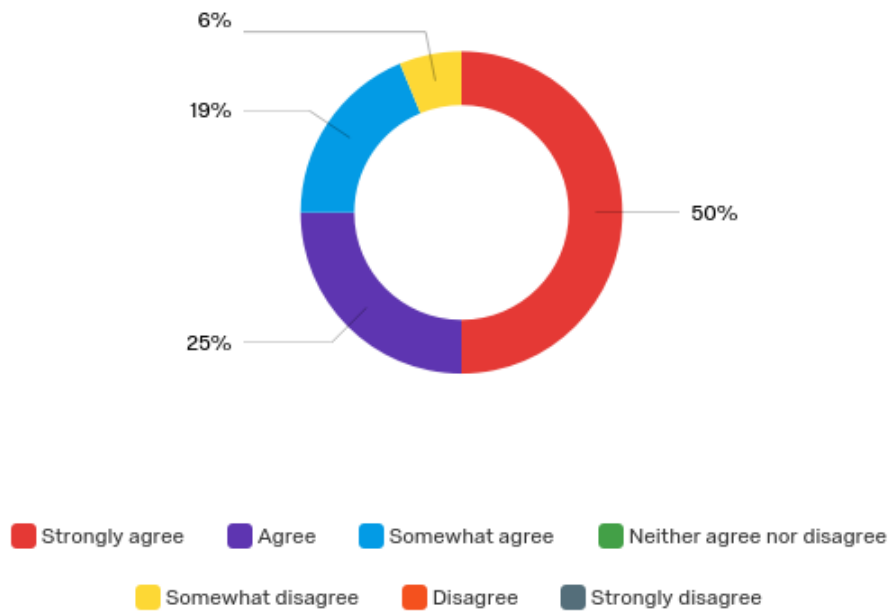
Q13 - The ability to see avatars improved my understanding of the use of spaces



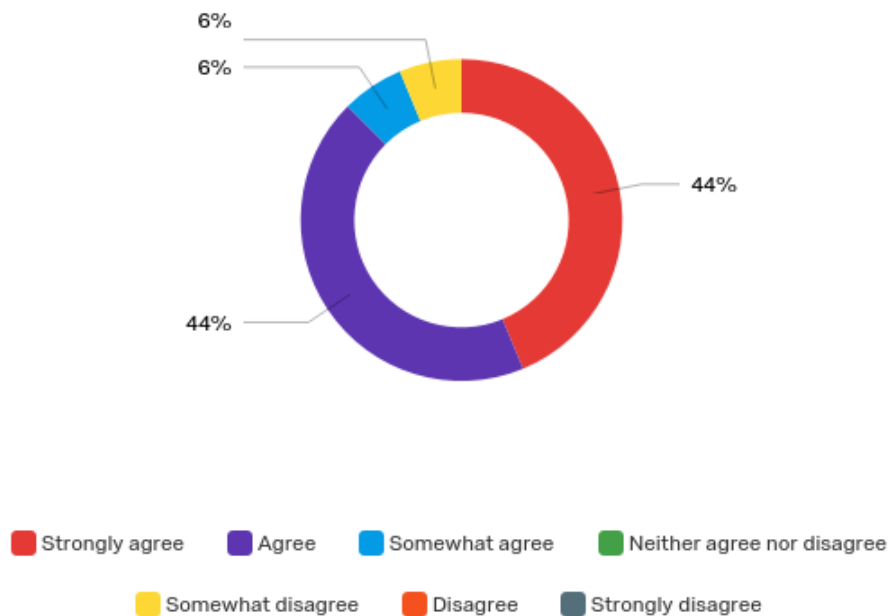
Q14 - Avatars provided a sense of people living in the space.



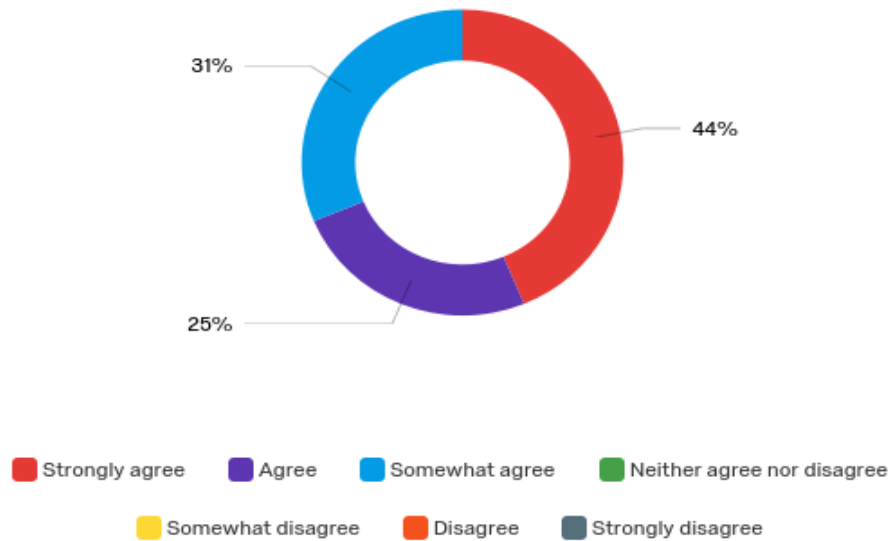
Q15 - I appreciated the possibility to navigate the model through a first-person perspective.



Q16 - The possibility to navigate the model through a first-person perspective improved my understanding of spaces.



Q17 - The text descriptions were clear and comprehensive.

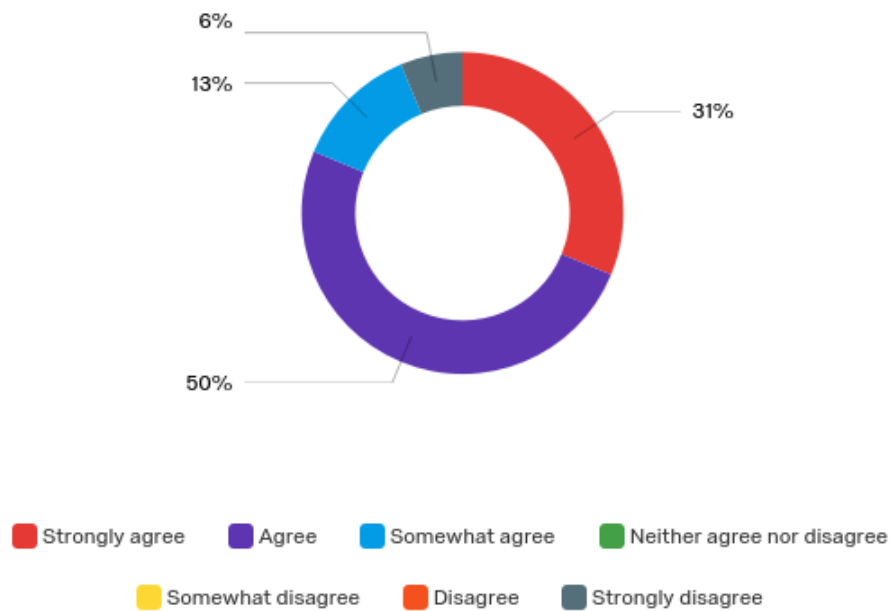


Q18 - If not, please explain why.

The descriptions were understandably technical, however, more user friendly summaries could have been included.

I am not sure if the texts descriptions were providing enough information regarding the transmission from the one stage to the other

Q19 - It was easy to interact with the model.



Q20 - If not, please explain which elements made the interaction hard to manage.

Could not figure out how to navigate with mouse.

The navigation via the mouse wasn't the best one

As a frequent gamer, I am used to being able to move the camera along axis of movement as well as just forward and back in the direction the camera is pointing. Once I had realised this the interaction was a lot easier.

Q21 - How would you evaluate this experience?

Statement	Not at all		A little		Mildly		Moderately		Somewhat		Very		Extremely		Total
	%	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%	Count	
It was engaging	0%	0	0%	0	0%	0	13%	2	13%	2	56%	9	19%	3	16
I felt bored	75%	12	13%	2	0%	0	13%	2	0%	0	0%	0	0%	0	16
It was stimulating	0%	0	13%	2	6%	1	0%	0	6%	1	56%	9	19%	3	16
It was a waste of time	100%	16	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	16
It was useful for learning	0%	0	0%	0	6%	1	6%	1	6%	1	44%	7	38%	6	16
It evoked a sense of another culture	6%	1	6%	1	6%	1	0%	0	38%	6	31%	5	13%	2	16
It fostered curiosity in learning more about the site and its history	0%	0	0%	0	13%	2	13%	2	19%	3	31%	5	25%	4	16
It fostered curiosity in learning about Cypriot history and culture	0%	0	6%	1	0%	0	6%	1	31%	5	31%	5	25%	4	16

Q22 - What do you remember about this experience? Please list at least 3 things.

Ease of use, sense of engagement above simply reading about the subject and quality of rendering.

Looking at the interior of the buildings- Using avatars-

materials, phases. visualisation

pottery, space and roofs

workshop complex, materials, avatar

Easy to understand, stimulant, immediacy

The possibility to see from avatar point of view. The chronological sequence. The information about the hotspots.

information about the site. the way to explore the space. a new way to think about communication of archaeological information

The ease at which the model could be moved through, the frame rate was very good.

The First-person viewpoint of the avatars, the ability to change between the two phases seamlessly, and the ease of clicking on an object to receive detailed, unique information

The pottery found. The stair. The walls.

Struggling initially to move the camera as I wished; being impressed with the sun/light control, but then I struggled to see the interpretive value, as it didn't seem to affect many of the spaces, learning more about a site and period I was previously unaware of

pottery, layout and whorls

avatars, differences between phase A and phase B, Description

Q23 - What did you like about this experience?

The potential it contains. Use in early years education would give younger children a chance to see that history can be 'experienced' in a sense.

Avatar

clarity

the view of both the phases, the text descriptions

I like the possibility of see the reconstruction of the workshop complex, walls and roof.3d model is useful to understand disposition of the rooms and materials.

I like the opportunity to see the life phases of the site

The interaction with the hotspots and with the objects in the rooms.

the fact that I didn't know what expect, and the possibility to explore a space that I knew in first person in a different way

The ease of use, having no prior experience with 3D models I was worried the model would be difficult to navigate and use, but this was definitely not the case.

the ease of navigation around the model, with the inclusion of phase visualization and day-night cycles

I liked the model. I particularly like the fact that you had the opportunity to hide the materials.

Was a very interactive learning experience, was much easier to visualise the site by seeing the reconstruction and moving around it than by reading descriptions alone.

trying something new

interactive experience

Q24 - What didn't you like about this experience?

Very hard to navigate and no guidance for navigation controls, had to guess to use the right mouse button.

the first person view and the avatars (and their view)

It's interesting and help to understand what in not visible today

shades of colours

I didn't find the avatars to be of great use, it was relatively easy to just position the camera at head height in one of the rooms without using the avatar cameras. They felt slightly unnecessary, but did not hinder the model in any way.

Maybe the navigation wasn't so easy

It would have been useful to have been able to click on the avatars to see through their view, instead I had to click through the views until I found the one I wanted.

snowy coloured ground surfaces

explanation about the site.

Q25 - Other comments

The use of modelling like this alongside the interpretive data could be used to great effect in early education to give children a more 'hands-on' approach to history without having to resort to logistically difficult (albeit fun) groundwork. Adapting this for VR could benefit those in later stages of education, remotely accessing sites or taking part in historical events. Those with dyslexia could benefit because of the more visual aspect. I feel that the possibilities are almost endless.

the view of both phases improves my understanding . I think it will be nice to improve the pottery and the materials

Interesting and enjoyable

A fantastic model, thank you for letting others experience this, inspiring for somebody who wishes to one day do this themselves.

I maybe wanted to see some vegetation like plants etc.

Appendix D

Interviews with Digital Heritage Practitioners and Museum Curators November 2017 - January 2018

Questions

- Q1. Could you please tell me something yourself? What is your professional role?
- Q2. What 3D interactive media have you been involved in making and/or evaluating?
- Q3. Was it/Were they designed for a specific purpose? If yes, what purpose?
- Q4. What approaches have you been using to evaluate audiences' response to such media?
- Q5. What's been most/least effective in terms of gathering useful data on audience experience?
- Q6. What results have you been getting in your studies in terms of audiences' reaction to these new technologies?
- Q7. Anything expected/unexpected that you've encountered through your work with audiences and 3D interactives?
- Q8. How would you sum up your experiences so far? Lessons learned that you have applied or will apply in subsequent projects?

Themes

1. **INTERACTIVE DIGITAL MEDIA: WHY, WHAT, HOW AND FOR WHOM:**
Interviewees' comments of their work: what kind of digital heritage resources they have designed and/or evaluated, intended audiences and main aims.
2. **AUDIENCE EXPECTATIONS:**
Interviewees' discussion on what they have learned through their work/research about what audiences expect from their experiences with interactive digital media in heritage settings.
3. **EVALUATION: AIMS, APPROACHES AND EFFICACY:**
Interviewees' comments on strengths and limitations of the different evaluation approaches they adopted.
4. **AUDIENCE RESPONSE:**
Interviewees' discussion on how various audiences perceived and responded to the interactive digital media they designed and/or evaluated.
5. **BEST PRACTICE, PARTICIPATORY DESIGN AND STORYTELLING:**

Discussion around interviewees' experiences and lessons learned, the role played by storytelling and the importance of adopting collaborative participatory approaches when designing digital heritage experiences.

Theme 1

Reference 1

ALFONSINA:

Quasi tutti non sono frutto di sperimentazioni di laboratorio, ma avevano un obiettivo finale: per esempio nel caso della mostra le Chiavi di Roma le installazioni erano state realizzate con lo scopo di creare una mostra interattiva ed itinerante da essere allestita in quattro musei europei. Chiaramente nella scelta della tecnologia, nella scelta del target e nella scelta dei contenuti ci si è basati molto sulla tipologia di testi che volevamo utilizzare e sulla tipologia di testi che avevamo nei musei ospiti. Con Etruscanning il pubblico è stato molto variegato, perché il pubblico dei Musei Vaticani è tutto e di più, e anche nel caso di Villa di Livia il target è stato abbastanza ampio per fascia d'età, ma specifico per quanto riguarda la formazione perché chiaramente parliamo delle Terme di Diocleziano un complesso difficile da spiegare.

Reference 2

ARETI:

In terms of making, web apps, for example. I will present one today (York Heritage Research Seminars-16th January 2018): that is more of a critical design of a digital interactive installation. The context is very different in most of the cases, so the web app I have mentioned before it was an old project, 2011, and it had an archaeological context and there were archaeologists in the team. Now we work more with social history, migration, European identity and that sort of things. I have to say: I don't make them myself, I am in the design team, I work with the content.

Reference 3

ARETI:

The projects I was involved in were part of research projects, so they had the purpose to answer the research questions. In most of the cases those projects that I had designed outputs were digital heritage applications, we developed those applications in order to answer research questions which are of the design, so for example: "how do we support dialogue?" or "how do we support speculation within heritage interpretation?". Of course, all of them are deployed in real life situations and long term, so for example the web apps we developed in 2011 are still up and running. In that respect they also had an

audience in mind, but they didn't have a purpose to answer someone else's question, as the questions were from within the research.

Reference 4

ARETI:

That again depends on the context. For example, one of the key principle in the work I do as a designer, is the idea of a situated action: so depend on the situation and the installation you need to think of how you design before that situation. A project that we did with the web apps it was about rock arts in a rural site and we didn't know anything about the audience, we started assembling the audience through the research project: we observed the site, we figured out more or less what kind of people were visiting and we went from there recruiting groups to help us with the design. That's how I was trying to differentiate between products developed by museums or heritage sites that have a specific audience segmentation or work in relation to a specific audience. So, for example, for the installation I'll be talking about today the audience was given because it was in a very specific gallery within a permanent exhibition, so the museum had a very good view of what the audience would be, but we were not asked to design something for that audience and we were given the permission to experiment with space and look at different audience.

Reference 5

ERIK:

Within my PhD, for example, I built them from scratch and they were archaeological environments and they were in-games with three different interactions across the environments.

Reference 6

EVA:

Io sono qui al CNR più o meno dall'inizio degli anni 2000 e come background sono conservatore dei beni culturali specializzato in storia dell'arte, in particolare sul filone arte contemporanea, anche se poi come sappiamo le tecnologie digitali si applicano un po' per tradizione e forse anche un po' per necessità molto al campo dell'archeologia, quindi comunque venendo qui a lavorare al CNR., prima con assegno di ricerca e poi da diversi anni come ricercatrice a tempo indeterminato. Mi è capitato spesso di lavorare a progetti legati all'archeologia virtuale, sia per quanto riguarda il paesaggio archeologico che per quanto riguarda lo studio, la documentazione e la ricostruzione virtuale per la

comunicazione di siti archeologici e di oggetti, quindi diverse scale di dettaglio e ovviamente una metodologia che ha elementi in comune ma anche differenze.

Reference 7

LAIA:

The virtual world was not meant for dissemination, but it was built on purpose for the research question which was related to presence.

Reference 8

LUIGINA:

I am a Professor in Human centered Computing at Sheffield Hallam University and my job is mainly to do research and my field is human-computer interaction. One of the domains that I have been studying for about 20 years is cultural heritage museums and exhibitions, but not only cultural heritage, more in general things that matter to various communities, so in my role I run research projects that are mainly qualitative projects looking at the role of digital technology for heritage.

Reference 9

LUIGINA:

Obviously, yes. The way I work has always to do with understanding end users.

Reference 10

MARIA:

The interviewee has been involved in projects related to virtual reality infrastructures at and exhibits the Foundation of Hellenic World and interactive virtual learning environments for children.

Reference 11

MARIA:

The interviewee responded that they were mostly designed for educational purposes.

Reference 12

SOPHIE:

I was involved in a project a couple of years ago where we were going to create some sort of digital resources for teachers, so we specifically went out and did observations and focus groups with teachers primary and secondary level across the region, looking at how they were using digital contents

Reference 13

SOPHIE:

Yes, each of them were designed for a very specific purpose and usually with a quite specific audience in mind. The big project we just did we were looking at teachers and even so is a massive range, because some of the teachers had just come out of universities and were doing NQT while others were on their way to retirement, so a massive range of skills. Then within the museum the three little projects I have been evaluating sending our app in the gallery here at the museum: we have a case which has hundreds of objects, there isn't enough room for labels, so we had an app made that gives you more information about all the objects. This app was designed to give our audiences some ideas about how they can access a little bit more information and then in the Sedgwick Museum of Earth Sciences they had another case, a display which is a very old cabinet containing collections, but the cabinet couldn't be opened for conservation reasons so they designed this app to give visitors a view into this very early collection without compromising the preservation of the objects.

Theme 2

Reference 1

ALFONSINA:

Questa cosa dell'imbarazzo era una cosa non prevista, che nessuno degli sviluppatori ma neanche i responsabili della valutazione e Maria Roussou sia aspettavano. Un'altra cosa che era inaspettata era la grafica: al pubblico non interessa quanto avanzata e perfetta sia la grafica, che sicuramente attira, l'importante è che sia qualcosa di familiare e credibile e poi che sia una storia che lo tenga incollato. Diciamo che sulla narrazione ce lo aspettavamo, sulla grafica no perché per tanti anni abbiamo lavorato sulla grafica, sul fotorealismo e sulla caratterizzazione dei personaggi e alla fine ci siamo accorti che questa cosa non portava a nulla mentre cose più semplici erano sufficienti

Reference 2

ARETI:

In terms of unexpected results, one thing that we came across while studying this interactive installation we installed in a museum in Newcastle, is that people expected it to be all singing all dancing, that it would be something spectacular and because the installation was trying to think about reflection it was a very quiet installation and people didn't expect that in a gallery all the other installations were touch screens with sounds and things like that.

Reference 3

ARETI:

What I have understood from the way I worked in these research projects is that it is easy for someone in a participatory context to assume authority, but it is also equally easy to be exactly in the opposite side, which is try to respond to all of the needs and requirements and requests of the users or stakeholders and I think that the biggest challenge but also the thing that I keep in mind is that the reason why I am leading a team is because I have a design sensibility which a need to maintain and take responsibility for my decisions, while listening actively to other people's positions. Also, I never put the technology first, that doesn't mean that I wouldn't use innovative technologies, it's just that we didn't use them for the sake of using them. For me technology has to be able to contribute to something in order to be selected. Technologies bring with them assumptions of use, so for example with the website if you put out an experimental website-we are trying to work around some experimental interfaces for collections- one of the key fact is that people have very longstanding a solely understanding of what a certain database is likely to look like, so they don't know what to do with them; so in a way the website is a technological tool that brings many socio-cultural assumptions which basically shape the experience and the expectations of the users

Reference 4

ERIK:

That they don't want them and I always wonder if they chose them because they are exposed to new technology. But secondly, I found that while they want contents on display they also want simple clear things for navigation, because they get very confused by complex navigations.

Reference 5

EVA:

Allora i risultati che abbiamo ottenuto sono innanzitutto che l'impatto delle tecnologie virtuali all'interno di un museo ha delle potenzialità enormi, perché comunque il museo è una situazione di fissità; se si propone una situazione dove c'è movimento, suoni, storie, è ovvio che c'è un impatto se non altro perché si differenzia da quello che è normalmente il museo e poi perché è un contesto di narrazione, che è ciò che il pubblico vuole dentro al museo, vuole interagire e sentirsi immerso in una storia e questo appunto sentirsi immerso in una storia: mi sono sentito veramente protagonista", "mi

sembrava di essere lì", "era interattivo" sono i commenti più ricorrenti, quindi è evidente che sono aspetti che hanno un immediato impatto

Reference 6

LAIA:

Yes, I have to say there is an expectation, or I would say that experts in cultural heritage what they think audiences expect it is not really what audiences expect. They are concerned about different things. People really, audiences I would say they still want to be transformed, to be amazed, you know. So, let me put it in a different way: to me archaeologists and people from cultural heritage they do think in terms of information, while other people and audiences want experiences. I would say that's the major difference between them and this is something that needs to be understood and changed from our side because people are still not getting engaged and we will continue spending money and resources for something that in the end it is not as successful as it could be. So, people really want to be moved, they want to travel to the past, to see people like them so they can relate to them, they want to say "Wow, tell me a story". They are interested in things like "why the statue's nose is broken", while the archaeologists are interested in telling them about the chronology and things that don't really make sense to people.

Reference 7

LAIA:

I have come myself to a sort of revelation in terms of approaches and methodologies, I have also realised myself some applications for the Chess Project and I think that the important thing now is to abandon this more informational perspective. It is everything: the approach, the information, the interface-this individual desktop or mobile or other device that is just for one person- and go more towards full body, multisensory experiences that are also designed for each single case. The reason why I am here at the full-body interaction lab is to be able to design and see how we can really integrate in the cultural heritage field more tangible and multisensory experiences. I really hope that we will be able to develop more multi-sensory group-shared experiences. Second thing, and this also comes from the human-computer interaction field, is to evaluate always, because up to now there is a really small percentage of projects that do it. I think it is because cultural heritage people take for granted that everybody is interested and the way to communicate is universal and valid for anybody and it is not. For example,

studies have proved that photorealism can be counterproductive, but we still think that it is all about visualisation and it is not.

Theme 3

Reference 1

ALFONSINA:

Allora diciamo che in generale nella pipeline di valutazione che si possa ritenere tale è molto importante che la persona che poi va a fare la valutazione sia un qualche modo partecipe del processo creativo. In generale ci sono delle scuole di pensiero per le quali la persona che la fa la valutazione non deve far parte del processo di creazione e design per avere una valutazione obiettiva, però questa cosa è stata sfatata qualche anno fa. È importante coinvolgere i responsabili della valutazione nel processo creativo e fare pilot test prima del rilascio del prodotto.

Reference 2

ALFONSINA:

Allora io quando sono arrivata al CNR per i primi anni ho svolto solo test di validità, quindi per me a livello contenutistico l'approccio quantitativo era fondamentale perché mi dava un indice abbastanza netto e chiaro della validità, che poi è legata ad altri indici quali l'usabilità, la navigabilità e quant'altro. Poi siamo passati a fare una cosa che si chiama scenari guidati, che è un qualcosa che è stato insegnato dalla scuola tedesca e proprio da Schoenhofen: praticamente è una procedura molto semplice però efficace: ovvero l'utente in maniera cosciente si trova di fronte a questa che deve utilizzare, quindi una situazione attiva, e gli viene chiesto di compiere determinati task tipo "prova a capire cosa puoi fare con questo tasto", l'utente è libero di fare vari tentativi perché non c'è un limite di tempo ma deve solo raggiungere l'obiettivo che gli hai suggerito, e poi devi chiedere all'utente di fare un'autovalutazione della sua esperienza e poi confrontarla con la tua valutazione della sua esperienza, e questa cosa qui si chiama scenario guidato ed è stata molto utile perché: a) sembra un pochino quello che sono le tematiche del questionario cioè dell'anonimicità della ricerca, tante cose non le puoi approfondire, tanti atteggiamenti non li riesci a cogliere, come la mimica facciale ed il comportamento; b) soprattutto in questo modo metti l'utente in una situazione di comfort perché non è obbligato a scrivere pagine e pagine di questionario o, magari se è di fretta, a stare lì e fare l'intervista. Comunque, utilizzo ancora le interviste, dalla mezz'ora all'ora, i questionari li uso ancora molto ma li ho ridotti in termini di quantità di pagine e di domande e li ho migliorati molto dal punto di vista del condizionamento della

risposta e in questo mi ha aiutato una linguista, Maria Roussou, per quanto riguarda la formulazione della domanda in modo da non suggerire o veicolare la risposta. Diciamo che come protocollo di valutazione utilizzo un mix di queste cose: questionario, scenario guidato ed osservazione, che è una cosa imprescindibile perché quello che ti dà l'osservazione non te lo dà nient'altro.

Reference 3

ALFONSINA:

Dipende molto molto dal contesto in cui viene svolta la valutazione e dipende moltissimo dall'area geografica. Chiaramente, avere una audience nord-europea, avvezza ad un certo tipo di comportamento anche proprio all'interno del museo, ad una apertura mentale e preparazione scolastica comunque nettamente superiore, la valutazione in qualche modo è più onesta nel senso che quello che ti dicono rispecchia quello che pensano. La parte mediterranea, non abituata alle osservazioni e alle valutazioni, vedendo le valutazioni come indagini di mercato, e con un livello culturale ed una apertura mentale un po' più bassa, con un comportamento nei musei e davanti alle applicazioni diverso, soprattutto qui in Italia dove certe tecnologie sono ancora poco utilizzate, è chiaro che non tanto quello che ti dicono ma proprio il contesto storico che mi ritrovo influenza tanto.

Reference 4

ALFONSINA:

Diciamo che in generale possono individuare 4 macroaree tematiche: 1. l'usabilità, quindi ciò che riguarda l'aspetto pratico dell'interazione; 2. contenuti, quindi la narrazione/storytelling; 3. accoglimento dei contenuti multimediale; 4. apprendimento cognitivo.

Reference 5

ALFONSINA:

Quando parliamo di apprendimento cognitivo io valuto sempre: attenzione, memorizzazione, elaborazione e concentrazione.

Reference 6

ALFONSINA:

Una cosa importante è cercare sempre di fare valutazioni con persone che non sono esperti, al di fuori dell'ambito della ricerca, perché altrimenti non ho un dato valido.

Reference 7

ARETI:

I have done evaluations where I was commissioned to do evaluation of someone else's work, apps or other installations, and those commissioned evaluations sometimes need to respond to the brief of the people who commissioned you to do it. In my own work, I very rarely follow the traditional evaluation approach, formative or summative, because in many ways the design process, for example if it's a participatory process or the iterative study of an artefact within space, one might call it evaluation but for me it's a research process. I'm using primarily qualitative approaches: interviews, observations, semi-structured interviews and focus groups. I always try to add something different in my mix. Within my research projects sometimes I have the flexibility to practice some that I wouldn't necessarily use in a commissioned process, so I have used diaries or apps to understand how people live with their apps for a long period of time. One of my students is using go-pro to have a first-hand recording of a visit with a mobile app; we did a project where we used recording glasses, so basically, we sent visitors into the galley using these glasses and after we showed them the video they made to discuss their experience.

Reference 8

ARETI:

In my experience, it depends on what the question is: for example, if you are interested in finding out how people make meaning of an app over a period of four weeks you are not going to get this from Google Analytics and it would be entirely unmanageable doing this using from diaries of hundreds of participants. So, pragmatics come into it. Personally I measure values in terms of lessons for research in qualitative methods, so this idea of talking to people and also allowing people not to talk just in an interview situation but get people to express themselves in ways that are more familiar to them: so, for example, when we Evaluated the web apps we did the shadowing in the field and the post-visit interviews, but also we did mind maps based on prompts from the interpretation and in fact that aspect of the Evaluation gave us a lot of insights on something that interviews couldn't give us because we were looking on how people experience sense of place.

Reference 9

ERIK:

During my PhD I used several ones, mainly because it was focused on the evaluation of the existing Evaluation approaches, so I think the most effective one was to ask general knowledge questions like what they remember and what they have learned during the experience, then ask them questions about the culture and how much time took them to complete things and how many of the tasks they have completed. I asked them to rate the environments with a scale from 1 to 7 in terms of local culture authenticity, interactivity and engagement; I asked them questions to see if they have observed things in the environment and which environment took less time to finish. Now we evaluate more experience rather than tasks completion.

Reference 10

EVA:

Guarda, noi abbiamo cominciato a fare valutazione sul pubblico a partire dal 2012 in maniera più sistematica e questa è una cosa che ho particolarmente a cuore altrimenti non si ha la percezione di cosa di sta facendo. Innanzitutto, una considerazione monte: è molto importante che la valutazione, cioè quando si discutono i risultati della valutazione, si consideri dove questa valutazione è stata fatta. Mi spiego meglio: se io ho un'installazione di realtà virtuale che è stata pensata per uno specifico spazio, per uno specifico contesto mettiamo un museo e io ho costruito dei ritmi nella comunicazione che sono pensati per uno spazio dedicato, abbastanza isolato, scuro, silenzioso, dove immergo il visitatore in un'esperienza; allora se io questa l'installazione prima di metterla in un museo la valuto in un laboratorio oppure la valuto all'evento fieristico dove viene tenuta lì per tre giorni e ci stanno ondate di visitatori, caos, rumore etc. è chiaro che posso fare delle valutazioni, ma non certamente sull'impatto cognitivo, sull'esperienza sensoriale che ho appena vissuto.

Reference 11

EVA:

Per quanto riguarda gli aspetti che noi valutiamo, sono relativi a diversi aspetti. Allora innanzitutto partiamo dall'attrattività di quello che noi proponiamo (adesso sto parlando principalmente all'interno dei musei) quanto ciò che noi proponiamo attrae l'attenzione del visitatore. Visitare un museo è un'esperienza interattiva in se stessa perché l'utente sceglie il percorso, sceglie dove andare e dove fermarsi, quali vetrine predilige e loto spesso queste scelte sono casuali per una persona che non è esperta, cioè ci sono degli

elementi che attraggono più di altri e quindi è importante se noi vogliamo attirare il pubblico alle nostre applicazioni creare qualcosa che sia un elemento di attrazione ed in questo ci può aiutare la grafica, il suono, il tipo di tecnologia e l'interfaccia che si crea che ha un impatto immediato: per esempio l'interfaccia naturale che utilizza i gesti del corpo per interagire con la realtà virtuale, una volta che il visitatore è stato attratto sono in grado di mantenere la sua attenzione o dopo dieci secondi il visitatore se ne va? per quanto tempo rimane? per quanto tempo interagisce? Allora c'è tutta una parte basata sull'osservazione che riguarda proprio l'attitudine che il visitatore mostra rispetto al contenuto digitale, quanto tempo riesce a rimanere davanti all'installazione, se comunque mostra di avere un atteggiamento stressato oppure rilassato, se si posiziona correttamente quindi sia l'atteggiamento psicologico che la capacità di utilizzare il sistema. Dopodiché, all'osservazione che è una delle cose più importanti della valutazione e che deve essere fatta senza che l'osservatore risulti troppo invasivo perché il visitatore non se ne deve accorgere altrimenti poi cambia atteggiamento, viene affiancato molto spesso un questionario, quindi uno strumento quantitativo anche se noi molto spesso mettiamo anche domande di tipo qualitativo con risposte aperte, dove chiediamo cosa ha attratto dell'installazione, quali sono gli elementi che il visitatore ha preferito e tutta una serie di domande sull'usabilità, il gradimento e poi facciamo delle domande sui contenuti ovviamente e quindi cerchiamo di capire se al di là che si possa essere divertito o meno cosa il visitatore abbia compreso e memorizzato. le domande sui contenuti vengono poste sul modello di risposte sbagliate o giuste, oppure una domanda aperta dove deve scrivere qualcosa e diciamo che le risposte sui contenuti sono generalmente anche quelle che hanno la maggiore percentuale di evasive, ma non tanto perché le persone non si ricordano ma perché sono più impegnative. Io devo riempire un questionario e tu mi stai facendo delle domande sui contenuti, io prima di dare una risposta ci devo pensare, devo vagliare se tu mi stai dicendo che sono sbagliate o giuste, o parzialmente giuste e quindi diciamo che abbiamo sempre notato che questa parte relativa ai contenuti è difficoltosa per l'utente. Poi abbiamo tutta una parte anagrafica e poi a questo affianchiamo uno scenario guidato, vale a dire diamo il tempo alla persona di prendere confidenza con l'installazione e la tecnologia, dopodiché ci riveliamo e diciamo guardi stiamo facendo un'indagine, se ci può aiutare le vorremmo chiedere di svolgere alcuni compiti specifici quali andare nel menu, selezionare un percorso e provare attraverso il percorso virtuale a raggiungere un certo contenuto. in questo modo cerchiamo di capire, da task molto semplici a task più complesse e articolate, se il visitatore non opera in maniera casuale ma ha il controllo sul sistema.

Reference 12

EVA:

L'osservazione credo che sia assolutamente fondamentale, l'unica accortezza è non farsi notare e non fare accorgere il pubblico. Il questionario anche trovo che sia qualcosa di estremamente utile, chiaramente ci sono tutta una serie di criteri, del tipo fare domande il più possibili neutre in cui non suggerisci la risposta, oppure quando hai una risposta multipla metterle tutte della stessa lunghezza, comunque cercare di tenere un bilanciamento in modo da avere una cosa il più possibile neutra; oppure, ad esempio, certe volte abbiamo notato che è meglio non fare questionari molto lunghi perché poi il pubblico si stanca e non risponde, e anche magari non mettere la parte più impegnativa del questionario in fondo per lo stesso motivo.

Reference 13

EVA:

Comunque, una cosa che noi valutiamo sempre in maniera sistematica è la differenza tra il pubblico attivo, cioè coloro che effettivamente interagiscono con il sistema, e il pubblico che invece rimane soltanto come spettatore, perché noi lavoriamo sempre su tecnologie che sono inclusive.

Reference 14

LAIA:

I think I went from, let's call them traditional visitors studies from a museum point of view, to a more human-computer interaction approach or methods of investigation, which are not so different, the latter I would say it's more implicit. So, to put an example, at the very beginning I would triangulate users' information and questionnaires before and after the experience, and what I did was use that both tools to the fact of having ict so not just analysing an exhibition, but we wanted to see the role of technology in there. And now, more recently, I've gone into multiple analysis, which is something that is done in the field of human-computer interaction and... more or less it is the same, just more structured and, again, if you want to analyse very much in depth observations.

Reference 15

LAIA:

Observations, for example, when you don't have video possibility of recording, for example was a challenge because you have to record everything on spot, you can't have multiple researchers going through everything, so research suffers from that because it's

less orthodox, it's less objective and someone would say it's valid for research. So, it depends on what you count on, what tools and technology, but also questionnaires sometimes if they are not well written, especially tests beforehand, they can also be less effective. For me it depends on the circumstances, everything can be valid. So first: be aware of what you want to know without the constraint of context and situation, and then decide all the tools...several tools combined, triangulate everything and then test it and then this will be the most effective as possible, that's my answer.

Reference 16

LUIGINA:

I am a Professor in Human centered Computing at Sheffield Hallam University and my job is mainly to do research and my field is human-computer interaction. One of the domains that I have been studying for about 20 years is cultural heritage museums and exhibitions, but not only cultural heritage, more in general things that matter to various communities, so in my role I run research projects that are mainly qualitative projects looking at the role of digital technology for heritage.

Reference 17

LUIGINA:

I have used loads throughout the years, depending on the project, so I have used plenty of observations shadowing people around in installations and exhibitions and documenting what they do both with video and notes, photographs. We have done interviews with people before and after the visit and asked feedback, questionnaires, surveys. We have done observations without people, so with fixed cameras and looking at more quantitative indicators: in a recent exhibition- and being under MeSch we have thousands of visitors we couldn't have possibly followed them all- we had fixed cameras and then we counted things that happened, we did they stop, what was the station where most people went and so forth. I haven't done much in the way of experimental studies, but in terms of field approaches almost everything. We have done post-exhibition workshop to evaluate, with museums where you can actually go and find visitors again, ask them back, do workshop where you get together and present them examples of interactions and they comment on their memories, what they liked and what they didn't like, what they remember and so on. Of course, there are museums where you can't find visitors again. The most common approach is probably a mix of observations, interviews and questionnaires

Reference 18

LUIGINA:

It depends on what kind of data you are looking for and what your evaluation questions are. I find surveys of limited use, they are very useful when you are getting a lot of visitors and you want to get something up from all of them, so they can tell you something that you can't possibly get with interviews, but I find that on their own they can be a little bit shallow. Usually we always combine surveys with something else, so if we know we are going to have thousands of people coming in we get them to fill the survey, maybe we get 300 responses, which is pretty good, but then maybe we try to interview 80 people and get a slightly deeper set of data. At the same time, the qualitative and individual approaches they might go deeper, but they don't tell you much about the whole population. I don't think there is a tool that is not effective and one that is effective, I think that it is a lot down to what are you asking, who are asking, what access do you have to these people. So, I think they all have some usefulness, you just have to be careful when you plan how you are going to do the Evaluation, making sure that you try and get as much relevant data as you can. I am a great believer in mixed methods, so I always try to combine at least two techniques.

Reference 19

LUIGINA:

It changes wildly, also because the technology changed and it is not just the technology, is the type of exhibition and we never ask questions about the technology. You ask questions like: "what did you remember about the exhibition?", "what was your favourite thing?". I find that a very effective question in interviews is: " If you were to tell your friends about the exhibition you saw today, what would you tell them?", and it really interesting how people tell the story, because they mention the technology because they have used it, but it is never the main thing they mention.

Reference 20

MARIA:

The interviewee has been using mainly qualitative approaches, specifically observation and semi-structured interviews, but also questionnaires.

Reference 21

MARIA:

[talking about pros and cons of quantitative and qualitative approaches, questionnaires and interviews] [...]that break their experiences and that results in different

answers...also the fact that they have to re-muster the event after the experience, remember to answer the questionnaire or to respond to an interview can also give you different data than what in fact they did experience, because they have forgotten and they are out of context when you ask the questions. There are problems in the sense that there are a lot of data to process, to go back and view all the video-based audio and try to make sense out of that and another problem with qualitative Evaluation is that you have to find a framework to analyse that data and these framework [...]are very time-consuming, there is a lot of manual labour involved, so I still do think that qualitative methodology is the most appropriate methodology to use but there are the problems that I mentioned before.

Reference 22

MARIA:

It depends again on the project and also it depends on the time, so I have been doing this for many years, decades, and of course this kind of technology, especially immersive virtual reality now they wear glasses and they have stereoscopic vision of these [unintelligible] have always been very impressive and so, there is this novelty effect that really impacts the experience and has always been the struggle to see how you can design something that goes beyond the novelty effect, so that it is actually meaningful for your visitors beyond the wow effect that they experience when they see this. So, it is hard to actually get to that deeper impact, the Evaluations have not been very useful in showing us how these kinds of experiences impacted visitors in the long term and that means that you need to set up a kind of long-term Evaluation, which is difficult to do when you have a virtual reality experience open to the broad public: they will come and have this experience for ten, maybe twenty minutes and then they will leave. It is very hard to set up a longer impact study based on ten-twenty minutes experience, you know, results are not very conclusive I would say. I can say that everyone is always impressed of what they see, but I really don't know whether that impression has a lasting impact.

Reference 23

SOPHIE:

I was involved in a project a couple of years ago where we were going to create some sort of digital resources for teachers, so we specifically went out and did observations and focus groups with teachers primary and secondary level across the region, looking at how they were using digital contents.

Reference 24

SOPHIE:

I do a lot of visitors' observations in my current role. We did some kind of guided interviews where we asked people to look at the app, we watched what they did and did the interview at the end; I have done some with just timing and observations without them knowing that we were doing it. With the teachers, we set up a few websites that we wanted them to look at and gave them a specific task asking them to find something to fit with their current teaching plan, so we asked them to find information, and we recorded and observed what they were doing and did interviews at the end. So, it's been kind of a combination of different approaches.

Reference 25

SOPHIE:

I think, and certainly the biggest lesson I learned was sitting and watching the teachers, because without me giving any input to what they were doing, so: "here is your task, find something to fit with your current planning and here is the website that we want you to use", and we knew that there was something in the website fitting their planning, and just letting them free and observing what they were doing, I was with three teachers of a primary school using a particular website and somehow they ended up in a Russian website. Sitting and watching them I could totally see how they got there, it was just a couple of clicks, and they didn't realise their drawing further and further away from they were started, that kind of process and listening them to say: "I don't know where I am, I am not really sure what I'm doing", witnessing that reticence and nervousness was a massive lesson to me. There was one group of teachers that we had a Pinterest page for and they were critiquing Pinterest, which wasn't really the aim. We also observed classed in that project and gain sitting in a classroom where all of the students had iPad, it was an art class and the teacher was saying it was much better now, because its preparation was very different and all the people were Google searching pieces of fruits, so rather than actually having fruits for them to draw they were looking for images and then drawing, so that observation I think was the most useful method of really seeing what people do in their own natural environment. I think that the least useful piece of evaluation I have been involved with, are the ones where the museum or curators' intentions are not very clear in the end-product and so because they don't have a really defined audience for what they are trying to do and the parameters are not sorted out at the beginning, sometimes you come in to evaluate something and you can't do it because you don't know what criteria you are looking against, so it is not possible to see

whether it was successful or not. I think that sometimes people use digital media as a brain dump and then expect other people to be able to find what they want.

Theme 4

Reference 1

ALFONSINA:

Diciamo che in generale possono individuare 4 macroaree tematiche: 1. l'usabilità, quindi ciò che riguarda l'aspetto pratico dell'interazione; 2. contenuti, quindi la narrazione/storytelling; 3. accoglimento dei contenuti multimediale; 4. apprendimento cognitivo. Per quanto riguarda l'usabilità dipende dal contesto, però nonostante ciò in un qualche modo influenza molto la curiosità e l'interesse che devono essere opportunamente stimolate, non soltanto per attirare l'utente per i primi secondi ma per mantenere vivo interesse e la curiosità. Questo non è facile, diciamo che la tecnologia aiuta, quello che fa la differenza è la qualità visiva, il fotorealismo è quello che si aspettano, e la storia, quindi lo svolgimento tematico di quell'argomento. Questa è la cosa più complicata da fare, perché a seconda delle fasce di utenza hai una narrazione differente ed è difficile trovare un core narrative che vada bene per tutti. Diciamo che noi negli ultimi anni ci siamo concentrati sulla fascia 20-40 anni. Rispetto a quello che è l'usabilità oramai è evidente che usabile non è sinonimo di semplice, ma è riferito ad intuitivo, quindi qualcosa che in un qualche modo abbracci i gesti, le movenze o comunque le azioni abitudinarie che l'utente fa già normalmente e che incorpora in quel momento nell'esperienza sensoriale, e dall'altra parte che abbia dei movimenti e un'interattività che magari non è familiare ma che sia in un qualche modo connessa percettivamente ad una psicomotricità che l'utente già conosce. L'usabilità è fondamentale per far rimanere l'utente, non deve essere necessariamente semplice ma deve essere intuitiva. Per quanto riguarda l'apprendimento cognitivo, che non riguarda soltanto ciò che l'utente apprende ma anche il coinvolgimento emotivo, la sensazione di benessere ed il comfort comporta un'apertura mentale all'apprendere ed imparare molto più favorevole. Ad esempio, quello che è emerso in uno studio che abbiamo fatto con degli studenti e che è emerso anche con altri utenti è il senso di imbarazzo: soprattutto con le applicazioni immersive e grandangolari con i visitatori seduti come il cinema, l'utente che magari è venuto con un gruppo di familiari o amici non ha voglia di mettersi al centro dell'attenzione e usare l'applicazione. Noi abbiamo analizzato solo grazie ad osservazioni che molte persone, magari con una scusa, tornavano poi da sole.

Questo nell'area mediterranea; mentre nel nord-Europa è completamente diverso, gli utenti si buttavano senza ritegno.

Reference 2

ALFONSINA:

Questa cosa dell'imbarazzo era una cosa non prevista, che nessuno degli sviluppatori ma neanche i responsabili della valutazione e Maria Roussou sia aspettavano. Un'altra cosa che era inaspettata era la grafica: al pubblico non interessa quanto avanzata e perfetta sia la grafica, che sicuramente attira, l'importante è che sia qualcosa di familiare e credibile e poi che sia una storia che lo tenga incollato. Diciamo che sulla narrazione ce lo aspettavamo, sulla grafica no perché per tanti anni abbiamo lavorato sulla grafica, sul fotorealismo e sulla caratterizzazione dei personaggi e alla fine ci siamo accorti che questa cosa non portava a nulla mentre cose più semplici erano sufficienti. Oggi però siamo arrivati ad una soluzione mista: abbiamo personaggi reali che si muovono in un mondo virtuale. Un'altra applicazione che stiamo usando recentemente è la foto panoramica interattiva: uno scenario reale a 360 gradi ma interattivo. Un'altra cosa che non ci aspettava, ma in questi anni era stata un po' intuita, soprattutto per quanto riguarda le applicazioni con interazione naturale, è la motricità dell'utente e la relativa sincronicità con l'interfaccia: è importante che la motricità dell'utente sia sincronizzata con l'interfaccia e non in differita.

Reference 3

ALFONSINA:

Una cosa importante è cercare sempre di fare valutazioni con persone che non sono esperti, al di fuori dell'ambito della ricerca, perché altrimenti non ho un dato valido. Un'altra cosa che vorrei sempre di più nel futuro è lavorare sulla percezione dello stesso contenuto ma su supporti diversi: se uso lo smartphone o il tablet o altri mezzi quanto cambia la mia comprensione? Quindi vorrei andare a capire quanto effettivamente nell'ambito della percezione cosa mi cambia se la mia esperienza è situata o non lo è. Perché guardare qualcosa su tablet o cellulare è molto più remunerativo dal punto di vista intellettuale, perché hai subito l'impatto di quello che sta accadendo; diversamente avere il caschetto o il visore e un'esperienza più immersiva mi fa perdere qualcosa perché sono talmente concentrato sulla parte immersiva che non riesco a focalizzarmi. Ecco un'altra di quelle cose che non mi sono aspettata e che adesso sta un po' emergendo, è che l'essere completamente immersi nella tecnologia non aiuta a focalizzarsi. Ad esempio, con l'installazione del Museo della Valle del Tevere noi

pensavamo che chi osservava sarebbe stato più attento ai contenuti e chi utilizzava l'installazione sarebbe stato più focalizzato sui movimenti e sull'usabilità, invece è stato l'esatto contrario.

Reference 4

ARETI:

In terms of unexpected results, one thing that we came across while studying this interactive installation we installed in a museum in Newcastle, is that people expected it to be all singing all dancing, that it would be something spectacular and because the installation was trying to think about reflection it was a very quiet installation and people didn't expect that in a gallery all the other installations were touch screens with sounds and things like that. So, something we learned from that is that when you put these installations, especially in a specific context, you always need to curate the all context to allow to different engagements to happen: so basically, the story, the narrative around the installation needs to cohere with the context.

Reference 5

ARETI:

What I have understood from the way I worked in these research projects is that it is easy for someone in a participatory context to assume authority, but it is also equally easy to be exactly in the opposite side, which is try to respond to all of the needs and requirements and requests of the users or stakeholders and I think that the biggest challenge but also the thing that I keep in mind is that the reason why I am leading a team is because I have a design sensibility which a need to maintain and take responsibility for my decisions, while listening actively to other people's positions. Also, I never put the technology first, that doesn't mean that I wouldn't use innovative technologies, it's just that we didn't use them for the sake of using them. For me technology has to be able to contribute to something in order to be selected. Technologies bring with them assumptions of use, so for example with the website if you put out an experimental website-we are trying to work around some experimental interfaces for collections- one of the key fact is that people have very longstanding a solely understanding of what a certain database is likely to look like, so they don't know what to do with them; so in a way the website is a technological tool that brings many socio-cultural assumptions which basically shape the experience and the expectations of the users.

Reference 6

ERIK:

That they don't want them and I always wonder if they chose them because they are exposed to new technology. But secondly, I found that while they want contents on display they also want simple clear things for navigation, because they get very confused by complex navigations.

Reference 7

ERIK:

My guess is that what I expected when I first did the pilot study with 100 archaeologists and 50 students they wanted to know how to shoot things and I was really surprised by that. Another interesting thing is that if you tell people something is a game and not an archaeological simulation, then they will engage; if you tell them it is an archaeological simulation they value and respect the artefacts but then they don't engage, they get lost.

Reference 8

EVA:

Io sono qui al CNR più o meno dall'inizio degli anni 2000 e come background sono conservatore dei beni culturali specializzato in storia dell'arte, in particolare sul filone arte contemporanea, anche se poi come sappiamo le tecnologie digitali si applicano un po' per tradizione e forse anche un po' per necessità molto al campo dell'archeologia, quindi comunque venendo qui a lavorare al CNR., prima con assegno di ricerca e poi da diversi anni come ricercatrice a tempo indeterminato. Mi è capitato spesso di lavorare a progetti legati all'archeologia virtuale, sia per quanto riguarda il paesaggio archeologico che per quanto riguarda lo studio, la documentazione e la ricostruzione virtuale per la comunicazione di siti archeologici e di oggetti, quindi diverse scale di dettaglio e ovviamente una metodologia che ha elementi in comune ma anche differenze. Ciò non toglie che io cerco comunque sempre di non rimanere legata soltanto all'ambito archeologico, ma di fare anche progetti che riguardano le arti in generale e anche le arti contemporanee; soprattutto in questo senso sto trovando degli spunti dal mio background universitario come storica dell'arte contemporanea per quanto riguarda i linguaggi, perché io ho cominciato facendo documentazione, cominciando ad acquisire conoscenza di come usare gli strumenti, come documentare e acquisire digitalmente in 3D, scanner laser, fotogrammetria di rilievo e poi sempre di più nel corso degli anni mi sono spostata sul versante della comunicazione al pubblico, che è una materia molto complessa, contrariamente a quanto molti pensano che comunque poi la comunicazione

è una semplificazione, mentre in realtà mi sto rendendo conto che è molto più difficile disegnare un'esperienza per il pubblico, pensiamo ad esempio ad un pubblico museale o ad un pubblico di un sito archeologico, ma di più per un pubblico museale dove gli oggetti sono fuori contesto. È più difficile disegnare una comunicazione in questi casi, piuttosto che scrivere un ottimo articolo accademico che ha un linguaggio molto ben cristallizzato e che si rivolge ad un'audience che parla la stessa lingua. La comunicazione in realtà è veramente un ambito infinito di sperimentazione, dal mio punto di vista estremamente stimolante, perché si parla tanto oggi anche in termini ricorrenti, anche troppo abusati, di digital storytelling: tutti quanti parlano di storytelling e dell'importanza di questo concetto, però se poi andiamo a vedere chi veramente approfondisce le potenzialità dello storytelling e come costruirlo non ci sono poi tantissimi cambiamenti a livello. E di questo sono convinta che sia così, c'è molta più evoluzione, molto più sviluppo nella ricerca legata alla documentazione e alla visualizzazione piuttosto che nella ricerca legata alla narrazione, anche interattiva naturalmente. Quando parlo di narrazione non intendo un film necessariamente, ma intendo anche un'installazione interattiva dove tu comunque applichi dei comportamenti relativamente al modello 3D che stai vedendo però sei introdotto in un percorso di narrazione e quindi, diciamo, che chiaramente unire l'interazione con la narrazione pone tanti interrogativi: come fare, come strutturare la narrazione, come guidare. Perché poi narrazione significa anche un percorso che se io ti devo portare in un racconto è chiaro che se ti lascio completamente libero di vedere quello che vuoi in un ambiente di realtà virtuale dove ci sia una libertà totale di esplorazione dello spazio, se ti lascio totalmente libero è chiaro che poi ti perdi alcuni aspetti della narrazione, perché la narrazione come ci insegna il teatro, il cinema, la drammaturgia e il romanzo è portare piano piano per mano il fruitore lungo un percorso che si evolve e si sviluppa anche se secondo determinate regole che sono abbastanza precise possono essere ovviamente, pensando alle tecnologie di oggi, insomma molto più miste, però sicuramente ha una narrativa ben precisa e quindi, insomma, si aprono tanti scenari molto interessanti. Ah, io ovviamente sto parlando relativamente ad un pubblico ampio, quindi se mi fai una domanda relativa alla visualizzazione e interazione con progetti 3D relativi all'archeologia o ad altre discipline all'interno di un museo in quel momento sto pensando ad un pubblico ampio, quindi questi concetti di come disegnare una narrazione sono semplici ma fondamentali. Magari diventa meno urgente per un pubblico ampio dare la possibilità di studiare analiticamente l'oggetto, di approfondire dell'oggetto quei livelli che sono più di pertinenza di una comunità di studiosi, quindi è chiaro che l'oggetto di per sé è un

qualcosa di oserei quasi dire di neutro, nel senso che è semplicemente una digitalizzazione di quanto esistente, non è altro che una replica digitale, quindi se io non associo ad alcun tipo di informazione all'oggetto non ho fatto quasi nulla, è come se avessi fatto un prodotto in 3D fundamentalmente. Quindi si diciamo che ho creato un archivio però poi quello che è più importante dal mio punto di vista non è tanto il 3D in sé stesso quanto che si fa poi, cioè che tipo di informazione si vuole estrarre, cosa ci si vuole costruire intorno e quindi è chiaro che ad un certi punto laddove io mi rivolgo ad un pubblico ampio e generico come può essere il pubblico del museo o delle scuole, allora costruisco attorno a questo oggetto in 3D una dimensione narrativa e di informazione pensata per quel target; se mi rivolgo ad una comunità di studiosi forse più che la narrazione può essere interessante associare l'oggetto a tutta una serie di livelli analitici ed interpretativi, o, ad esempio, associare i metadati e le fonti interpretative, i casi comparativi, far diventare il contesto in 3D un lavoro di studi. Noi facciamo tanta valutazione con il pubblico dei musei, specialmente negli ultimi anni e una cosa che abbiamo notato che i due elementi che destano maggiore attenzione nel pubblico sono l'interazione e la narrazione, perché l'oggetto 3D, adesso ormai siamo pieni di ricostruzioni 3D bellissime, però se tu non ci agganci qualcosa perde di interesse e diventa l'ennesima mostra digitale con oggetti 3D, una lista di oggetti 3D

Reference 9

EVA:

L'osservazione credo che sia assolutamente fondamentale, l'unica accortezza è non farsi notare e non fare accorgere il pubblico. Il questionario anche trovo che sia qualcosa di estremamente utile, chiaramente ci sono tutta una serie di criteri, del tipo fare domande il più possibili neutre in cui non suggerisci la risposta, oppure quando hai una risposta multipla metterle tutte della stessa lunghezza, comunque cercare di tenere un bilanciamento in modo da avere una cosa il più possibile neutra; oppure, ad esempio, certe volte abbiamo notato che è meglio non fare questionari molto lunghi perché poi il pubblico si stanca e non risponde, e anche magari non mettere la parte più impegnativa del questionario in fondo per lo stesso motivo. Poi cerchiamo anche di capire se ci sono delle ricorrenze di risposte in base alla fascia di età; infatti quando lavoriamo per le scuole a volte utilizziamo un tipo di template diverso perché un conto è quando intervisti un pubblico generico, molto spesso adulto, un conto è quando hai a che fare con una classe di venti ragazzi. Noi molto spesso abbiamo notato, soprattutto con le installazioni con interazione naturale che c'è una certa corrispondenza di risultati tra il pubblico giovane, i ragazzi, e il pubblico delle persone che sono over 60, che questo è

pure strano ma in realtà con l'interazione naturale gli ultrasessantenni sono più disinibiti e molto più liberi, mentre nel pubblico tra i venti e i quaranta la persona è più reticente e tende ad esprimersi un po' di meno, ad essere più cauto. Con l'interazione basata sul corpo ci sono mille implicazione, poi alla fine è un'esperienza a tutto tondo dalla familiarità con la tecnologia al tipo di carattere e alla percezione del proprio corpo; anche se sono gesti molto semplici non è detto che tutti abbiamo la stessa percezione del proprio corpo, quindi se tu dici devi mettere il braccio avanti lo fai anche vedere, noi facevamo vedere sul schermo con un figurino che fa vedere quale posa devi assumere per fare un certo movimento.

Reference 10

EVA:

Allora i risultati che abbiamo ottenuto sono innanzitutto che l'impatto delle tecnologie virtuali all'interno di un museo ha delle potenzialità enormi, perché comunque il museo è una situazione di fissità; se si propone una situazione dove c'è movimento, suoni, storie, è ovvio che c'è un impatto se non altro perché si differenzia da quello che è normalmente il museo e poi perché è un contesto di narrazione, che è ciò che il pubblico vuole dentro al museo, vuole interagire e sentirsi immerso in una storia e questo appunto sentirsi immerso in una storia: mi sono sentito veramente protagonista", "mi sembrava di essere lì", "era interattivo" sono i commenti più ricorrenti, quindi è evidente che sono aspetti che hanno un immediato impatto, così come la grafica. Noi lavoriamo molto su un tipo di presentazione che sia anch'essa narrativa, mi spiego meglio: allora si digitalizza un oggetto, poi si fa una ricostruzione in 3D del contesto antico e poi si fanno una serie di scelte su come renderizzare, se si utilizza una texturizzazione molto fredda, neutra e oggettiva, che è anche molto bella per carità, però in un qualche modo non è una narrativa, non veicola il visitatore; io invece voglio creare un ambiente dove è come se ti portassi dentro una fiaba, perché comunque sto costruendo un certo tipo di racconto e di storytelling, che vuole suscitare un certo tipo di impatto e io come lo faccio, lo faccio anche con un certo tipo di colori, con un'atmosfera, con un tipo di rendering che costruisco, con i movimenti di camera; quindi questa è una cosa che il pubblico comincia ad apprezzare moltissimo, cioè siamo proprio entrati secondo me in una nuova epoca in cui il 3D non è solo uno strumento di presentazione. Un'altra cosa su cui stiamo molto lavorando è l'audio, perché la narrazione ha bisogno dell'audio, e noi abbiamo musicisti che hanno esperienza in questo e abbiamo un po' l'ambizione di fare sperimentazione, però purtroppo nei musei è sempre una lotta, perché l'audio è una cosa che disturba e spesso bisogna abbassare il

volume. Ci sono elementi che possono migliorare questo problema, del tipo se non c'è nessuno davanti all'applicazione il livello si abbassa mentre se c'è qualcuno automaticamente si alza, però è anche vero che a volte l'audio percepito da un'altra stanza è motivo di attrazione. Un'altra cosa che abbiamo notato, come risultato inatteso, è stato quanto tempo la gente dedica a queste installazioni. Allora sicuramente la tecnologia è motivo di attrazione, però poi questo si esaurisce molto rapidamente e lì entra in gioco la capacità di tenerlo il visitatore, perché se io trovo dei contenuti belli allora mi trattengo e quindi lavorando un po' su questo abbiamo notato che è premiante, cioè stiamo vedendo che davanti alle nostre installazioni la gente rimane 20-30 minuti, che comunque è tanto.

Reference 11

LAIA:

We had this evaluation in collaboration with the CNR for this exhibition called Virtual Rome and it was about people's expectation and perception of ICT, and I have to say that it is not changed as much actually, because it's being awe, you know, at the technology, you always keep having this wow effect, people are still amazed, you know, of the technology and what the technology allows, they are still saying things related to image quality, or that the concepts are not straight, things like that, because of the technology. People are really willing to go to the suspension of this belief. Even in the case of game players: this is something we got in our study that I was talking about before, the LEAP project and I was surprised that even gamers were not really disturbed by the fact of having a very bad texture, this was on purpose, and they could get frustration about the interaction of storytelling and so on. And I guess that depends on people understanding that they are experiencing a digital heritage medium, that the experience is being mediated and so they will accept it and understand that it is not perfect, it is not a direct experience and they are going to accept to suspend this belief and just enjoy the experience and see what it can provide. If I have to take a general conclusion of people's reaction to digital technology it will be that and it is still amazing because we have known for some years now.

Reference 12

LAIA:

Yes, I have to say there is an expectation, or I would say that experts in cultural heritage what they think audiences expect it is not really what audiences expect. They are concerned about different things. People really, audiences I would say they still want to

be transformed, to be amazed, you know. So, let me put it in a different way: to me archaeologists and people from cultural heritage they do think in terms of information, while other people and audiences want experiences. I would say that's the major difference between them and this is something that needs to be understood and changed from our side because people are still not getting engaged and we will continue spending money and resources for something that in the end it is not as successful as it could be. So, people really want to be moved, they want to travel to the past, to see people like them so they can relate to them, they want to say "Wow, tell me a story". They are interested in things like "why the statue's nose is broken", while the archaeologists are interested in telling them about the chronology and things that don't really make sense to people. And the thing is up to now, because they are called information and communication technologies, they are reinforcing this informational perspective that curators have; I think we should go more towards experiences rather than information. But let me say something to be fair: it also depends on the country. I have done evaluation both in the UK and in Catalonia, actually one of my studies was a comparison between the two countries, and audiences do have different expectations and different ideas of what museum is: for example, here when I was asking them to tell which ICT applications was the funniest one and they replied "What? Having fun? This is a museum, we come here to learn." The visit modality also is different: in UK, for example, if people come with their family and they don't want to learn, or if they don't want to do it on purpose, they want to do thing together and if they learn something is fine, it is another outcome, but it is really about being together and be amazed and do things. While here visits are more formal and even if people come as a family they will split. So here museums, as in Greece, are more associated with formal learning environments, while in the UK it is completely different and it is why also perceptions of the technology are different.

Reference 13

LUIGINA:

It changes wildly, also because the technology changed and it is not just the technology, it is the type of exhibition and we never ask questions about the technology. You ask questions like: "what did you remember about the exhibition?", "what was your favourite thing?". I find that a very effective question in interviews is: " If you were to tell your friends about the exhibition you saw today, what would you tell them?", and it really interesting how people tell the story, because they mention the technology because they have used it, but it is never the main thing they mention. It is always part

of the overall experience, which to me is a good sign in the sense that the technology is not the end, it is the story you tell around it.

Reference 14

LUIGINA:

I think that it is very important when you bring something new to an institution that the institution is part of the process, so the projects I have done where this kind of participation has been stronger they have been the ones that might have worked best. I think that it is important to try and build that in at least in some measure. What I think that it is really important and valuable is that people should be able to respond, to speak back, because you give them so much content and you have these additional things that give you even more content and I just find that they are overwhelmed with it.

Reference 15

MARIA:

It depends again on the project and also it depends on the time, so I have been doing this for many years, decades, and of course this kind of technology, especially immersive virtual reality now they wear glasses and they have stereoscopic vision of these [unintelligible] have always been very impressive and so, there is this novelty effect that really impacts the experience and has always been the struggle to see how you can design something that goes beyond the novelty effect, so that it is actually meaningful for your visitors beyond the wow effect that they experience when they see this.

Reference 16

SOPHIE:

I think, and certainly the biggest lesson I learned was sitting and watching the teachers, because without me giving any input to what they were doing, so: "here is your task, find something to fit with your current planning and here is the website that we want you to use", and we knew that there was something in the website fitting their planning, and just letting them free and observing what they were doing, I was with three teachers of a primary school using a particular website and somehow they ended up in a Russian website. Sitting and watching them I could totally see how they got there, it was just a couple of clicks, and they didn't realise their drawing further and further away from they were started, that kind of process and listening them to say: "I don't know where I am, I am not really sure what I'm doing", witnessing that reticence and nervousness was a massive lesson to me.

Reference 17

SOPHIE:

It varies wildly and I think it's that some of our audiences have more confidence that others and so some people are just happy to come and play around on a piece of technology without necessarily knowing where they are going, while some people are put off by the technology: I was just doing some analysis of some data that I have got from another gallery and I just discovered was that a jigsaw that they have in the gallery people stopped at for an average of 4 minutes and a piece of digital technology they stopped at for an average of 2 minutes, and I found really fascinating that the piece of digital technology was drawing people in but it wasn't necessarily keeping them there in a way that the jigsaw really did. I have seen evidence from our evaluations across at the university museums that some people have been grateful for the museum that doesn't have masses of screens in, while some people wanted to see more of that.

Theme 5

Reference 1

ALFONSINA:

Allora diciamo che in generale nella pipeline di valutazione che si possa ritenere tale è molto importante che la persona che poi va a fare la valutazione sia un qualche modo partecipe del processo creativo. In generale ci sono delle scuole di pensiero per le quali la persona che la fa la valutazione non deve far parte del processo di creazione e design per avere una valutazione obiettiva, però questa cosa è stata sfatata qualche anno fa. È importante coinvolgere i responsabili della valutazione nel processo creativo e fare pilot test prima del rilascio del prodotto.

Reference 2

ALFONSINA:

Diciamo che in generale possono individuare 4 macroaree tematiche: 1. l'usabilità, quindi ciò che riguarda l'aspetto pratico dell'interazione; 2. contenuti, quindi la narrazione/storytelling; 3. accogliamento dei contenuti multimediale; 4. apprendimento cognitivo. Per quanto riguarda l'usabilità dipende dal contesto, però nonostante ciò in un qualche modo influenza molto la curiosità e l'interesse che devono essere opportunamente stimolate, non soltanto per attirare l'utente per i primi secondi ma per mantenere vivo interesse e la curiosità. Questo non è facile, diciamo che la tecnologia aiuta, quello che fa la differenza è la qualità visiva, il fotorealismo è quello che si aspettano, e la storia, quindi lo svolgimento tematico di quell'argomento. Questa è la

cosa più complicata da fare, perché a seconda delle fasce di utenza hai una narrazione differente ed è difficile trovare un core narrative che vada bene per tutti. Diciamo che noi negli ultimi anni ci siamo concentrati sulla fascia 20-40 anni. Rispetto a quello che è l'usabilità oramai è evidente che usabile non è sinonimo di semplice, ma è riferito ad intuitivo, quindi qualcosa che in un qualche modo abbracci i gesti, le movenze o comunque le azioni abitudinarie che l'utente fa già normalmente e che incorpora in quel momento nell'esperienza sensoriale, e dall'altra parte che abbia dei movimenti e un'interattività che magari non è familiare ma che sia in un qualche modo connessa percettivamente ad una psicomotricità che l'utente già conosce. L'usabilità è fondamentale per far rimanere l'utente, non deve essere necessariamente semplice ma deve essere intuitiva. Per quanto riguarda l'apprendimento cognitivo, che non riguarda soltanto ciò che l'utente apprende ma anche il coinvolgimento emotivo, la sensazione di benessere ed il comfort comporta un'apertura mentale all'apprendere ed imparare molto più favorevole. Ad esempio, quello che è emerso in uno studio che abbiamo fatto con degli studenti e che è emerso anche con altri utenti è il senso di imbarazzo: soprattutto con le applicazioni immersive e grandangolari con i visitatori seduti come il cinema, l'utente che magari è venuto con un gruppo di familiari o amici non ha voglia di mettersi al centro dell'attenzione e usare l'applicazione. Noi abbiamo analizzato solo grazie ad osservazioni che molte persone, magari con una scusa, tornavano poi da sole. Questo nell'area mediterranea; mentre nel nord-Europa è completamente diverso, gli utenti si buttavano senza ritegno.

Reference 3

ALFONSINA:

Questa cosa dell'imbarazzo era una cosa non prevista, che nessuno degli sviluppatori ma neanche i responsabili della valutazione e Maria Roussou sia aspettavano. Un'altra cosa che era inaspettata era la grafica: al pubblico non interessa quanto avanzata e perfetta sia la grafica, che sicuramente attira, l'importante è che sia qualcosa di familiare e credibile e poi che sia una storia che lo tenga incollato. Diciamo che sulla narrazione ce lo aspettavamo, sulla grafica no perché per tanti anni abbiamo lavorato sulla grafica, sul fotorealismo e sulla caratterizzazione dei personaggi e alla fine ci siamo accorti che questa cosa non portava a nulla mentre cose più semplici erano sufficienti. Oggi però siamo arrivati ad una soluzione mista: abbiamo personaggi reali che si muovono in un mondo virtuale. Un'altra applicazione che stiamo usando recentemente è la foto panoramica interattiva: uno scenario reale a 360 gradi ma interattivo. Un'altra cosa che non ci aspettava, ma in questi anni era stata un po' intuita, soprattutto per quanto

riguarda le applicazioni con interazione naturale, è la motricità dell'utente e la relativa sincronicità con l'interfaccia: è importante che la motricità dell'utente sia sincronizzata con l'interfaccia e non in differita. perché magari è capitato, soprattutto con l'installazione della Valle del Tevere che le persone non facessero il gesto nella maniera più corretta e questo era frustrante per loro. Quello che ho visto funzionare meglio, anche a livello cognitivo, è l'avere una situazione organizzata: ti faccio vedere come funziona, ti metto in testa il Cardboard; oppure per la realtà aumentata prendo in mano il tablet, lo metto davanti e mi appare qualcosa e quindi anche a livello percettivo e cognitivo io faccio quel passaggio che è fondamentale. Quando parliamo di apprendimento cognitivo io valuto sempre: attenzione, memorizzazione, elaborazione e concentrazione. Purtroppo, la parte dell'immaginazione in contesti archeologici è quella in cui tutti quanto siamo più carenti, quindi avere un supporto tecnologico che davvero aiuta il percorso dell'elaborazione dell'immagine in maniera concreta aiuta molto perché in un qualche modo aiuta le persone a superare il gap tra immaginazione e comprensione: noi li catapultiamo direttamente alla fase della comprensione quindi in un qualche modo viene facilitata la memorizzazione ed il ricordo.

Reference 4

ALFONSINA:

Una cosa importante è cercare sempre di fare valutazioni con persone che non sono esperti, al di fuori dell'ambito della ricerca, perché altrimenti non ho un dato valido. Un'altra cosa che vorrei sempre di più nel futuro è lavorare sulla percezione dello stesso contenuto ma su supporti diversi: se uso lo smartphone o il tablet o altri mezzi quanto cambia la mia comprensione? Quindi vorrei andare a capire quanto effettivamente nell'ambito della percezione cosa mi cambia se la mia esperienza è situata o non lo è. Perché guardare qualcosa su tablet o cellulare è molto più remunerativo dal punto di vista intellettuale, perché hai subito l'impatto di quello che sta accadendo; diversamente avere il caschetto o il visore e un'esperienza più immersiva mi fa perdere qualcosa perché sono talmente concentrato sulla parte immersiva che non riesco a focalizzarmi. Ecco un'altra di quelle cose che non mi sono aspettata e che adesso sta un po' emergendo, è che l'essere completamente immersi nella tecnologia non aiuta a focalizzarsi. Ad esempio, con l'installazione del Museo della Valle del Tevere noi pensavamo che chi osservava sarebbe stato più attento ai contenuti e chi utilizzava l'installazione sarebbe stato più focalizzato sui movimenti e sull'usabilità, invece è stato l'esatto contrario.

Reference 5

ARETI:

In terms of unexpected results, one thing that we came across while studying this interactive installation we installed in a museum in Newcastle, is that people expected it to be all singing all dancing, that it would be something spectacular and because the installation was trying to think about reflection it was a very quiet installation and people didn't expect that in a gallery all the other installations were touch screens with sounds and things like that. So, something we learned from that is that when you put these installations, especially in a specific context, you always need to curate the all context to allow different engagements to happen: so basically, the story, the narrative around the installation needs to cohere with the context. I can tell you something regarding archaeological installations: it was a project with proper expert archaeologists and it was aimed at supporting speculations on the field and social interaction; one of the finding from the qualitative evaluation was that they loved all of these things, but they also asked, "where is the hard facts?". All the technologies we use are very intuitive, we learned very early issues around usability; but in my own observations that's kind of a common thing. I mean people have to be able to use it before experiencing it. So for example, what happened with the apps (it was a set of apps) is that very early in the project we decided to differentiate between usability and experience, so we treated usability in a kind of traditional way like: can people find where to click? What should the icon look like? does the circle mean click or here I am with no interactivity implied? and we tried to solve this before we started working with the experience. So, in terms of navigation we spend a very significant amount of time on how you navigate the app in relation to the landscape and we used different ways: instructions as well as views of what you are supposed to be looking at when you are heading in the right direction.

Reference 6

ARETI:

What I have understood from the way I worked in these research projects is that it is easy for someone in a participatory context to assume authority, but it is also equally easy to be exactly in the opposite side, which is try to respond to all of the needs and requirements and requests of the users or stakeholders and I think that the biggest challenge but also the thing that I keep in mind is that the reason why I am leading a team is because I have a design sensibility which a need to maintain and take responsibility for my decisions, while listening actively to other people's positions.

Also, I never put the technology first, that doesn't mean that I wouldn't use innovative technologies, it's just that we didn't use them for the sake of using them. For me technology has to be able to contribute to something in order to be selected. Technologies bring with them assumptions of use, so for example with the website if you put out an experimental website-we are trying to work around some experimental interfaces for collections- one of the key fact is that people have very longstanding a solely understanding of what a certain database is likely to look like, so they don't know what to do with them; so in a way the website is a technological tool that brings many socio-cultural assumptions which basically shape the experience and the expectations of the users.

Reference 7

ERIK:

The most useful and one of the most interesting studies was the one we have done last year related to Cultural Presence last year, where I found that people who completed the tasks the most efficiently and the quickest were the same people who made out the least from the experience in terms of significance.

Reference 8

ERIK:

My guess is that what I expected when I first did the pilot study with 100 archaeologists and 50 students they wanted to know how to shoot things and I was really surprised by that. Another interesting thing is that if you tell people something is a game and not an archaeological simulation, then they will engage; if you tell them it is an archaeological

Reference 9

ERIK:

It is mainly about creating researches that are sustainable, so as a UNESCO chair I'm trying to work at how do we keep evaluating and prototyping 3D models for cultural heritage and how people do research. So, to me the research needs to consider not the 3D model itself but the interaction, because people can't or don't share the interaction and what they learned, so we need to start the interaction from scratch again.

Reference 10

EVA:

Io sono qui al CNR più o meno dall'inizio degli anni 2000 e come background sono conservatore dei beni culturali specializzato in storia dell'arte, in particolare sul filone arte contemporanea, anche se poi come sappiamo le tecnologie digitali si applicano un

po' per tradizione e forse anche un po' per necessità molto al campo dell'archeologia, quindi comunque venendo qui a lavorare al CNR., prima con assegno di ricerca e poi da diversi anni come ricercatrice a tempo indeterminato. Mi è capitato spesso di lavorare a progetti legati all'archeologia virtuale, sia per quanto riguarda il paesaggio archeologico che per quanto riguarda lo studio, la documentazione e la ricostruzione virtuale per la comunicazione di siti archeologici e di oggetti, quindi diverse scale di dettaglio e ovviamente una metodologia che ha elementi in comune ma anche differenze. Ciò non toglie che io cerco comunque sempre di non rimanere legata soltanto all'ambito archeologico, ma di fare anche progetti che riguardano le arti in generale e anche le arti contemporanee; soprattutto in questo senso sto trovando degli spunti dal mio background universitario come storica dell'arte contemporanea per quanto riguarda i linguaggi, perché io ho cominciato facendo documentazione, cominciando ad acquisire conoscenza di come usare gli strumenti, come documentare e acquisire digitalmente in 3D, scanner laser, fotogrammetria di rilievo e poi sempre di più nel corso degli anni mi sono spostata sul versante della comunicazione al pubblico, che è una materia molto complessa, contrariamente a quanto molti pensano che comunque poi la comunicazione è una semplificazione, mentre in realtà mi sto rendendo conto che è molto più difficile disegnare un'esperienza per il pubblico, pensiamo ad esempio ad un pubblico museale o ad un pubblico di un sito archeologico, ma di più per un pubblico museale dove gli oggetti sono fuori contesto. È più difficile disegnare una comunicazione in questi casi, piuttosto che scrivere un ottimo articolo accademico che ha un linguaggio molto ben cristallizzato e che si rivolge ad un'audience che parla la stessa lingua. La comunicazione in realtà è veramente un ambito infinito di sperimentazione, dal mio punto di vista estremamente stimolante, perché si parla tanto oggi anche in termini ricorrenti, anche troppo abusati, di digital storytelling: tutti quanti parlano di storytelling e dell'importanza di questo concetto, però se poi andiamo a vedere chi veramente approfondisce le potenzialità dello storytelling e come costruirlo non ci sono poi tantissimi cambiamenti a livello. E di questo sono convinta che sia così, c'è molta più evoluzione, molto più sviluppo nella ricerca legata alla documentazione e alla visualizzazione piuttosto che nella ricerca legata alla narrazione, anche interattiva naturalmente. Quando parlo di narrazione non intendo un film necessariamente, ma intendo anche un'installazione interattiva dove tu comunque applichi dei comportamenti relativamente al modello 3D che stai vedendo però sei introdotto in un percorso di narrazione e quindi, diciamo, che chiaramente unire l'interazione con la narrazione pone tanti interrogativi: come fare, come strutturare la narrazione, come guidare. Perché poi

narrazione significa anche un percorso che se io ti devo portare in un racconto è chiaro che se ti lascio completamente libero di vedere quello che vuoi in un ambiente di realtà virtuale dove ci sia una libertà totale di esplorazione dello spazio, se ti lascio totalmente libero è chiaro che poi ti perdi alcuni aspetti della narrazione, perché la narrazione come ci insegna il teatro, il cinema, la drammaturgia e il romanzo è portare piano piano per mano il fruitore lungo un percorso che si evolve e si sviluppa anche se secondo determinate regole che sono abbastanza precise possono essere ovviamente, pensando alle tecnologie di oggi, insomma molto più miste, però sicuramente ha una narrativa ben precisa e quindi, insomma, si aprono tanti scenari molto interessanti.

Reference 11

EVA:

L'osservazione credo che sia assolutamente fondamentale, l'unica accortezza è non farsi notare e non fare accorgere il pubblico. Il questionario anche trovo che sia qualcosa di estremamente utile, chiaramente ci sono tutta una serie di criteri, del tipo fare domande il più possibili neutre in cui non suggerisci la risposta, oppure quando hai una risposta multipla metterle tutte della stessa lunghezza, comunque cercare di tenere un bilanciamento in modo da avere una cosa il più possibile neutra; oppure, ad esempio, certe volte abbiamo notato che è meglio non fare questionari molto lunghi perché poi il pubblico si stanca e non risponde, e anche magari non mettere la parte più impegnativa del questionario in fondo per lo stesso motivo. Poi cerchiamo anche di capire se ci sono delle ricorrenze di risposte in base alla fascia di età; infatti quando lavoriamo per le scuole a volte utilizziamo un tipo di template diverso perché un conto è quando intervisti un pubblico generico, molto spesso adulto, un conto è quando hai a che fare con una classe di venti ragazzi. Noi molto spesso abbiamo notato, soprattutto con le installazioni con interazione naturale che c'è una certa corrispondenza di risultati tra il pubblico giovane, i ragazzi, e il pubblico delle persone che sono over 60, che questo è pure strano ma in realtà con l'interazione naturale gli ultrasessantenni sono più disinibiti e molto più liberi, mentre nel pubblico tra i venti e i quaranta la persona è più reticente e tende ad esprimersi un po' di meno, ad essere più cauto

Reference 12

EVA:

Allora i risultati che abbiamo ottenuto sono innanzitutto che l'impatto delle tecnologie virtuali all'interno di un museo ha delle potenzialità enormi, perché comunque il museo è una situazione di fissità; se si propone una situazione dove c'è movimento, suoni,

storie, è ovvio che c'è un impatto se non altro perché si differenzia da quello che è normalmente il museo e poi perché è un contesto di narrazione, che è ciò che il pubblico vuole dentro al museo, vuole interagire e sentirsi immerso in una storia e questo appunto sentirsi immerso in una storia: mi sono sentito veramente protagonista", "mi sembrava di essere lì", "era interattivo" sono i commenti più ricorrenti, quindi è evidente che sono aspetti che hanno un immediato impatto, così come la grafica. Noi lavoriamo molto su un tipo di presentazione che sia anch'essa narrativa, mi spiego meglio: allora si digitalizza un oggetto, poi si fa una ricostruzione in 3D del contesto antico e poi si fanno una serie di scelte su come renderizzare, se si utilizza una texturizzazione molto fredda, neutra e oggettiva, che è anche molto bella per carità, però in un qualche modo non è una narrativa, non veicola il visitatore; io invece voglio creare un ambiente dove è come se ti portassi dentro una fiaba, perché comunque sto costruendo un certo tipo di racconto e di storytelling, che vuole suscitare un certo tipo di impatto e io come lo faccio, lo faccio anche con un certo tipo di colori, con un'atmosfera, con un tipo di rendering che costruisco, con i movimenti di camera; quindi questa è una cosa che il pubblico comincia ad apprezzare moltissimo, cioè siamo proprio entrati secondo me in una nuova epoca in cui il 3D non è solo uno strumento di presentazione. Un'altra cosa su cui stiamo molto lavorando è l'audio, perché la narrazione ha bisogno dell'audio, e noi abbiamo musicisti che hanno esperienza in questo e abbiamo un po' l'ambizione di fare sperimentazione, però purtroppo nei musei è sempre una lotta, perché l'audio è una cosa che disturba e spesso bisogna abbassare il volume. Ci sono elementi che possono migliorare questo problema, del tipo se non c'è nessuno davanti all'applicazione il livello si abbassa mentre se c'è qualcuno automaticamente si alza, però è anche vero che a volte l'audio percepito da un'altra stanza è motivo di attrazione. Un'altra cosa che abbiamo notato, come risultato inatteso, è stato quanto tempo la gente dedica a queste installazioni. Allora sicuramente la tecnologia è motivo di attrazione, però poi questo si esaurisce molto rapidamente e lì entra in gioco la capacità di tenerlo il visitatore, perché se io trovo dei contenuti belli allora mi trattengo e quindi lavorando un po' su questo abbiamo notato che è premiante, cioè stiamo vedendo che davanti alle nostre installazioni la gente rimane 20-30 minuti, che comunque è tanto. Comunque, una cosa che noi valutiamo sempre in maniera sistematica è la differenza tra il pubblico attivo, cioè coloro che effettivamente interagiscono con il sistema, e il pubblico che invece rimane soltanto come spettatore, perché noi lavoriamo sempre su tecnologie che sono inclusive, mi spiego: non lavoriamo molto con sensori, sistemi oculus che sono più immersivi e molto belli, però

in un museo sono un po' esclusivi. Se tu fai un'esposizione permanente deve essere qualcosa che include un gruppo di persone, e quindi c'è sempre questo aspetto di chi interagisce e chi guarda e abbiamo cercato di capire se l'impatto cambia a seconda se sei attivo o passivo, dando per scontato ad esempio che chi in questa installazione della Valle del Tevere dove ci sono tre grandi schermi che sono montati a semicerchio e poi c'è davanti la parte interattiva con dei segni a terra che fanno capire all'utente dove si deve posizionare per interagire con il corpo: è abbastanza d'impatto e ci sono delle sedute dove fino ad una quindicina di persone si possono sedere e una persona alla volta interagisce e quindi noi avevamo dato per scontato che la persona che stava interagendo con il corpo fosse molto più concentrata sulla gestualità e meno attenta ai contenuti e invece chi era seduto avesse la mente più aperta ai contenuti e invece abbiamo visto con nostra sorpresa che era quasi il contrario, cioè che la persona che interagisce ha tutti i sensi aperti e quindi è più ricettiva, mentre il pubblico che sta alle spalle tende più a chiacchierare

Reference 13

EVA:

Si, allora una cosa che ho maturato è la convinzione di lavorare sulle forme di interazione, sul modo di raccontare e su come interagire con l'informazione. Sono proprio convinta che la narrazione nei musei sia fondamentale e che costruirla sia una sfida, cercare di mettere insieme regole che vengono dalla realtà virtuale, ma anche dal cinema, dal teatro. Ora stiamo lavorando su delle vetrine olografiche, un progetto tutt'ora in corso, con un oggetto reale del museo dentro e poi su questo abbiamo fatto delle proiezioni olografiche che interagiscono con l'oggetto reale: è interessante questo, perché mentre tradizionalmente si vedono gli oggetti reali da una parte e il virtuale che è decisamente da un'altra, convivono ma non si toccano, invece in questo caso la scommessa è proprio fare il virtuale su un oggetto reale con le proiezioni olografiche che si sovrappongono ad esso, che si proiettano attorno e non è una descrizione dell'oggetto, ma si sentono voci, ci sono ricostruzioni di accadimenti, simulazioni virtuali che sono momenti di vita dell'oggetto, come se ci fossero dei flash dei momenti di vita di questo oggetto, come era stato creato e utilizzato; è molto minimale, però questo è proprio magnetico, è una cosa a cui il pubblico non è abituato e in questo caso non è interattivo, però è molto interattivo dal punto di vista cognitivo. L'insegnamento che ho tratto è che secondo me non esistono delle regole standard nella comunicazione, la comunicazione è un qualcosa di sempre creativo, cioè implica una parte di scienze e

tecnologie e una parte artistica e il linguaggio della comunicazione è sempre molto personale.

Reference 14

LAIA:

Yes, I have to say there is an expectation, or I would say that experts in cultural heritage what they think audiences expect it is not really what audiences expect. They are concerned about different things. People really, audiences I would say they still want to be transformed, to be amazed, you know. So, let me put it in a different way: to me archaeologists and people from cultural heritage they do think in terms of information, while other people and audiences want experiences. I would say that's the major difference between them and this is something that needs to be understood and changed from our side because people are still not getting engaged and we will continue spending money and resources for something that in the end it is not as successful as it could be. So, people really want to be moved, they want to travel to the past, to see people like them so they can relate to them, they want to say "Wow, tell me a story". They are interested in things like "way the statue's nose is broken", while the archaeologists are interested in telling them about the chronology and things that don't really make sense to people. And the thing is up to now, because they are called information and communication technologies, they are reinforcing this informational perspective that curators have; I think we should go more towards experiences rather than information. But let me say something to be fair: it also depends on the country. I have done evaluation both in the UK and in Catalonia, actually one of my studies was a comparison between the two countries, and audiences do have different expectations and different ideas of what museum is: for example, here when I was asking them to tell which ICT applications was the funniest one and they replied "What? Having fun? This is a museum, we come here to learn." The visit modality also is different: in UK, for example, if people come with their family and they don't want to learn, or if they don't want to do it on purpose, they want to do things together and if they learn something is fine, it is another outcome, but it is really about being together and be amazed and do things. While here visits are more formal and even if people come as a family they will split. So here museums, as in Greece, are more associated with formal learning environments, while in the UK it is completely different and it is why also perceptions of the technology are different. Technologies could bring this, being less formal and more experiential, they could really bring this more multi-sensory and participative

dimension, where people can contribute and bring their opinions, experiences and perceptions.

Reference 15

LAIA:

I have come myself to a sort of revelation in terms of approaches and methodologies, I have also realised myself some applications for the Chess ProJet and I think that the important thing now is to abandon this more informational perspective. It is everything: the approach, the information, the interface-this individual desktop or mobile or other device that is just for one person- and go more towards full body, multisensory experiences that are also designed for each single case. The reason why I am here at the full-body interaction lab is to be able to design and see how we can really integrate in the cultural heritage field more tangible and multisensory experiences. I really hope that we will be able to develop more multi-sensory group-shared experiences. Second thing, and this also comes from the human-computer interaction field, is to evaluate always, because up to now there is a really small percentage of projects that do it. I think it is because cultural heritage people take for granted that everybody is interested and the way to communicate is universal and valid for anybody and it is not. For example, studies have proved that photorealism can be counterproductive, but we still think that it is all about visualisation and it is not. It is also very important to create a participatory process, take end users into account and have them design things with you, evaluate, then refine.

Reference 16

LUIGINA:

Obviously, yes. The way I work has always to do with understanding end users, institutions stakeholders, so it is always designed with a very long process behind. At the beginning, we never start knowing what technology is going to be. There is always a process of design and that process most of the time is participatory, so it is the museums, the heritage professionals, the visitors who have a role in shaping that and we show them options: they have an idea about the interaction should be like and we show them what they can use to achieve that

Reference 17

LUIGINA:

It changes wildly, also because the technology changed and it is not just the technology, is the type of exhibition and we never ask questions about the technology. You ask

questions like: "what did you remember about the exhibition?", "what was your favourite thing?". I find that a very effective question in interviews is: " If you were to tell your friends about the exhibition you saw today, what would you tell them?", and it really interesting how people tell the story, because they mention the technology because they have used it, but it is never the main thing they mention. It is always part of the overall experience, which to me is a good sign in the sense that the technology is not the end, it is the story you tell around it.

Reference 18

LUIGINA:

I think you are always surprised about people's actions, in general, because people will improvise when they are in certain situations. I have done a lot of work getting visitors respond to what they see, so having technology that doesn't just deliver information to them but collect it back and I have always been surprised by how creative people can be, if you give them a little bit of space.

Reference 19

LUIGINA:

I think that it is very important when you bring something new to an institution that the institution is part of the process, so the projects I have done where this kind of participation has been stronger they have been the ones that might have worked best. I think that it is important to try and build that in at least in some measure. What I think that it is really important and valuable is that people should be able to respond, to speak back, because you give them so much content and you have these additional things that give you even more content and I just find that they are overwhelmed with it.

Reference 20

MARIA:

It depends again on the project and also it depends on the time, so I have been doing this for many years, decades, and of course this kind of technology, especially immersive virtual reality now they wear glasses and they have stereoscopic vision of these [unintelligible] have always been very impressive and so, there is this novelty effect that really impacts the experience and has always been the struggle to see how you can design something that goes beyond the novelty effect, so that it is actually meaningful for your visitors beyond the wow effect that they experience when they see this. So, it is hard to actually get to that deeper impact, the evaluations have not been very useful in showing us how these kinds of experiences impacted visitors in the long term and that

means that you need to set up a kind of long-term evaluation, which is difficult to do when you have a virtual reality experience open to the broad public: they will come and have this experience for ten, maybe twenty minutes and then they will leave. It is very hard to set up a longer impact study based on ten-twenty minutes experience, you know, results are not very conclusive I would say. I can say that everyone is always impressed of what they see, but I really don't know whether that impression has a lasting impact.

Reference 21

MARIA:

what we feel missing is this deeper connection to the visualised content, to the visualised cultural content, which is this emotive engagement, so what I previously coined as a "longer lasting impact" or "deeper meaning", that is what we are trying to add into our work, so trying to add type of storytelling that really engages the visitor.

Reference 22

SOPHIE:

It varies wildly and I think it's that some of our audiences have more confidence than others and so some people are just happy to come and play around on a piece of technology without necessarily knowing where they are going, while some people are put off by the technology: I was just doing some analysis of some data that I have got from another gallery and I just discovered was that a jigsaw that they have in the gallery people stopped at for an average of 4 minutes and a piece of digital technology they stopped at for an average of 2 minutes, and I found really fascinating that the piece of digital technology was drawing people in but it wasn't necessarily keeping them there in a way that the jigsaw really did. I have seen evidence from our evaluations across at the university museums that some people have been grateful for the museum that don't have masses of screens in, while some people wanted to see more of that: I think it comes back to what I was saying, that the best digital uses are always going to be the one that are clearly defined in what they want to do and I think that the temptation is not curate these things, whereas the need so much input.

Reference 23

SOPHIE:

Do user testing as much as possible, I think that definitely is something that we need to look at as much as possible, having really clear objectives and do observations before you even design your own thing.

Transcripts

INTERVIEWER:

Can you please tell me something about yourself? What is your professional role?

LAIA:

So, I'm a researcher at the Pompeu Fabra University in Barcelona. My field of research is, let's call it heritage virtual archaeology, so the user evaluation design, evaluation of ict applications in cultural heritage, and more specifically in archaeology, and at the moment I'm working on this project, which is called ViMM, virtual multimodal museums, which is a csa (coordination and support action) related to policies, definitions, indicators, etc. around the concept of virtual museums.

INTERVIEWER:

What 3D interactive media have you been involved in making and/or evaluating?

LAIA:

The most recent had to do with my Marie Curie fellowship two years ago and it was related to virtual reality and virtual reconstructions, and the goal of this was to evaluate the concept of cultural presence in archaeology. So, presence is a field of research at the intersection of psychology, computer science and so on, so we wanted to see if one of the concept of this cultural presence, given the coincidence in cultural heritage world was a constant that we can use as framework for design and evaluation for virtual reconstructions in archaeology and so what I did was to build a world, a reconstruction of Çatalhöyük in Turkey and have users test it and evaluate their experience in terms of presence.

INTERVIEWER:

Was it/were they designed for a specific purpose?

LAIA:

The virtual world was not meant for dissemination, but it was built on purpose for the research question which was related to presence.

INTERVIEWER:

During your career what approach have you used to evaluate audiences' response to such media?

LAIA:

I think I went from, let's call them traditional visitors studies from a museum point of view, to a more human-computer interaction approach or methods of investigation,

which are not so different, the latter I would say it's more implicit. So, to put an example, at the very beginning I would triangulate users' information and questionnaires before and after the experience, and what I did was use that both tools to the fact of having ICT so not just analysing an exhibition, but we wanted to see the role of technology in there. And now, more recently, I've gone into multiple analysis, which is something that is done in the field of human-computer interaction and... more or less it is the same, just more structured and, again, if you want to analyse very much in depth observations.

INTERVIEWER:

What's been the most/least effective in terms of gathering useful data on audience experience?

LAIA:

Observations, for example, when you don't have video possibility of recording, for example was a challenge because you have to record everything on spot, you can't have multiple researchers going through everything, so research suffers from that because it's less orthodox, it's less objective and someone would say it's valid for research. So, it depends on what you count on, what tools and technology, but also questionnaires sometimes if they are not well written, especially tests beforehand, they can also be less effective. For me it depends on the circumstances, everything can be valid. So first: be aware of what you want to know without the constraint of context and situation, and then decide all the tools...several tools combined, triangulate everything and then test it and then this will be the most effective as possible, that's my answer.

INTERVIEWER:

What results have you been getting in your studies in terms of audiences' reaction to these new technologies?

LAIA:

We had this evaluation in collaboration with the CNR for this exhibition called Virtual Rome and it was about people's expectation and perception of ICT, and I have to say that it is not changed as much actually, because it's being awe, you know, at the technology, you always keep having this wow effect, people are still amazed, you know, of the technology and what the technology allows, they are still saying things related to image quality, or that the concepts are not straight, things like that, because of the technology. People are really willing to go to the suspension of this belief. Even in the case of game players: this is something we got in our study that I was talking about

before, the LEAP project and I was surprised that even gamers were not really disturbed by the fact of having a very bad texture, this was on purpose, and they could get frustration about the interaction of storytelling and so on. And I guess that depends on people understanding that they are experiencing a digital heritage medium, that the experience is being mediated and so they will accept it and understand that it is not perfect, it is not a direct experience and they are going to accept to suspend this belief and just enjoy the experience and see what it can provide. If I have to take a general conclusion of people's reaction to digital technology will be that and it is still amazing because we have known for some years now.

INTERVIEWER:

Anything expected/unexpected that you've encountered through your work with audiences and 3D interactives?

LAIA:

Yes, I have to say there is an expectation, or I would say that experts in cultural heritage what they think audiences expect it is not really what audiences expect. They are concerned about different things. People really, audiences I would say they still want to be transformed, to be amazed, you know. So, let me put it in a different way: to me archaeologists and people from cultural heritage they do think in terms of information, while other people and audiences want experiences. I would say that's the major difference between them and this is something that needs to be understood and changed from our side because people are still not getting engaged and we will continue spending money and resources for something that in the end it is not as successful as it could be. So, people really want to be moved, they want to travel to the past, to see people like them so they can relate to them, they want to say "Wow, tell me a story". They are interested in things like "way the statue's nose is broken", while the archaeologists are interested in telling them about the chronology and things that don't really make sense to people. And the thing is up to now, because they are called information and communication technologies, they are reinforcing this informational perspective that curators have; I think we should go more towards experiences rather than information. But let me say something to be fair: it also depends on the country. I have done evaluation both in the UK and in Catalonia, actually one of my studies was a comparison between the two countries, and audiences do have different expectations and different ideas of what museum is: for example, here when I was asking them to tell which ICT applications was the funniest one and they replied "What? Having fun? This

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INTERVIEWER:

How would you sum up your experiences so far? Lessons learned that you have applied or will apply in subsequent projects?

LAIA:

I have come myself to a sort of revelation in terms of approaches and methodologies, I have also realised myself some applications for the Chess ProJet and I think that the important thing now is to abandon this more informational perspective. It is everything: the approach, the information, the interface-this individual desktop or mobile or other device that is just for one person- and go more towards full body, multisensory experiences that are also designed for each single case. The reason why I am here at the full-body interaction lab is to be able to design and see how we can really integrate in the cultural heritage field more tangible and multisensory experiences. I really hope that we will be able to develop more multi-sensory group-shared experiences. Second thing, and this also comes from the human-computer interaction field, is to evaluate always, because up to now there is a really small percentage of projects that do it. I think it is because cultural heritage people take for granted that everybody is interested and the way to communicate is universal and valid for anybody and it is not. For example, studies have proved that photorealism can be counterproductive, but we still think that it is all about visualisation and it is not. It is also very import to create a participatory process, take end users into account and have them design things with you, evaluate, then refine and then we could have something that in the end that it might take longer, it may cost more at the beginning, but it will last longer and be more engaging for end users.

INTERVIEWER:

Could you please tell me something yourself? What is your professional role?

EVA:

Io sono qui al CNR più o meno dall'inizio degli anni 2000 e come background sono conservatore dei beni culturali specializzato in storia dell'arte, in particolare sul filone arte contemporanea, anche se poi come sappiamo le tecnologie digitali si applicano un po' per tradizione e forse anche un po' per necessità molto al campo dell'archeologia, quindi comunque venendo qui a lavorare al CNR., prima con assegno di ricerca e poi da diversi anni come ricercatrice a tempo indeterminato. Mi è capitato spesso di lavorare a progetti legati all'archeologia virtuale, sia per quanto riguarda il paesaggio archeologico che per quanto riguarda lo studio, la documentazione e la ricostruzione virtuale per la comunicazione di siti archeologici e di oggetti, quindi diverse scale di dettaglio e ovviamente una metodologia che ha elementi in comune ma anche differenze. Ciò non toglie che io cerco comunque sempre di non rimanere legata soltanto all'ambito archeologico, ma di fare anche progetti che riguardano le arti in generale e anche le arti contemporanee; soprattutto in questo senso sto trovando degli spunti dal mio background universitario come storica dell'arte contemporanea per quanto riguarda i linguaggi, perché io ho cominciato facendo documentazione, cominciando ad acquisire conoscenza di come usare gli strumenti, come documentare e acquisire digitalmente in 3D, scanner laser, fotogrammetria di rilievo e poi sempre di più nel corso degli anni mi sono spostata sul versante della comunicazione al pubblico, che è una materia molto complessa, contrariamente a quanto molti pensano che comunque poi la comunicazione è una semplificazione, mentre in realtà mi sto rendendo conto che è molto più difficile disegnare un'esperienza per il pubblico, pensiamo ad esempio ad un pubblico museale o ad un pubblico di un sito archeologico, ma di più per un pubblico museale dove gli oggetti sono fuori contesto. È più difficile disegnare una comunicazione in questi casi, piuttosto che scrivere un ottimo articolo accademico che ha un linguaggio molto ben cristallizzato e che si rivolge ad un'audience che parla la stessa lingua. La comunicazione in realtà è veramente un ambito infinito di sperimentazione, dal mio punto di vista estremamente stimolante, perché si parla tanto oggi anche in termini ricorrenti, anche troppo abusati, di digital storytelling: tutti quanti parlano di storytelling e dell'importanza di questo concetto, però se poi andiamo a vedere chi veramente approfondisce le potenzialità dello storytelling e come costruirlo non ci sono poi tantissimi cambiamenti a livello. E di questo sono convinta che sia così, c'è molta più evoluzione, molto più sviluppo nella ricerca legata alla documentazione e alla

visualizzazione piuttosto che nella ricerca legata alla narrazione, anche interattiva naturalmente. Quando parlo di narrazione non intendo un film necessariamente, ma intendo anche un'installazione interattiva dove tu comunque applichi dei comportamenti relativamente al modello 3D che stai vedendo però sei introdotto in un percorso di narrazione e quindi, diciamo, che chiaramente unire l'interazione con la narrazione pone tanti interrogativi: come fare, come strutturare la narrazione, come guidare. Perché poi narrazione significa anche un percorso che se io ti devo portare in un racconto è chiaro che se ti lascio completamente libero di vedere quello che vuoi in un ambiente di realtà virtuale dove ci sia una libertà totale di esplorazione dello spazio, se ti lascio totalmente libero è chiaro che poi ti perdi alcuni aspetti della narrazione, perché la narrazione come ci insegna il teatro, il cinema, la drammaturgia e il romanzo è portare piano piano per mano il fruitore lungo un percorso che si evolve e si sviluppa anche se secondo determinate regole che sono abbastanza precise possono essere ovviamente, pensando alle tecnologie di oggi, insomma molto più miste, però sicuramente ha una narrativa ben precisa e quindi, insomma, si aprono tanti scenari molto interessanti. Ah, io ovviamente sto parlando relativamente ad un pubblico ampio, quindi se mi fai una domanda relativa alla visualizzazione e interazione con progetti 3D relativi all'archeologia o ad altre discipline all'interno di un museo in quel momento sto pensando ad un pubblico ampio, quindi questi concetti di come disegnare una narrazione sono semplici ma fondamentali. Magari diventa meno urgente per un pubblico ampio dare la possibilità di studiare analiticamente l'oggetto, di approfondire dell'oggetto quei livelli che sono più di pertinenza di una comunità di studiosi, quindi è chiaro che l'oggetto di per sé è un qualcosa di oserei quasi dire di neutro, nel senso che è semplicemente una digitalizzazione di quanto esistente, non è altro che una replica digitale, quindi se io non associo ad alcun tipo di informazione all'oggetto non ho fatto quasi nulla, è come se avessi fatto un prodotto in 3D fondamentalmente. Quindi si diciamo che ho creato un archivio però poi quello che è più importante dal mio punto di vista non è tanto il 3D in sé stesso quanto che si fa poi, cioè che tipo di informazione si vuole estrarre, cosa ci si vuole costruire intorno e quindi è chiaro che ad un certo punto laddove io mi rivolgo ad un pubblico ampio e generico come può essere il pubblico del museo o delle scuole, allora costruisco attorno a questo oggetto in 3D una dimensione narrativa e di informazione pensata per quel target; se mi rivolgo ad una comunità di studiosi forse più che la narrazione può essere interessante associare l'oggetto a tutta una serie di livelli analitici ed interpretativi, o, ad esempio, associare i metadati e le fonti interpretative, i casi comparativi, far diventare il contesto in 3D un lavoro di studi. Noi facciamo tanta

valutazione con il pubblico dei musei, specialmente negli ultimi anni e una cosa che abbiamo notato che i due elementi che destano maggiore attenzione nel pubblico sono l'interazione e la narrazione, perché l'oggetto 3D. Adesso ormai siamo pieni di ricostruzioni 3D bellissime, però se tu non ci agganci qualcosa perde di interesse e diventa l'ennesima mostra digitale con oggetti 3D, una lista di oggetti 3D,

INTERVIEWER:

What 3D interactive media have you been involved in making and/or evaluating? Was it/Were they designed for a specific purpose? If yes, what purpose?

EVA:

Guarda, noi abbiamo cominciato a fare valutazione sul pubblico a partire dal 2012 in maniera più sistematica e questa è una cosa che ho particolarmente a cuore altrimenti non si ha la percezione di cosa di sta facendo. Innanzitutto, una considerazione monte: è molto importante che la valutazione, cioè quando si discutono i risultati della valutazione, si consideri dove questa valutazione è stata fatta. Mi spiego meglio: se io ho un'installazione di realtà virtuale che è stata pensata per uno specifico spazio, per uno specifico contesto mettiamo un museo e io ho costruito dei ritmi nella comunicazione che sono pensati per uno spazio dedicato, abbastanza isolato, scuro, silenzioso, dove immergo il visitatore in un'esperienza; allora se io questa l'installazione prima di metterla in un museo la valuto in un laboratorio oppure la valuto all'evento fieristico dove viene tenuta lì per tre giorni e ci stanno ondate di visitatori, caos, rumore etc. è chiaro che posso fare delle valutazioni, ma non certamente sull'impatto cognitivo, sull'esperienza sensoriale che ho appena vissuto. Che poi la comunicazione non è mai neutra, ma è comunque tarata al contesto nel quale viene resa accessibile, quindi è molto importante che la valutazione tenga conto di questo.

INTERVIEWER:

What approaches have you been using to evaluate audiences' response to such media?

EVA:

Per quanto riguarda gli aspetti che noi valutiamo, sono relativi a diversi aspetti. Allora innanzitutto partiamo dall'attrattività di quello che noi proponiamo (adesso sto parlando principalmente all'interno dei musei) quanto ciò che noi proponiamo attrae l'attenzione del visitatore. Visitare un museo è un'esperienza interattiva in se stessa perché l'utente sceglie il percorso, sceglie dove andare e dove fermarsi, quali vetrine predilige e loto spesso queste scelte sono casuali per una persona che non è esperta, cioè ci sono degli elementi che attraggono più di altri e quindi è importante se noi vogliamo attirare il

pubblico alle nostre applicazioni creare qualcosa che sia un elemento di attrazione ed in questo ci può aiutare la grafica, il suono, il tipo di tecnologia e l'interfaccia che si crea che ha un impatto immediato: per esempio l'interfaccia naturale che utilizza i gesti del corpo per interagire con la realtà virtuale, una volta che il visitatore è stato attratto sono in grado di mantenere la sua attenzione o dopo dieci secondi il visitatore se ne va? per quanto tempo rimane? per quanto tempo interagisce? Allora c'è tutta una parte basata sull'osservazione che riguarda proprio l'attitudine che il visitatore mostra rispetto al contenuto digitale, quanto tempo riesce a rimanere davanti all'installazione, se comunque mostra di avere un atteggiamento stressato oppure rilassato, se si posiziona correttamente quindi sia l'atteggiamento psicologico che la capacità di utilizzare il sistema. Dopodiché, all'osservazione che è una delle cose più importanti della valutazione e che deve essere fatta senza che l'osservatore risulti troppo invasivo perché il visitatore non se ne deve accorgere altrimenti poi cambia atteggiamento, viene affiancato molto spesso un questionario, quindi uno strumento quantitativo anche se noi molto spesso mettiamo anche domande di tipo qualitativo con risposte aperte, dove chiediamo cosa ha attratto dell'installazione, quali sono gli elementi che il visitatore ha preferito e tutta una serie di domande sull'usabilità, il gradimento e poi facciamo delle domande sui contenuti ovviamente e quindi cerchiamo di capire se al di là che si possa essere divertito o meno cosa il visitatore abbia compreso e memorizzato. le domande sui contenuti vengono poste sul modello di risposte sbagliate o giuste, oppure una domanda aperta dove deve scrivere qualcosa e diciamo che le risposte sui contenuti sono generalmente anche quelle che hanno la maggiore percentuale di evasive, ma non tanto perché le persone non si ricordano ma perché sono più impegnative. Io devo riempire un questionario e tu mi stai facendo delle domande sui contenuti, io prima di dare una risposta ci devo pensare, devo vagliare se tu mi stai dicendo che sono sbagliate o giuste, o parzialmente giuste e quindi diciamo che abbiamo sempre notato che questa parte relativa ai contenuti è difficoltosa per l'utente. poi abbiamo tutta una parte anagrafica e poi a questo affianchiamo uno scenario guidato, vale a dire diamo il tempo alla persona di prendere confidenza con l'installazione e la tecnologia, dopodiché ci riveliamo e diciamo guardi stiamo facendo un'indagine, se ci può aiutare le vorremmo chiedere di svolgere alcuni compiti specifici quali andare nel menu, selezionare un percorso e provare attraverso il percorso virtuale a raggiungere un certo contenuto. in questo modo cerchiamo di capire, da task molto semplici a task più complesse e articolate, se il visitatore non opera in maniera casuale ma ha il controllo sul sistema. Dopodiché analizziamo questi dati e scriviamo dei report che presentiamo generalmente al direttore

del museo dove era presente l'installazione, in modo da capirne l'impatto. Servono comunque anche a noi e devo dire che a volte ci sono dei risultati abbastanza prevedibili, mentre altre abbiamo dei risultati assolutamente imprevedibili, sono veramente degli strumenti fondamentali per chi fa ricerca in questo settore.

INTERVIEWER:

What's been most/least effective in terms of gathering useful data on audience experience?

EVA:

L'osservazione credo che sia assolutamente fondamentale, l'unica accortezza è non farsi notare e non fare accorgere il pubblico. Il questionario anche trovo che sia qualcosa di estremamente utile, chiaramente ci sono tutta una serie di criteri, del tipo fare domande il più possibili neutre in cui non suggerisci la risposta, oppure quando hai una risposta multipla metterle tutte della stessa lunghezza, comunque cercare di tenere un bilanciamento in modo da avere una cosa il più possibile neutra; oppure, ad esempio, certe volte abbiamo notato che è meglio non fare questionari molto lunghi perché poi il pubblico si stanca e non risponde, e anche magari non mettere la parte più impegnativa del questionario in fondo per lo stesso motivo. Poi cerchiamo anche di capire se ci sono delle ricorrenze di risposte in base alla fascia di età; infatti quando lavoriamo per le scuole a volte utilizziamo un tipo di template diverso perché un conto è quando intervisti un pubblico generico, molto spesso adulto, un conto è quando hai a che fare con una classe di venti ragazzi. Noi molto spesso abbiamo notato, soprattutto con le installazioni con interazione naturale che c'è una certa corrispondenza di risultati tra il pubblico giovane, i ragazzi, e il pubblico delle persone che sono over 60, che questo è pure strano ma in realtà con l'interazione naturale gli ultra-sessantenni sono più disinibiti e molto più liberi, mentre nel pubblico tra i venti e i quaranta la persona è più reticente e tende ad esprimersi un po' di meno, ad essere più cauto. Con l'interazione basata sul corpo ci sono mille implicazione, poi alla fine è un'esperienza a tutto tondo dalla familiarità con la tecnologia al tipo di carattere e alla percezione del proprio corpo; anche se sono gesti molto semplici non è detto che tutti abbiamo la stessa percezione del proprio corpo, quindi se tu dici devi mettere il braccio avanti lo fai anche vedere, noi facevamo vedere sul schermo con un figurino che fa vedere quale posa devi assumere per fare un certo movimento.

INTERVIEWER:

What results have you been getting in your studies in terms of audiences' reaction to these new technologies? Anything expected/unexpected that you've encountered through your work with audiences and 3D interactives?

EVA:

Allora i risultati che abbiamo ottenuto sono innanzitutto che l'impatto delle tecnologie virtuali all'interno di un museo ha delle potenzialità enormi, perché comunque il museo è una situazione di fissità; se si propone una situazione dove c'è movimento, suoni, storie, è ovvio che c'è un impatto se non altro perché si differenzia da quello che è normalmente il museo e poi perché è un contesto di narrazione, che è ciò che il pubblico vuole dentro al museo, vuole interagire e sentirsi immerso in una storia e questo appunto sentirsi immerso in una storia: mi sono sentito veramente protagonista", "mi sembrava di essere lì", "era interattivo" sono i commenti più ricorrenti, quindi è evidente che sono aspetti che hanno un immediato impatto e anche la grafica...noi lavoriamo molto su un tipo di presentazione che sia anch'essa narrativa, mi spiego meglio: allora si digitalizza un oggetto, poi si fa una ricostruzione in 3D del contesto antico e poi si fanno una serie di scelte su come renderizzare, se si utilizza una texturizzazione molto fredda, neutra e oggettiva, che è anche molto bella per carità, però in un qualche modo non è una narrativa, non veicola il visitatore ; io invece voglio creare un ambiente dove è come se ti portassi dentro una fiaba, perché comunque sto costruendo un certo tipo di racconto e di storytelling, che vuole suscitare un certo tipo di impatto e io come lo faccio, lo faccio anche con un certo tipo di colori, con un'atmosfera, con un tipo di rendering che costruisco, con i movimenti di camera; quindi questa è una cosa che il pubblico comincia ad apprezzare moltissimo, cioè siamo proprio entrati secondo me in una nuova epoca in cui il 3D non è solo uno strumento di presentazione. Un'altra cosa su cui stiamo molto lavorando è l'audio, perché la narrazione ha bisogno dell'audio, e noi abbiamo musicisti che hanno esperienza in questo e abbiamo un po' l'ambizione di fare sperimentazione, però purtroppo nei musei è sempre una lotta, perché l'audio è una cosa che disturba e spesso bisogna abbassare il volume. Ci sono elementi che possono migliorare questo problema, del tipo se non c'è nessuno davanti all'applicazione il livello si abbassa mentre se c'è qualcuno automaticamente si alza, però è anche vero che a volte l'audio percepito da un'altra stanza è motivo di attrazione...poi un'altra cosa che abbiamo notato, come risultato inatteso, è stato quanto tempo la gente dedica a queste installazioni. Allora sicuramente la tecnologia è motivo di attrazione, però poi questo si esaurisce molto rapidamente e lì

entra in gioco la capacità di tenerlo il visitatore, perché se io trovo dei contenuti belli allora mi trattengo e quindi lavorando un po' su questo abbiamo notato che è premiante, cioè stiamo vedendo che davanti alle nostre installazioni la gente rimane 20-30 minuti, che comunque è tanto. Comunque, una cosa che noi valutiamo sempre in maniera sistematica è la differenza tra il pubblico attivo, cioè coloro che effettivamente interagiscono con il sistema, e il pubblico che invece rimane soltanto come spettatore, perché noi lavoriamo sempre su tecnologie che sono inclusive, mi spiego: non lavoriamo molto con sensori, sistemi oculus che sono più immersivi e molto belli, però in un museo sono un po' esclusivi. Se tu fai un'esposizione permanente deve essere qualcosa che include un gruppo di persone, e quindi c'è sempre questo aspetto di chi interagisce e chi guarda e abbiamo cercato di capire se l'impatto cambia a seconda se sei attivo o passivo, dando per scontato ad esempio che chi in questa installazione della Valle del Tevere dove ci sono tre grandi schermi che sono montati a semicerchio e poi c'è davanti la parte interattiva con dei segni a terra che fanno capire all'utente dove si deve posizionare per interagire con il corpo: è abbastanza d'impatto e ci sono delle sedute dove fino ad una quindicina di persone si possono sedere e una persona alla volta interagisce e quindi noi avevamo dato per scontato che la persona che stava interagendo con il corpo fosse molto più concentrata sulla gestualità e meno attenta ai contenuti e invece chi era seduto avesse la mente più aperta ai contenuti e invece abbiamo visto con nostra sorpresa che era quasi il contrario, cioè che la persona che interagisce ha tutti i sensi aperti e quindi è più ricettiva, mentre il pubblico che sta alle spalle tende più a chiacchierare; però questo dipende molto dall'ambiente perché se ti entri in una sala buia con poche sedie tutti quanti in silenzio, se sei in un ambiente più di passaggio chiaramente la deconcentrazione è sempre in agguato.

INTERVIEWER:

How would you sum up your experiences so far? Lessons learned that you have applied or will apply in subsequent projects?

EVA:

Si, allora una cosa che ho maturato è la convinzione di lavorare sulle forme di interazione, sul modo di raccontare e su come interagire con l'informazione. Sono proprio convinta che la narrazione nei musei sia fondamentale e che costruirla sia una sfida, cercare di mettere insieme regole che vengono dalla realtà virtuale, ma anche dal cinema, dal teatro. Ora stiamo lavorando su delle vetrine olografiche, un progetto tutt'ora in corso, con un oggetto reale del museo dentro e poi su questo abbiamo fatto

delle proiezioni olografiche che interagiscono con l'oggetto reale: è interessante questo, perché mentre tradizionalmente si vedono gli oggetti reali da una parte e il virtuale che è decisamente da un'altra, convivono ma non si toccano, invece in questo caso la scommessa è proprio fare il virtuale su un oggetto reale con le proiezioni olografiche che si sovrappongono ad esso, che si proiettano attorno e non è una descrizione dell'oggetto, ma si sentono voci, ci sono ricostruzioni di accadimenti, simulazioni virtuali che sono momenti di vita dell'oggetto, come se ci fossero dei flash dei momenti di vita di questo oggetto, come era stato creato e utilizzato; è molto minimale, però questo è proprio magnetico, è una cosa a cui il pubblico non è abituato e in questo caso non è interattivo, però è molto interattivo dal punto di vista cognitivo. L'insegnamento che ho tratto è che secondo me non esistono delle regole standard nella comunicazione, la comunicazione è un qualcosa di sempre creativo, cioè implica una parte di scienze e tecnologie e una parte artistica...il linguaggio della comunicazione è sempre molto personale.

INTERVIEWER:

Could you please tell me something yourself? What is your professional role?

ALFONSINA:

Attualmente ho un assegno di ricerca al CNR. Vengo da un background in comunicazione gestione dei beni culturali e ho lavorato anche nel settore privato, pubblicità e comunicazione. Sono stata la prima persona ad essere assunta al CNR specificante per la valutazione.

INTERVIEWER:

What 3D interactive media have you been involved in making and/or evaluating?

ALFONSINA:

Allora diciamo che in generale nella pipeline di valutazione che si possa ritenere tale è molto importante che la persona che poi va a fare la valutazione sia un qualche modo partecipe del processo creativo. In generale ci sono delle scuole di pensiero per le quali la persona che la fa la valutazione non deve far parte del processo di creazione e design per avere una valutazione obiettiva, però questa cosa è stata sfatata qualche anno fa. È importante coinvolgere i responsabili della valutazione nel processo creativo e fare pilot test prima del rilascio del prodotto. Purtroppo, qui al CNR, nonostante io riesca a seguire la filiera del lavoro dalla A alla Z, poi nel momento della valutazione post prodotto non riesce quasi mai a ritornare sul prodotto o perché è già finito o perché lo sviluppatore difficilmente si schioda dal suo prodotto perché lo considera come un

figlio. Poi per quanto riguarda la filiera dalla A alla Z, c'è sicuramente il progetto di realtà virtuale della Valle del Tevere, un'installazione virtuale all'interno del Museo di Villa Giulia, ed il progetto Etruscanning, un'installazione che sta ai Musei Vaticani. Ho seguito anche il progetto delle Villa di Livia che sta al Museo delle Terme di Diocleziano, e ho seguito la pipeline di tutta la mostra che si chiama Le Chiavi di Roma, che era l'ultima mostra del progetto V-MusT: lì erano 11 installazioni, di cui soltanto 2 hanno visto la revision, mentre le altre non hanno mai visto la fase della revision, gli sviluppatori hanno ricevuto positivamente il report ma non hanno poi fatto alcun cambiamento e questa è una cosa che accade spessissimo nell'ambito della ricerca, mentre in campo commerciale è obbligatorio prima del rilascio. Come ti dicevo prima ci sono varie scuole di pensiero: l'americana, quella dell'est europeo, quella del nord Europa e poi la scuola inglese; personalmente, anche per deformazione professionale, mi sento più vicina alla scuola svedese.

INTERVIEWER:

Was it/Were they designed for a specific purpose? If yes, what purpose?

ALFONSINA:

Quasi tutti non sono frutto di sperimentazioni di laboratorio, ma avevano un obiettivo finale: per esempio nel caso della mostra le Chiavi di Roma le installazioni erano state realizzate con lo scopo di creare una mostra interattiva ed itinerante da essere allestita in quattro musei europei. Chiaramente nella scelta della tecnologia, nella scelta del target e nella scelta dei contenuti ci si è basati molto sulla tipologia di testi che volevamo utilizzare e sulla tipologia di testi che avevamo nei musei ospiti. Con Etruscanning il pubblico è stato molto variegato, perché il pubblico dei Musei Vaticani è tutto e di più, e anche nel caso di Villa di Livia il target è stato abbastanza ampio per fascia d'età, ma specifico per quanto riguarda la formazione perché chiaramente parliamo delle Terme di Diocleziano un complesso difficile da spiegare, parliamo di una cornice prettamente archeologica e soprattutto è stata allocata in uno spazio poco visibile, ci vai se lo sai, e questo influenza molto la valutazione e la scelta della tecnologia da proporre: puoi scegliere una tecnologia portatile o minimale da mettere lungo il percorso di visita, ma se vuoi fare una cosa immersiva più grande hai bisogno di uno spazio più grande e dedicato che però non sempre ti danno.

INTERVIEWER:

What approaches have you been using to evaluate audiences' response to such media?

ALFONSINA:

Allora io quando sono arrivata al CNR per i primi anni ho svolto solo test di validità, quindi per me a livello contenutistico l'approccio quantitativo era fondamentale perché mi dava un indice abbastanza netto e chiaro della validità, che poi è legata ad altri indici quali l'usabilità, la navigabilità e quant'altro. Poi siamo passati a fare una cosa che si chiama scenari guidati, che è un qualcosa che è stato insegnato dalla scuola tedesca e proprio da Schoenhofen: praticamente è una procedura molto semplice però efficace: ovvero l'utente in maniera cosciente si trova di fronte a questa che deve utilizzare, quindi una situazione attiva, e gli viene chiesto di compiere determinati task tipo "prova a capire cosa puoi fare con questo tasto", l'utente è libero di fare vari tentativi perché non c'è un limite di tempo ma deve solo raggiungere l'obiettivo che gli hai suggerito, e poi devi chiedere all'utente di fare un'autovalutazione della sua esperienza e poi confrontarla con la tua valutazione della sua esperienza, e questa cosa qui si chiama scenario guidato ed è stata molto utile perché: a) sembra un pochino quello che sono le tematiche del questionario cioè dell'anonimicità della ricerca, tante cose non le puoi approfondire, tanti atteggiamenti non li riesci a cogliere, come la mimica facciale ed il comportamento; b) soprattutto in questo modo metti l'utente in una situazione di comfort perché non è obbligato a scrivere pagine e pagine di questionario o, magari se è di fretta, a stare lì e fare l'intervista. Comunque, utilizzo ancora le interviste, dalla mezz'ora all'ora, i questionari li uso ancora molto ma li ho ridotti in termini di quantità di pagine e di domande e li ho migliorati molto dal punto di vista del condizionamento della risposta e in questo mi ha aiutato una linguista, Maria Roussou, per quanto riguarda la formulazione della domanda in modo da non suggerire o veicolare la risposta. Diciamo che come protocollo di valutazione utilizzo un mix di queste cose: questionario, scenario guidato ed osservazione, che è una cosa imprescindibile perché quello che ti dà l'osservazione non te lo dà nient'altro.

INTERVIEWER:

What's been most/least effective in terms of gathering useful data on audience experience?

ALFONSINA:

Dipende molto molto dal contesto in cui viene svolta la valutazione e dipende moltissimo dall'area geografica. Chiaramente, avere una audience nord-europea, avvezza ad un certo tipo di comportamento anche proprio all'interno del museo, ad una apertura mentale e preparazione scolastica comunque nettamente superiore, la

valutazione in qualche modo è più onesta nel senso che quello che ti dicono rispecchia quello che pensano. La parte mediterranea, non abituata alle osservazioni e alle valutazioni, vedendo le valutazioni come indagini di mercato, e con un livello culturale ed una apertura mentale un po' più bassa, con un comportamento nei musei e davanti alle applicazioni diverso, soprattutto qui in Italia dove certe tecnologie sono ancora poco utilizzate, è chiaro che non tanto quello che ti dicono ma proprio il contesto storico che mi ritrovo influenza tanto. Per quanto riguarda invece fattori programmatici è molto importante la tua formazione ed il tuo background culturale, perché le osservazioni non le fa quasi nessuno perché sono time-consuming e richiedono competenze che una persona sola non ha, devi essere tuttologa: analista, psicologica, e matematica anche.

INTERVIEWER:

What results have you been getting in your studies in terms of audiences' reaction to these new technologies?

ALFONSINA:

Diciamo che in generale possono individuare 4 macroaree tematiche: 1. l'usabilità, quindi ciò che riguarda l'aspetto pratico dell'interazione; 2. contenuti, quindi la narrazione/storytelling; 3. accogliamento dei contenuti multimediale; 4. apprendimento cognitivo. Per quanto riguarda l'usabilità dipende dal contesto, però nonostante ciò in un qualche modo influenza molto la curiosità e l'interesse che devono essere opportunamente stimolate, non soltanto per attirare l'utente per i primi secondi ma per mantenere vivo interesse e la curiosità. Questo non è facile, diciamo che la tecnologia aiuta, quello che fa la differenza è la qualità visiva, il fotorealismo è quello che si aspettano, e la storia, quindi lo svolgimento tematico di quell'argomento. Questa è la cosa più complicata da fare, perché a seconda delle fasce di utenza hai una narrazione differente ed è difficile trovare un core narrative che vada bene per tutti. Diciamo che noi negli ultimi anni ci siamo concentrati sulla fascia 20-40 anni. Rispetto a quello che è l'usabilità oramai è evidente che usabile non è sinonimo di semplice, ma è riferito ad intuitivo, quindi qualcosa che in un qualche modo abbracci i gesti, le movenze o comunque le azioni abitudinarie che l'utente fa già normalmente e che incorpora in quel momento nell'esperienza sensoriale, e dall'altra parte che abbia dei movimenti e un'interattività che magari non è familiare ma che sia in un qualche modo connessa percettivamente ad una psicomotricità che l'utente già conosce. L'usabilità è fondamentale per far rimanere l'utente, non deve essere necessariamente semplice ma deve essere intuitiva. Per quanto riguarda l'apprendimento cognitivo, che non riguarda

soltanto ciò che l'utente apprende ma anche il coinvolgimento emotivo, la sensazione di benessere ed il comfort comporta un'apertura mentale all'apprendere ed imparare molto più favorevole. Ad esempio, quello che è emerso in uno studio che abbiamo fatto con degli studenti e che è emerso anche con altri utenti è il senso di imbarazzo: soprattutto con le applicazioni immersive e grandangolari con i visitatori seduti come il cinema, l'utente che magari è venuto con un gruppo di familiari o amici non ha voglia di mettersi al centro dell'attenzione e usare l'applicazione. Noi abbiamo analizzato solo grazie ad osservazioni che molte persone, magari con una scusa, tornavano poi da sole. Questo nell'area mediterranea; mentre nel nord-Europa è completamente diverso, gli utenti si buttavano senza ritegno.

INTERVIEWER:

Anything expected/unexpected that you've encountered through your work with audiences and 3D interactives?

ALFONSINA:

Questa cosa dell'imbarazzo era una cosa non prevista, che nessuno degli sviluppatori ma neanche i responsabili della valutazione e Maria Roussou sia aspettavano. Un'altra cosa che era inaspettata era la grafica: al pubblico non interessa quanto avanzata e perfetta sia la grafica, che sicuramente attira, l'importante è che sia qualcosa di familiare e credibile e poi che sia una storia che lo tenga incollato. Diciamo che sulla narrazione ce lo aspettavamo, sulla grafica no perché per tanti anni abbiamo lavorato sulla grafica, sul fotorealismo e sulla caratterizzazione dei personaggi e alla fine ci siamo accorti che questa cosa non portava a nulla mentre cose più semplici erano sufficienti. Oggi però siamo arrivati ad una soluzione mista: abbiamo personaggi reali che si muovono in un mondo virtuale. Un'altra applicazione che stiamo usando recentemente è la foto panoramica interattiva: uno scenario reale a 360 gradi ma interattivo. Un'altra cosa che non ci aspettava, ma in questi anni era stata un po' intuita, soprattutto per quanto riguarda le applicazioni con interazione naturale, è la motricità dell'utente e la relativa sincronicità con l'interfaccia: è importante che la motricità dell'utente sia sincronizzata con l'interfaccia e non in differita. perché magari è capitato, soprattutto con l'installazione della Valle del Tevere che le persone non facessero il gesto nella maniera più corretta e questo era frustrante per loro. Quello che ho visto funzionare meglio, anche a livello cognitivo, è l'aver una situazione organizzata: ti faccio vedere come funziona, ti metto in testa il Cardboard; oppure per la realtà aumentata prendo in mano il tablet, lo metto davanti e mi appare qualcosa e quindi anche a livello percettivo e

cognitivo io faccio quel passaggio che è fondamentale. Quando parliamo di apprendimento cognitivo io valuto sempre: attenzione, memorizzazione, elaborazione e concentrazione. Purtroppo, la parte dell'immaginazione in contesti archeologici è quella in cui tutti quanto siamo più carenti, quindi avere un supporto tecnologico che davvero aiuta il percorso dell'elaborazione dell'immagine in maniera concreta aiuta molto perché in un qualche modo aiuta le persone a superare il gap tra immaginazione e comprensione: noi li catapultiamo direttamente alla fase della comprensione quindi in un qualche modo viene facilitata la memorizzazione ed il ricordo. L'immaginazione è il gap che la tecnologia ha colmato.

INTERVIEWER:

How would you sum up your experiences so far? Lessons learned that you have applied or will apply in subsequent projects?

ALFONSINA:

Una cosa importante è cercare sempre di fare valutazioni con persone che non sono esperti, al di fuori dell'ambito della ricerca, perché altrimenti non ho un dato valido. Un'altra cosa che vorrei sempre di più nel futuro è lavorare sulla percezione dello stesso contenuto ma su supporti diversi: se uso lo smartphone o il tablet o altri mezzi quanto cambia la mia comprensione? Quindi vorrei andare a capire quanto effettivamente nell'ambito della percezione cosa mi cambia se la mia esperienza è situata o non lo è. Perché guardare qualcosa su tablet o cellulare è molto più remunerativo dal punto di vista intellettuale, perché hai subito l'impatto di quello che sta accadendo; diversamente avere il caschetto o il visore e un'esperienza più immersiva mi fa perdere qualcosa perché sono talmente concentrato sulla parte immersiva che non riesco a focalizzarmi. Ecco un'altra di quelle cose che non mi sono aspettata e che adesso sta un po' emergendo, è che l'essere completamente immersi nella tecnologia non aiuta a focalizzarsi. Ad esempio, con l'installazione del Museo della Valle del Tevere noi pensavamo che chi osservava sarebbe stato più attento ai contenuti e chi utilizzava l'installazione sarebbe stato più focalizzato sui movimenti e sull'usabilità, invece è stato l'esatto contrario. Sicuramente avere una visione di insieme da lontano aiuta a comprendere meglio, però è vero anche il contrario che magari avere il casco immersivo ti può dare la possibilità di guardare le cose più nel dettaglio ma allo stesso tempo ti può dare anche un senso di smarrimento. Questa cosa con gli standard della Comunità Europea, perché magari prendi per una buona una valutazione fatta con 30 persone; io adesso l'ho provato su 150 persone e ancora non sono arrivata al dunque. Quindi anche i

limiti per i test di valutazione andrebbero rivisti, perché non puoi dire che una ricerca è valida anche solo con otto persone. Ecco una cosa che non mi piace della scuola svedese è che fanno valutazioni con davvero poche persone, cosa che invece gli spagnoli e noi italiani facciamo con minimo 100 persone.

INTERVIEWER:

Could you please tell me something about yourself? What is your professional role?

ERIK:

I am a UNESCO chair of cultural heritage and visualisation, which means I evaluation-advise on recommending how to use 3D models for heritage sites and my background is in architecture and my PhD was on virtual environments with Mayan archaeology.

INTERVIEWER:

What 3D interactive media have you been involved in making and/or evaluating?

ERIK:

My PhD was using game engines and Unity. Currently we are doing a project using game engines and 3dsMax and Blender.

INTERVIEWER:

Was it/Were they designed for a specific purpose? If yes, what purpose?

ERIK:

Within my PhD, for example, I built them from scratch and they were archaeological environments and they were in-games with three different interactions across the environments: observing, reading texts and use them to navigate towards temples, click on checkboxes which were connected to the 3D characters. The others we used characters inside the temples, exploration using bio-feedback. There was another project about Cnossos and for this one we used intelligent characters worked out of the human visitors or the locals.

INTERVIEWER:

What approaches have you been using to evaluate audiences' response to such media?

ERIK:

During my PhD I used several ones, mainly because it was focused on the evaluation of the existing evaluation approaches, so I think the most effective one was to ask general knowledge questions like what they remember and what they have learned during the experience, then ask them questions about the culture and how much time took them to complete things and how many of the tasks they have completed. I asked them to rate

the environments with a scale from 1 to 7 in terms of local culture authenticity, interactivity and engagement; I asked them questions to see if they have observed things in the environment and which environment took less time to finish. Now we evaluate more experience rather than tasks completion.

INTERVIEWER:

What's been most/least effective in terms of gathering useful data on audience experience?

ERIK:

The most useful and one of the most interesting study was the one we have done last year related to Cultural Presence last year, where I found that people who completed the tasks the most efficiently and the quickest were the same people who made out the least from the experience in terms of significance.

INTERVIEWER:

What results have you been getting in your studies in terms of audiences' reaction to these new technologies?

ERIK:

That they don't want them and I always wonder if they chose them because they are exposed to new technology. But secondly, I found that while they want contents on display they also want simple clear things for navigation, because they get very confused by complex navigations.

INTERVIEWER:

Anything expected/unexpected that you've encountered through your work with audiences and 3D interactives?

ERIK:

My guess is that what I expected when I first did the pilot study with 100 archaeologists and 50 students they wanted to know how to shoot things and I was really surprised by that. Another interesting thing is that if you tell people something is a game and not an archaeological simulation, then they will engage; if you tell them it is an archaeological simulation they value and respect the artefacts but then they don't engage, they get lost. There is something about when people think it is a game they actually think to know how to operate the site, so I guess I was surprised by that.

INTERVIEWER:

How would you sum up your experiences so far? Lessons learned that you have applied or will apply in subsequent projects?

ERIK:

It is mainly about creating researches that are sustainable, so as a UNESCO chair I'm trying to work at how do we keep evaluating and prototyping 3D models for cultural heritage and how people do research. So, to me the research needs to consider not the 3D model itself but the interaction, because people can't or don't share the interaction and what they learned, so we need to start the interaction from scratch again.

INTERVIEWER:

Could you please tell me something about yourself? What is your professional role?

MARIA:

The interviewee is an assistant Professor in Interactive Systems (i.e. Human-Computer Interaction, Virtual Reality, Computer Games) at the Department of Informatics & Telecommunications, National and Kapodistrian University of Athens.

Interviewer:

What 3D interactive media have you been involved in making and/or evaluating?

MARIA:

The interviewee has been involved in projects related to virtual reality infrastructures at and exhibits the Foundation of Hellenic World and interactive virtual learning environments for children.

INTERVIEWER:

Was it/Were they designed for a specific purpose? If yes, what purpose?

MARIA:

The interviewee responded that they were mostly designed for educational purposes.

INTERVIEWER:

What approaches have you been using to evaluate audiences' response to such media?

MARIA:

The interviewee has been using mainly qualitative approaches, specifically observation and semi-structured interviews, but also questionnaires.

INTERVIEWER:

What's been the most/least effective in terms of gathering useful data on audience experience?

For technical issues, the recording starts at the minute 07:57. The previous part of the interview is integrated using the interviewer's notes.

MARIA:

[talking about pros and cons of quantitative and qualitative approaches, questionnaires and interviews] [...]that break their experiences and that results in different answers...also the fact that they have to re muster the event after the experience, remember to answer the questionnaire or to respond to an interview can also give you different data than what in fact they did experience, because they have forgotten and they are out of context when you ask the questions. There are problems in the sense that there are a lot of data to process, to go back and view all the video-based audio and try to make sense out of that and another problem with qualitative evaluation is that you have to find a framework to analyse that data and these framework [...]are very time-consuming, there is a lot of manual labour involved, so I still do think that qualitative methodology is the most appropriate methodology to use but there are the problems that I mentioned before.

INTERVIEWER:

What results have you been getting in your studies in terms of audiences' reaction to these new technologies?

MARIA:

It depends again on the project and also it depends on the time, so I have been doing this for many years, decades, and of course this kind of technology, especially immersive virtual reality now they wear glasses and they have stereoscopic vision of these [unintelligible] have always been very impressive and so, there is this novelty effect that really impacts the experience and has always been the struggle to see how you can design something that goes beyond the novelty effect, so that it is actually meaningful for your visitors beyond the wow effect that they experience when they see this. So, it is hard to actually get to that deeper impact, the evaluations have not been very useful in showing us how these kinds of experiences impacted visitors in the long term and that means that you need to set up a kind of long-term evaluation, which is difficult to do when you have a virtual reality experience open to the broad public: they will come and have this experience for ten, maybe twenty minutes and then they will leave. It is very hard to set up a longer impact study based on ten-twenty minutes experience, you know, results are not very conclusive I would say. I can say that everyone is always impressed of what they see, but I really don't know whether that impression has a lasting impact.

INTERVIEWER:

Anything expected/unexpected that you've encountered through your work with audiences and 3D interactives?

MARIA:

Well, for the most part what you expect to see is that evaluation will always bring up something that you have not thought about, because you've been working with that content for a long time and you have been developing, designing it and you don't see it with a fresh eye, so of course someone will come in and say something that you have not even thought about. There is not something that I can remember right now being completely unexpected, but still evaluation studies do review things that you have not thought about as a designer because people come in with a fresh look and you always get that, so it is important to evaluate.

INTERVIEWER:

How would you sum up your experiences so far? Lessons learned that you have applied or will apply in subsequent projects?

MARIA:

Well, in our current project we are working on, Emotive, we are trying to apply exactly the things that are missing in our view [... and what we feel missing is this deeper connection to the visualised content, to the visualised cultural content, which is this emotive engagement, so what I previously coined as a "longer lasting impact" or "deeper meaning", that is what we are trying to add into our work, so trying to add type of storytelling that really engages the visitor and goes beyond lifeless visualisations of cities and archaeological sites. That is our direction and it really difficult to understand how to do that and that is part of the research that we are doing now.

INTERVIEWER:

Could you please tell me something yourself? What is your professional role?

ARETI:

I am an academic at the University of Newcastle, in the department called Media and Cultural Heritage. My expertise in that area is around digital heritage: digital design, evaluation, development of digital heritage applications.

INTERVIEWER:

What 3D interactive media have you been involved in making and/or evaluating?

ARETI:

In terms of making, web apps, for example. I will present one today (York Heritage Research Seminars-16th January 2018): that is more of a critical design of a digital interactive installation. The context is very different in most of the cases, so the web app I have mentioned before it was an old project, 2011, and it had an archaeological context and there were archaeologists in the team. Now we work more with social history, migration, European identity and that sort of things. I have to say: I don't make them myself, I am in the design team, I work with the content.

INTERVIEWER:

Was it/Were they designed for a specific purpose? If yes, what purpose?

ARETI:

The projects I was involved in were part of research projects, so they had the purpose to answer the research questions. In most of the cases those projects that I had designed outputs were digital heritage applications, we developed those applications in order to answer research questions which are of the design, so for example: "how do we support dialogue?" or "how do we support speculation within heritage interpretation?". Of course, all of them are deployed in real life situations and long term, so for example the web apps we developed in 2011 are still up and running. In that respect they also had an audience in mind, but they didn't have a purpose to answer someone else's question, as the questions were from within the research.

INTERVIEWER:

Were they designed for a specific audience?

ARETI:

That again depends on the context. For example, one of the key principles in the work I do as a designer, is the idea of a situated action: so depending on the situation and the installation you need to think of how you design before that situation. A project that we did with the web apps it was about rock arts in a rural site and we didn't know anything about the audience, we started assembling the audience through the research project: we observed the site, we figured out more or less what kind of people were visiting and we went from there recruiting groups to help us with the design. That's how I was trying to differentiate between products developed by museums or heritage sites that have a specific audience segmentation or work in relation to a specific audience. So, for example, for the installation I'll be talking about today the audience was given because

it was in a very specific gallery within a permanent exhibition, so the museum had a very good view of what the audience would be, but we were not asked to design something for that audience and we were given the permission to experiment with space and look at different audience.

INTERVIEWER:

What approaches have you been using to evaluate audiences' response to such media?

ARETI:

I have done evaluations where I was commissioned to do evaluation of someone else's work, apps or other installations, and those commissioned evaluations sometimes need to respond to the brief of the people who commissioned you to do it. In my own work, I very rarely follow the traditional evaluation approach, formative or summative, because in many ways the design process, for example if it's a participatory process or the iterative study of an artefact within space, one might call it evaluation but for me it's a research process. I'm using primarily qualitative approaches: interviews, observations, semi-structured interviews and focus groups. I always try to add something different in my mix. Within my research projects sometimes I have the flexibility to practice some that I wouldn't necessarily use in a commissioned process, so I have used diaries or apps to understand how people live with their apps for a long period of time. One of my students is using go-pro to have a first-hand recording of a visit with a mobile app; we did a project where we used recording glasses, so basically, we sent visitors into the gallery using these glasses and after we showed them the video they made to discuss their experience.

INTERVIEWER:

What's been most/least effective in terms of gathering useful data on audience experience?

ARETI:

In my experience, it depends on what the question is: for example, if you are interested in finding out how people make meaning of an app over a period of four weeks you are not going to get this from Google Analytics and it would be entirely unmanageable doing this using from diaries of hundreds of participants. So, pragmatics come into it. Personally I measure values in terms of lessons for research in qualitative methods, so this idea of talking to people and also allowing people not to talk just in an interview situation but get people to express themselves in ways that are more familiar to them:

so, for example, when we evaluated the web apps we did the shadowing in the field and the post-visit interviews, but also we did mind maps based on prompts from the interpretation and in fact that aspect of the evaluation gave us a lot of insights on something that interviews couldn't give us because we were looking on how people experience sense of place.

INTERVIEWER:

What results have you been getting in your studies in terms of audiences' reaction to these new technologies? Anything expected/unexpected that you've encountered through your work with audiences and 3D interactives?

ARETI:

In terms of unexpected results, one thing that we came across while studying this interactive installation we installed in a museum in Newcastle, is that people expected it to be all singing all dancing, that it would be something spectacular and because the installation was trying to think about reflection it was a very quiet installation and people didn't expect that in a gallery all the other installations were touch screens with sounds and things like that. So, something we learned from that is that when you put these installations, especially in a specific context, you always need to curate the all context to allow different engagements to happen: so basically, the story, the narrative around the installation needs to cohere with the context. I can tell you something regarding archaeological installations: it was a project with proper expert archaeologists and it was aimed at supporting speculations on the field and social interaction; one of the findings from the qualitative evaluation was that they loved all of these things, but they also asked, "where is the hard facts?". All the technologies we use are very intuitive, we learned very early issues around usability; but in my own observations that's kind of a common thing. I mean people have to be able to use before experiencing it. So for example, what happened with the apps (it was a set of apps) is that very early in the project we decided to differentiate between usability and experience, so we treated usability in a kind of traditional way like: can people find where to click? What should the icon look like? does the circle mean click or here I am with no interactivity implied? and we tried to solve this before we started working with the experience. So, in terms of navigation we spend a very significant amount of time on how you navigate the app in relation to the landscape and we used different ways: instructions as well as views of what you are supposed to be looking at when you are heading in the right direction.

INTERVIEWER:

How would you sum up your experiences so far? Lessons learned that you have applied or will apply in subsequent projects?

ARETI:

What I have understood from the way I worked in these research projects is that it is easy for someone in a participatory context to assume authority, but it is also equally easy to be exactly in the opposite side, which is try to respond to all of the needs and requirements and requests of the users or stakeholders and I think that the biggest challenge but also the thing that I keep in mind is that the reason why I am leading a team is because I have a design sensibility which a need to maintain and take responsibility for my decisions, while listening actively to other people's positions. Also, I never put the technology first, that doesn't mean that I wouldn't use innovative technologies it's just that we didn't use them for the sake of using them. For me technology has to be able to contribute to something in order to be selected. Technologies bring with them assumptions of use, so for example with the website if you put out an experimental website-we are trying to work around some experimental interfaces for collections- one of the key fact is that people have very longstanding and solely understanding of what a certain database is likely to look like, so they don't know what to do with them; so in a way the website is a technological tool that brings many socio-cultural assumptions which basically shape the experience and the expectations of the users.

INTERVIEWER:

Could you please tell me something about yourself? What is your professional role?

SOPHIE:

I work at the Museum of Archaeology and Anthropology, which is part of the University of Cambridge. I am responsible for a lot of public-facing programs that we do, so all the teaching with schools, from preschool to postgraduate level. We put on activities and events for informal learning and I'm also responsible for the evaluation in the museum and for a project about evaluation across Cambridge museums.

INTERVIEWER:

What 3D interactive media have you been involved in making and/or evaluating?

SOPHIE:

I was involved in a project a couple of years ago where we were going to create some sort of digital resources for teachers, so we specifically went out and did observations and focus groups with teachers primary and secondary level across the region, looking at how they were using digital contents. Currently, all the museums and collections are trying out some of that stuff as well: we have got an app in the museum here that I have been doing some evaluation on. Six years ago, I did a pilot project evaluation involving the use of iPad.

INTERVIEWER:

Was it/Were they designed for a specific purpose? If yes, what purpose?

SOPHIE:

Yes, each of them were designed for a very specific purpose and usually with a quite specific audience in mind. The big project we just did we were looking at teachers and even so is a massive range, because some of the teachers had just come out of universities and were doing NQT while others were on their way to retirement, so a massive range of skills. Then within the museum the three little projects I have been evaluating sending our app in the gallery here at the museum: we have a case which has hundreds of objects, there isn't enough room for labels, so we had an app made that gives you more information about all the objects. This app was designed to give our audiences some ideas about how they can access a little bit more information and then in the Sedgwick Museum of Earth Sciences they had another case, a display which is a very old cabinet containing collections, but the cabinet couldn't be opened for conservation reasons so they designed this app to give visitors a view into this very early collection without compromising the preservation of the objects.

INTERVIEWER:

What approaches have you been using to evaluate audiences' response to such media?

SOPHIE:

I do a lot of visitors' observations in my current role. We did some kind of guided interviews where we asked people to look at the app, we watched what they did and did the interview at the end; I have done some with just timing and observations without them knowing that we were doing it. With the teachers, we set up a few websites that we wanted them to look at and gave them a specific task asking them to find something to fit with their current teaching plan, so we asked them to find information, and we

recorded and observed what they were doing and did interviews at the end. So, it's been kind of a combination of different approaches.

INTERVIEWER:

What's been the most/least effective in terms of gathering useful data on audience experience?

SOPHIE:

I think, and certainly the biggest lesson I learned was sitting and watching the teachers, because without me giving any input to what they were doing, so: "here is your task, find something to fit with your current planning and here is the website that we want you to use", and we knew that there was something in the website fitting their planning, and just letting them free and observing what they were doing, I was with three teachers of a primary school using a particular website and somehow they ended up in a Russian website. Sitting and watching them I could totally see how they got there, it was just a couple of clicks, and they didn't realise their drawing further and further away from they were started, that kind of process and listening them to say: "I don't know where I am, I am not really sure what I'm doing", witnessing that reticence and nervousness was a massive lesson to me. There was one group of teachers that we had a Pinterest page for and they were critiquing Pinterest, which wasn't really the aim. We also observed classes in that project and gain sitting in a classroom where all of the students had iPad, it was an art class and the teacher was saying it was much better now, because its preparation was very different and all the people were Google searching pieces of fruits, so rather than actually having fruits for them to draw they were looking for images and then drawing, so that observation I think was the most useful method of really seeing what people do in their own natural environment. I think that the least useful piece of evaluation I have been involved with, are the ones where the museum or curators' intentions are not very clear in the end-product and so because they don't have a really defined audience for what they are trying to do and the parameters are not sorted out at the beginning, sometimes you come in to evaluate something and you can't do it because you don't know what criteria you are looking against, so it is not possible to see whether it was successful or not. I think that sometimes people use digital media as a brain dump and then expect other people to be able to find what they want.

INTERVIEWER:

What results have you been getting in your studies in terms of audiences' reaction to these new technologies?

SOPHIE:

It varies wildly and I think it's that some of our audiences have more confidence that others and so some people are just happy to come and play around on a piece of technology without necessarily knowing where they are going, while some people are put off by the technology: I was just doing some analysis of some data that I have got from another gallery and I just discovered was that a jigsaw that they have in the gallery people stopped at for an average of 4 minutes and a piece of digital technology they stopped at for an average of 2 minutes, and I found really fascinating that the piece of digital technology was drawing people in but it wasn't necessarily keeping them there in a way that the jigsaw really did. I have seen evidence from our evaluations across at the university museums that some people have been grateful for the museum that don't have masses of screens in, while some people wanted to see more of that: I think it comes back to what I was saying, that the best digital uses are always going to be the one that are clearly defined in what they want to do and I think that the temptation is not curate these things, whereas the need so much input.

INTERVIEWER:

Anything expected/unexpected that you've encountered through your work with audiences and 3D interactives?

SOPHIE:

There is one of our museums that has screens in the gallery but they are not touch screens and since everyone is so used to touch screens there is a sort of frustration about screens in museums that are not touch screens.

INTERVIEWER:

How would you sum up your experiences so far? Lessons learned that you have applied or will apply in subsequent projects?

SOPHIE:

Do user testing as much as possible, I think that definitely is something that we need to look at as much as possible, having really clear objectives and do observations before you even design your own thing.

Appendix E

Pilot Codesign Workshop February 2019

UX prototypes evaluation

Questions

- Q1. What did you like/dislike about the experience?
- Q2. Was the format compelling?
- Q3. What was the key takeaway from the experience?
- Q4. What did you expect from the experience? Did the prototype match your expectations?

Themes

1. DESIGN:

Participants' comments on what they liked or disliked about the UX format.

2. AUDIENCE:

Participants' comments on their takeaway from the experience, what they perceived to be the UX's intended audience and discussion around audiences' needs.

3. ROLE OF EXPERTISE:

Participants' discussion around the role of archaeologists in the UX design process.

Theme 1

GROUP 1 QUESTIONNAIRES

Reference 1

I really liked the little details that link together the rooms in different fashions - e.g. the guiding questions/themes (turn me, pose me), the lighting and pathways. I especially liked some of the ideas from the final room that have made me think differently about what to leave behind and how (e.g. secret or on display/public)

Reference 2

I feel that the text content is something I might not be as keen on – there is potentially too much text and perhaps there is a lot of responsibility put on the visitor to learn, which could be hard given fatigue.

Reference 3

the object focus and the opportunity to leave things behind

Reference 4

I think at the end of an exhibition this may feel heavy

Reference 5

I liked how they reused 3D objects to point out different things in each room. I have slight access and spacing concern with how much they packed into the room.

Reference 6

I liked the multi-part nature and the use of different media- The light especially will be a great tool/draw for visitors.

Reference 7

Yes and very clear. Great flow. Love the light tethered path.

Reference 8

Yes! The use of digital things really enhanced the exhibit and was quite integral to the experience.

GROUP 2 QUESTIONNAIRES**Reference 1**

I really liked the mural and the ability to sit and see effects caused by other visitors.

Reference 2

It was slightly information light. Do you learn much about the site itself?

Reference 3

I liked the free flowing. And that there is no expectation to see everything. Need to be careful that the free-flowing nature doesn't mean visitors miss info that becomes important later on.

Reference 4

It is an object-centered approach, while maintaining a coherent human theme (led by the goat personality). Incorporating the excavation site into the room is a great way to portray the processes archaeologists go through. It would have been nice to learn more about the process of excavation, although this is mitigated by the thorough interaction with the three artefacts themselves.

Reference 5

I liked that the experience starts outside of space with texts on walls; the goat footprint for navigation; people guides in interactive (avatars); the room as an excavation site; the sofa!

Reference 6

Yes! Especially the murals. I liked the games.

Reference 7

Yes! I loved the excavation room. There is more opportunity here for archaeology-themed interactions. The games which center on the artefacts are a unique way to teach about how they're used.

FOCUS GROUP

Reference 1

CLAIRE

I really liked that idea of the mural wall and the sofas, because I am such a lazy person in museum. I thought even if I did nothing else but coming in and sit in the space and spend some time there you had an interaction.

Reference 2

PATRICK

I felt whereas ours was reasonably structured, I felt yours was a lot more free flowing, bit more open. I had the impression that there wasn't an expectation that you needed to see everything in there and that was a really good thing. But there also a flip side to that that a lot of the information you came across in the room is kind of predicated on some understating of what has gone previously, so it is sort of ensuring that people have taken enough knowledge for to move into the other space and I think ours has similar kind of issue as well, that we need to ensure that to get most out of that space you already have done, x,y. z in that space as well.

Reference 3

ASHLEY

Yes, but at the same time our story was very much grounded in what the site has told us, we just weren't explicit about it.

Reference 4

CLOE

I thought yours was really dark, like scarily dark. I would get a little bit nervous about going into this exhibition, because if you say you can pick up an object and something lights up and you pick it up and everything goes off, I would be like "oh no, what have I done? Did I break something", but then I realised that at first I would be like " why is it so dark?" but once you have understood how it works I think it would be really interesting.

Reference 5

HARALD

I liked a lot all the lighting stuff. You were talking about how people would pick up the objects and that it was it hinges, because if people don't pick up these objects they won't see a lot of stuff, so I think this is a very cool effect that has also a side effect I guess we have to think through and test, to see how it works.

Reference 6

HARALD

I also really liked that you allow people to leave something behind and I am kind of surprised that we didn't think about that feedback element in the exhibition. I think that the one would say is that I would be disappointed if the thing I left behind didn't show up on the screen when I was there and I completely get why you say it wouldn't work in that way and part of me is wondering whether it would be possible to dwell in that longer before jumping into and I don't have a solution, but I think in a way it is like you know you have contributed but you haven't actually seen it, so would come back to see it? Maybe it would work in that way, I don't know.

Reference 7

SARA

I really liked the lighting and the idea of the path, having a pathway's change between room and I also liked that each room had a guiding question or a theme like "turn me, pose me" and all that and I think that is one of the ways that you mitigate against thin thing like "how are they going to know that they need to turn out the light" , well if get in and the only thing you see it's a sign that says "turn me", presumably they are going to say "ok, I will do it. There must be something else in this dark room". So, I thought that was quite nice and simple too. I think without having seen it, I probably would have been put off but the amount of text there was on the tablet and maybe it is because I don't like museums that have a lot of text, especially specialists oriented texts, and I was going through it I was wondering what it is the main takeaway that yours was meant to have and I know that in your description it was kind of stated, but even afterwards I was like is it so I come out of this feeling like I have seen an object from multiple dimensions?.

Reference 8

SARA

I think we can have the same critique about ours, I don't know if at the end our ours they would have gotten something out of it. I feel like in yours they would do it in that last room. Although knowing the way I tour places, I don't know. I probably would have turned the things and done the instructions, but then when I saw a bunch of text I would leave.

Reference 9

PATRICK

That is one great thing about digital, that you don't have to show the text. And if you want to find more you simply have buttons that simply drop down the panel. But I am the same, sometimes I just read a paragraph, and I feel the responsibility like I have to read all this to make my money worth it! Just ensuring that people have a choice and they can pick their own pathway through it and if they want to look at the information it is there, but it is not necessarily all presented to you at the start.

Theme 2

GROUP 1 QUESTIONNAIRES

Reference 1

Not entirely clear to me-maybe that the visitor sees multiple dimensions to the objects? I feel that the exhibition is very much focused on what an archaeologist would want to learn.

Reference 2

Objects have lives and they do different things at different points-perhaps not functionally but certainly thematically.

Reference 3

I initially had no expectations, but as the day went on I wanted to understand how an exhibition can help visitors in their understanding of the past. The prototype enabled some special and historical conceptual understanding as to the past.

Reference 4

I expected quite a lot of interactivity and yes, the prototype matched this expectation.

GROUP 2 QUESTIONNAIRES

Reference 1

Compelling more for kids than adults I think.

Reference 2

Main takeaway is that activities and craft practice were important.

Reference 3

Strong focus on the industrial/economic aspects. I think I would takeaway knowledge of how the objects were used and what they are.

Reference 4

Visitors will learn about the context of the artefacts within the social context of the time and interact with each other while doing so.

Reference 5

Everyday life of this very skilful community.

Reference 6

I expected something like a design brief. The prototype does that at a high level.

Reference 7

To a large extent yes! Followed what I thought might happen re. industry etc.

Reference 8

Yes. The prototype gave an impressive broad overview of the experience.

Reference 9

I think I expected more digital/digital based experience. I am happy this wasn't another app but the whole customer journey.

FOCUS GROUP**Reference 1****RACHEL**

I think that work well for multiple audiences, because I felt that a lot of the more interactive stuff in your pitch was more geared towards kids, so in my head the parents would all go to sit on the sofas and the kids would be going around playing with the interactive things and it would be just a space for everyone.

Reference 2**PATRICK**

I felt whereas ours was reasonably structured, I felt yours was a lot more free flowing, bit more open. I had the impression that there wasn't an expectation that you needed to see everything in there and that was a really good thing. But there also a flip side to that that a lot of the information you came across in the room is kind of predicated on some understating of what has gone previously, so it is sort of ensuring that people have taken

enough knowledge for to move into the other space and I think ours has similar kind of issue as well, that we need to ensure that to get most out of that space you already have done, x,y. z in that space as well.

Reference 3

HARALD

I think for me the fact that this is the last room of the exhibition waved quite heavily on the back of my mind on what I though the spaces should be liked, just because I don't really like museums that much and so I feel museum fatigue quite quickly and I guess for me thinking about the space at the end was like: " we need a couch! and we need something that is kind of lighter in a way", so for me I went there quite quickly and maybe comparing with yours I feel like archaeologists we will better with your and fell like their work is properly represented and taken seriously and communicated, whereas they might not like ours. And I guess that goes back to what we talked about audiences. If you think about the audience ours is in a way designed for and the audience yours is designed for is probably different.

Reference 4

PATRICK

I felt yours had quite a strong focus on the industrial economic aspect of the site, which is one of the strongest aspects there, why did you latch on that?

Reference 5

SARA

I don't know the answer to that. We started with the cards and we wrote down some key words and it was through that that Harald had an idea about spindle whorl and the game when you are spinning things and I said something about textiles and Cloe said something about educational. So, in some ways ours maybe doesn't actually match the brief of what you wanted for that room, in another way we were thinking "would you really want to hear a massive story about a site after you had to go through six rooms with a bunch of traditional artefacts displays". So, I think we were more driven by a more playful aim.

Reference 6

CLOE

We didn't want people to leave the museum like "Oh, that was just more cases of artefacts".

Reference 7

ASHLEY

It's not just that last room that you can peruse through to go to the giftshop, it is the last experience and your lasting memory of the exhibition.

Reference 8

SARA

We were thinking what would make people want to go into this room after having gone through all the other rooms and that is where we were like " ok, here we are going to add some flash on to". So, I don't know if we told an honest story about the site itself, in which case I think the archaeologists would be very disappointed in us.

Reference 9

SARA

I really liked the lighting and the idea of the path, having a pathway's change between room and I also liked that each room had a guiding question or a theme like "turn me, pose me" and all that and I think that is one of the ways that you mitigate against thin thing like "how are they going to know that they need to turn out the light" , well if get in and the only thing you see it's a sign that says "turn me", presumably they are going to say "ok, I will do it. There must be something else in this dark room". So, I thought that was quite nice and simple too. I think without having seen it, I probably would have been put off but the amount of text there was on the tablet and maybe it is because I don't like museums that have a lot of text, especially specialists oriented texts, and I was going through it I was wondering what it is the main takeaway that yours was meant to have and I know that in your description it was kind of stated, but even afterwards I was like is it so I come out of this feeling like I have seen an object from multiple dimensions?

Theme 3

Reference 1

HARALD

I think for me the fact that this is the last room of the exhibition waved quite heavily on the back of my mind on what I thought the spaces should be liked, just because I don't really like museums that much and so I feel museum fatigue quite quickly and I guess for me thinking about the space at the end was like: " we need a couch! and we need something that is kind of lighter in a way", so for me I went there quite quickly and maybe comparing with yours I feel like archaeologists we will better with your and fell

like their work is properly represented and taken seriously and communicated, whereas they might not like ours. And I guess that goes back to what we talked about audiences. If you think about the audience ours is in a way designed for and the audience yours is designed for is probably different.

Reference 2

RACHEL

I think I felt an obligation of communicating a certain amount of information but the site, like what are the main points in the story, what this tells us about competition and the emergence of social complexity and here is the big picture plus some bits of material culture. For me it wouldn't have succeeded if someone had left without some information about the site itself and I don't know if you conceived yours as needing to do that or if you didn't think that was part of the purpose of what you were designing.

Reference 3

SARA

We were thinking what would make people want to go into this room after having gone through all the other rooms and that is where we were like " ok, here we are going to add some flash on to". So, I don't know if we told an honest story about the site itself, in which case I think the archaeologists would be very disappointed in us.

Reference 4

KRISTEN

and the majority of museum visitors are not archaeologists, so does that really matter?

Reference 5

RACHEL

I think we wanted you to understand a little bit about the objects and the site and the importance of archaeology on those stories. It was conceived in a way like all objects tell a story, but archaeology and archaeologist help shape those stories and then with the last room for you to be thinking what are the stories that my stuff are going to tell.

Reference 6

PATRICK

It was really kind of a reflective end. I think one interesting thing is also that you are given a lot of information by archaeologists, but our reinforcement would be this is our interpretation. In the excavation room we are saying this is the evidence we have been based it off, but this is merely our opinion. But I think that one of the interesting things for visitors in museums is that they can have an opinion too and saying that "This is

merely what we think based on the evidence, but here is the evidence, what do you think about it?".

Questionnaires

GROUP 1

Q1-What did you like about this experience? What didn't you like about this experience?

I really liked the little details that link together the rooms in different fashions - e.g. the guiding questions/themes (turn me, pose me), the lighting and pathways. I especially liked some of the ideas from the final room that have made me think differently about what to leave behind and how (e.g. secret or on display/public). I feel that the text content is something I might not be as keen on – there is potentially too much text and perhaps there is a lot of responsibility put on the visitor to learn, which could be hard given fatigue.

I enjoyed the diversity of ideas and thought processes going on. The collaborative work of this project was incredible. At times I did feel that we didn't have enough substantial information to go on. However, it also provided more free reign to discuss ideas.

It has a lot of information. Archaeologists from the excavation will be happy about the representation of the site. I liked the lighting, the object focus and the opportunity to leave things behind. I think at the end of an exhibition this may feel heavy. I would like to see the photo I leave behind projected on the wall.

I liked how they reused 3D objects to point out different things in each room. I have slight access and spacing concern with how much they packed into the room.

Q2-Was the format compelling?

I liked the multi-part nature and the use of different media- The light especially will be a great tool/draw for visitors.

I could easily envision this format taking place; the opportunity to be creative.

Yeas and very clear. Great flow. Love the light tethered path.

Yes! The use of digital things really enhanced the exhibit and was quite integral to the experience.

Q3-What was your main takeaway from this experience?

Not entirely clear to me-maybe that the visitor sees multiple dimensions to the objects? I feel that the exhibition is very much focused on what an archaeologist would want to learn.

I felt that designing an exhibition is a lot more challenging than you think, but I enjoy facing a challenge and more importantly this experience has been eye-opening as to understanding audiences and museum's interpretation of space. This experience provided the opportunity to see how artefacts are crucial in our conceptualisation of the past.

All the kinds of information a scientific excavation provides that individual objects cannot.

Objects have lives and they do different things at different points-perhaps not functionally but certainly thematically.

Q4-What did you expect from this experience? Did the prototype match your expectations?

I initially had no expectations, but as the day went on I wanted to understand how an exhibition can help visitors in their understanding of the past. The prototype enabled some special and historical conceptual understanding as to the past.

I expected quite a lot of interactivity and yes, the prototype matched this expectation.

GROUP 2

Q1-What did you like about this experience? What didn't you like about this experience?

I really liked the mural and the ability to sit and see effects caused by other visitors. It was slightly information light. Do you learn much about the site itself?

I liked the free flowing. And that there is no expectation to see everything. Need to be careful that the free-flowing nature doesn't mean visitors miss info that becomes important later on.

It is an object-centered approach, while maintaining a coherent human theme (led by the goat personality). Incorporating the excavation site into the room is a great way to

portray the processes archaeologists go through. It would have been nice to learn more about the process of excavation, although this is mitigated by the thorough interaction with the three artefacts themselves.

I liked that the experience starts outside of space with texts on walls; the goat footprint for navigation; people guides in interactive (avatars); the room as an excavation site; the sofa!

Q2-Was the format compelling?

Compelling more for kids than adults I think. I am compelled by a room design that puts you into the site.

Yes! Especially the murals. I liked the games.

Yes! I loved the excavation room. There is more opportunity here for archaeology-themed interactions. The games which center on the artefacts are a unique way to teach about how they're used.

It was but felt as if it was more suitable for families/younger people (and the young at heart).

It feels like a breakout 'playroom' in the museum which would be great!

Q3-What was your main takeaway from this experience?

Main takeaway is that activities and craft practice were important.

Strong focus on the industrial/economic aspects. I think I would takeaway knowledge of how the objects were used and what they are.

Visitors will learn about the context of the artefacts within the social context of the time and interact with each other while doing so.

Everyday life of this very skilful community.

Q4-What did you expect from this experience? Did the prototype match your expectations?

I expected something like a design brief. The prototype does that at a high level.

To a large extent yes! Followed what I thought might happen re. industry etc.

Yes. The prototype gave an impressive broad overview of the experience.

I think I expected more digital/digital based experience. I am happy this wasn't another app but the whole customer journey

Focus group transcript

A – GROUP 2 FEEDBACK ON GROUP 1 PROTOTYPE

KRISTEN

I really liked the floor plan off the excavation site that you guys had. Remind me again that was set up again.

RACHEL

I liked that it turned the entire space into the excavation and the view over the sea and the fact that it really puts you in the space.

HARALD

I think in my mind it wasn't necessarily the excavation. It is like you were imagining that the floor was the excavation site, if that makes sense, rather than the excavation site was reproduced on the floor.

ASHLEY

In my head a lot of space was blank walls with black space around and the mural being the main thing.

CLAIRE

I really liked that idea of the mural wall and the sofas, because I am such a lazy person in museums. I thought even if did nothing else but coming in and sit in the space and spend some time there you had an interaction.

ASHLEY

That was actually part of it, that if they didn't go for the tablet, they could at least sit there and watch the mural and it's still something.

RACHEL

I think that work well for multiple audiences, because I felt that a lot of the more interactive stuff in you pitch was more geared towards kids, so in my head the parents would all go to sit on the sofas and the kids would be going around playing with the interactive things and it would be just a space for everyone.

CLAIRE

This is interesting, because I have actually put down here that I have got this feeling that it would be great if this was like a breakout play room in the museum.

PATRICK

I felt whereas ours was reasonably structured, I felt yours was a lot more free flowing, bit more open. I had the impression that there wasn't an expectation that you needed to see everything in there and that was a really good thing. But there also a flip side to that that a lot of the information you came across in the room is kind of predicated on some understating of what has gone previously, so it is sort of ensuring that people have taken enough knowledge for to move into the other space and I think ours has similar kind of issue as well, that we need to ensure that to get most out of that space you already have done, x,y. z in that space as well.

CLAIRE

I liked the way you broke the rules, we were more conservative.

PATRICK

I really liked the game as a way of reinforcing knowledge that you kind of seen but now you can put into action, but you get feedback from it. We didn't do that as much.

HARALD

I think for me the fact that this is the last room of the exhibition waved quite heavily on the back of my mind on what I thought the spaces should be liked, just because I don't really like museums that much and so I feel museum fatigue quite quickly and I guess for me thinking about the space at the end was like: " we need a couch! and we need something that is kind of lighter in a way", so for me I went there quite quickly and maybe comparing with yours I feel like archaeologists we will better with your and fell like their work is properly represented and taken seriously and communicated, whereas they might not like ours. And I guess that goes back to what we talked about audiences. If you think about the audience ours is in a way designed for and the audience yours is designed for is probably different

RACHEL

I think I felt an obligation of communicating a certain amount of information but the site, like what are the main points in the story, what this tells us about competition and the emergence of social complexity and here is the big picture plus some bits of material culture. For me it wouldn't have succeeded if someone had left without some

information about the site itself and I don't know if you conceived yours as needing to do that or if you didn't think that was part of the purpose of what you were designing.

PATRICK

I felt yours had quite a strong focus on the industrial economic aspect of the site, which is one of the strongest aspects there, why did you latch on that?

SARA

I don't know the answer to that. We started with the cards and we wrote down some key words and it was through that that Harald had an idea about spindle whorl and the game when you are spinning things and I said something about textiles and Charlotte said something about educational. So, in some ways ours maybe doesn't actually match the brief of what you wanted for that room, in another way we were thinking "would you really want to hear a massive story about a site after you had to go through six rooms with a bunch of traditional artefacts displays". So, I think we were more driven by a more playful aim.

CHLOE

We didn't want people to leave the museum like "Oh, that was just more cases of artefacts".

ASHLEY

It's not just that last room that you can peruse through to go to the giftshop, it is the last experience and your lasting memory of the exhibition.

SARA

We were thinking what would make people want to go into this room after having gone through all the other rooms and that is where we were like " ok, here we are going to add some flash on to". So, I don't know if we told an honest story about the site itself, in which case I think the archaeologists would be very disappointed in us.

ASHLEY

Yes, but at the same time our story was very much grounded in what the site has told us, we just weren't explicit about it.

KRISTEN

and the majority of museum visitors are not archaeologists, so does that really matter?

SARA

I think it's very helpful to have gone through that and it is interesting to get your thoughts on what we did and also your thoughts on what you thought we said but we didn't say. That is very worthwhile.

B – GROUP1 FEEDBACK ON GROUP 2 PROTOTYPE

RACHEL

Do you guys have some comments on ours?

CHLOE

I thought yours was really dark, like scarily dark. I would get a little bit nervous about going into this exhibition, because if you say you can pick up an object and something lights up and you pick it up and everything goes off, I would be like "oh no, what have I done? Did I break something", but then I realised that at first I would be like "why is it so dark?" but once you have understood how it works I think it would be really interesting.

KRISTEN

I don't think it was meant to be pitch black.

PATRICK

I think part of it is because we were trying to do some wash light as well, setting an ambience within with each room was...so it would be more light spots.

HARALD

I was imagining it being quite dark, so almost like you wouldn't see the panel until you pick up one object and I thought "this is more cool than scary".

RACHEL

I imagined it being relatively dark in each room, but again you are right and there are probably accessibility and safety issues, although museums do that all the time and there are a lot of exhibits with dark spaces.

SARA

We were talking about this for the secret room too and Ashley said that there are ways you can handle the dark.

ASHLEY

Yes, it is making sure that you add lighted paths and that you are managing transitions between, so you are going from regular light to dark and you are not going from dark to very bright outside.

HARALD

I liked a lot all the lighting stuff. You were talking about how people would pick up the objects and that it was it hinges, because if people don't pick up these objects they won't see a lot of stuff, so I think this is a very cool effect that has also a side effect I guess we have to think through and test, to see how it works.

PATRICK

I think there is a reasonable amount of assumptions and obviously I put the best-case scenario.

HARALD

I also really liked that you allow people to leave something behind and I am kind of surprised that we didn't think about that feedback element in the exhibition. I think that the one would say is that I would be disappointed if the think I left behind didn't show up on the screen when I was there and I completely get why you say it wouldn't work in that way and part of me is wondering whether it would be possible to dwell in that longer before jumping into and I don't have a solution, but I think in a way it is like you know you have contributed but you haven't actually seen it, so would come back to see it? Maybe it would work in that way, I don't know.

PATRICK

The ways that I have seen it done before, is that you can basically do it through social media, so you can trace people back to whatever picture they put up there and that dissuade a lot of people from doing stupid stuff.

RACHEL

Essentially the question is: "Do you give the gratification of an immediate feedback? and is doing that worth the risk that 5% of visitors are going to write something completely inappropriate?".

PATRICK

I have also seen that if you do it with a projector and tap you message on a tablet and it is displayed on the wall it lasts only 10-15 seconds and gradually fades out.

SARA

I really liked the lighting and the idea of the path, having a pathway's change between room and I also liked that each room had a guiding question or a theme like "turn me, pose me" and all that and I think that is one of the ways that you mitigate against thin thing like "how are they going to know that they need to turn out the light" , well if get

in and the only thing you see it's a sign that says "turn me", presumably they are going to say "ok, I will do it. There must be something else in this dark room". So, I thought that was quite nice and simple too. I think without having seen it, I probably would have been put off but the amount of text there was on the tablet and maybe it is because I don't like museums that have a lot of text, especially specialists oriented texts, and I was going through it I was wondering what it is your main takeaway that yours was meant to have and I know that in your description it was kind of stated, but even afterwards I was like is it so I come out of thins feeling like I have seen an object from multiple dimensions?.

RACHEL

I think we wanted you to understand a little bit about the objects and the site and the importance of archaeology on those stories. It was conceived in a way like all objects tell a story, but archaeology and archaeologist help shape those stories and then with the last room for you to be thinking what are the stories that my stuff are going to tell.

PATRICK

It was really kind of a reflective end. I think one interesting thing is also that you are given a lot of information by archaeologists, but our reinforcement would be this is our interpretation. In the excavation room we are saying this is the evidence we have been based it off, but this is merely our opinion. But I think that one of the interesting things for visitors in museums is that they can have an opinion too and saying that "This is merely what we think based on the evidence, but here is the evidence, what do you think about it?".

SARA

I think we can have the same critique about ours, I don't know if at the end our ours they would have gotten something out of it. I feel like in yours they would do it in that last room. Although knowing the way I tour places, I don't know. I probably would have turned the things and done the instructions, but then when I saw a bunch of text I would leave.

PATRICK

That is one great thing about digital, that you don't have to show the text. And if you want to find more you simply have buttons that simply drop down the panel. But I am the same, sometimes I just read a paragraph, and I feel the responsibility like I have to read all this to make my money worth it! Just ensuring that people have a choice and

they can pick their own pathway through it and if they want to look at the information it is there, but it is not necessarily all presented to you at the start.

PD process evaluation

Themes

1. STRENGTHS:

Participants' comments on the efficacy of PD process and design resources

2. ISSUES:

Participants' comments on issues around the workshop's structure.

3. PERCEIVED BENEFIT:

Participants' comments on what they felt to have gained professional and personally from their participation.

Theme 1

Reference 1

PATRICK

I have to say I found it really useful. we had conversations together (referring to our previous meeting regarding the exhibition) where we tried to process all this information and pull out few strands and when it's just two people you end up going around the same things, but having other people involved in those conversations...I mean, the lighting thing that came over (referring to the prototype developed by Group 2), was brilliant I would have never thought of that.

Reference 2

CLAIRE

I think it is important to come from the experience point of view, which means everything in the user experiences not just the technology, because sometimes you find that that takes the focus immediately. So, for me this process is about taking that holistic experience.

Reference 3

SARA

I was listening to different ideas in our group, but also with the thing you were saying about people leaving comments behind and wanting to have them private (referring to Group 2 prototype) and it just made me think about other projects were I was like I can see where I would use that idea of a private comment , so I think that could be stressed also with others who may not be familiar with this process to design to be able to say: "ok we are going to design this experience for somebody else, but there a loads of stuff that you are going to be able to take away from it. So, these little things where you are like: " Ok I can use that in a different scenario". which I probably wouldn't had thought

about in any other case. But having said that, because all of us are designing things more often, it might be easier for us to be able to say "I could use that" in other space, so I wonder how you can provide people with tools and prompts to be able to see that whatever you're doing now, you can also use it elsewhere.

Reference 4

RACHEL

Some sort of reflection on the key components of the design. That would make it easier for people to see the transferability to other projects.

Reference 5

PATRICK

I think so much of it comes down to think about the audiences but recognising that whatever you come up with a great idea is usually only ever going to have to appeal to a certain segment of audience and there is always something which needs to sit alongside that, which is either a non-tech version or something that tries to bridge that gap a little bit.

Reference 6

RACHEL

It's interesting for me that this was specifically meant to be an event about digital design, or design with digital media, but then you build in a very strong mandate to also think about the non-digital parts of the user experience and that really made me reflect because we had a parallel conversation with Gabii publication and the way we designed the publication there in no digital option and that was a big design decision, one that not everyone agree with, and so this made think on how do you embed your digital design in a broader experience design that has digital and non-digital components.

Reference 7

SARA

I thought that Claire was making a similar point about all the different integrated pieces of it and I was thinking about the April event and how this is going to work, and I like the fact that it is not just a digital experience and that you are forced to think about everything else. Because coming into this morning I thought we were just going to build a mobile app, but it was much more in the way we did this, and I found it much more meaningful.

Reference 8**RACHEL**

I think that what pushed us in that direction is that you gave us the plane of the space and that we all had to think to the physicality of the space in which the digital media were going to be used and where they were going to be and that I think really helped us to bridge that gap.

Reference 9**KRISTEN**

That's a great point because I don't think we necessarily would have thought it in that way if we didn't have the site plan.

Reference 10**HARALD**

I think the block for us as well. We talked a little about this and when we were sketching stuff out on paper we thought "oh we have all the space", but then we tried to translate that into blocks we thought "Oh, it is going to be really crowded in here!". So that changed our we approach our core design automatically and even towards the end thinking about how is this space compared to the room and thinking about our bodies in the space that felt useful as well, where having dimensions that could actually mapped out in the space you were in so you have the sense of how big it is compared to elements.

Reference 11**SARA**

I liked the idea... what you were saying about the digital book...that you may have to force people to think about where this digital book is going to be read, think about the physical...because I don't know that it happens that often. I like that idea and that made me think differently about it, because I was wondering what if somebody else comes with a case study that's like "I am going to design a website" , are they going to go through this process ? maybe we have to force them to think about the physical space in which you are going to engage with that website.

Reference 12**SARA**

I think it's very helpful to have gone through that and It is interesting to get your thoughts on what we did and also your thoughts on what you thought we said but we didn't say. That is very worthwhile.

Theme 2

Reference 1

HARALD

I think for the prototype as well; our group needed a bit more of a push to create paper prototypes, so we could give it to you, so you experience it. And I feel like, yes, maybe we needed more time to be able to do it, but if that had been clearer as a challenge, like this is the goal you are working towards, maybe we would have been able to get closer to that anyway.

Reference 2

SARA

I would have liked to have an actual debrief after the experiences after filling out the questionnaire. I feel unsatisfied, because I want to do more. I think there needs to be a question about the audience because, you guys maybe don't know what audience we were pitching at and we don't know yours either.

Reference 3

HARALD

I think it would have been nice to hear the kind of feedback you guys were writing down and conversely, I don't know if you are curious of what we thought about yours. We presented this thing that we partially love and partially think it is ridiculous, but I am genuinely curios.

Theme 3

GROUP 1

Reference 1

I felt that designing an exhibition is a lot more challenging than you think, but I enjoy facing a challenge and more importantly this experience has been eye-opening as to understanding audiences and museum's interpretation of space. This experience provided the opportunity to see how artefacts are crucial in our conceptualisation of the past.

FOCUS GROUP

Reference 1

SARA

I was listening to different ideas in our group, but also with the thing you were saying about people leaving comments behind and wanting to have them private (referring to Group 2 prototype) and it just made me think about other projects were I was like I can

see where I would use that idea of a private comment , so I think that could be stressed also with others who may not be familiar with this process to design to be able to say: "ok we are going to design this experience for somebody else, but there a loads of stuff that you are going to be able to take away from it. So, these little things where you are like: " Ok I can use that in a different scenario". which I probably wouldn't had thought about in any other case. But having said that, because all of us are designing things more often, it might be easier for us to be able to say "I could use that" in other space, so I wonder how you can provide people with tools and prompts to be able to see that whatever you're doing now, you can also use it elsewhere.

Reference 2

CLAIRE

This was the first time I had to design a museum exhibition.

Reference 3

KRISTEN

That has definitely changed how I think about museum displays and also, I think I can incorporate this kind of thinking into the design of my own work.

Reference 4

RACHEL

I really think in terms of building your own professional network doing a design focused workshop like this is really a great way to see how your natural collaborator might be.

Reference 5

SARA

I have gotten to work with Ashley and Harald before so I had a sense when we started that this was going to be a nice collaboration, but I was neat to be able to work with Cloe because we are going to be working together over the next few months, so I liked the idea of...and maybe it is linking to what you were saying Rachel about recognising the things that work and don't work with other people and also being able to recognise people skills set. I think that there is something nice that comes out of that, where they are creative thinkers, or they are good at writing texts or they have wild wacky ideas. I think there is a lot of benefit to that and appreciation of other people's skills.

Focus group transcript

A - GENERAL IMPRESSIONS

FACILITATOR

Should we start with general impressions?

SARA

Are we talking about our experiences, the things we developed or the process?

FACILITATOR

The process.

PATRICK

I have to say I found it really useful. we had conversations together (referring to our previous meeting regarding the exhibition) where we tried to process all this information and pull out few strands and when it's just two people you end up going around the same things, but having other people involved in those conversations...I mean, the lighting thing that came over (referring to the prototype developed by Group 2), was brilliant I would have never thought of that.

CLAIRE

I think it is important to come from the experience point of view, which means everything in the user experiences not just the technology, because sometimes you find that that takes the focus immediately. So, for me this process is about taking that holistic experience.

HARALD

Maybe this is a bit off topic, but I had a lot of fun today!

SARA

I was listening to different ideas in our group, but also with the thing you were saying about people leaving comments behind and wanting to have them private (referring to Group 2 prototype) and it just made me think about other projects were I was like I can see where I would use that idea of a private comment , so I think that could be stressed also with others who may not be familiar with this process to design to be able to say: "ok we are going to design this experience for somebody else, but there a loads of stuff that you are going to be able to take away from it. So, these little things where you are like: " Ok I can use that in a different scenario". which I probably wouldn't had thought about in any other case. But having said that, because all of us are designing things more often, it might be easier for us to be able to say "I could use that" in other space,

so I wonder how you can provide people with tools and prompts to be able to see that whatever you're doing now, you can also use it elsewhere.

RACHEL

Some sort of reflection on the key components of the design. That would make it easier for people to see the transferability to other projects.

SARA

Because that is the thing I was wondering as if it would be harder for other people and do you help them to reflect on the process.

RACHEL

Maybe a little bit of categorisation, things we all thought about: so the layout of the space, interactivity and movement.

PATRICK

I think so much of it comes down to think about the audiences but recognising that whatever you come up with a great idea is usually only ever going to have to appeal to a certain segment of audience and there is always something which needs to sit alongside that. which is either a non-tech version or something that tries to bridge that gap a little bit.

RACHEL

It's interesting for me that this was specifically meant to be an event about digital design, or design with digital media, but then you build in a very strong mandate to also think about the non-digital parts of the user experience and that really made me reflect because we had a parallel conversation with Gabii publication and the way we designed the publication there in no digital option and that was a big design decision, one that not everyone agree with, and so this made think on how do you embed your digital design in a broader experience design that has digital and non-digital components.

PATRICK

Also, recognition that you can't do everything and keep things relatively on focus, which I think we all did today.

SARA

I thought that Claire was making a similar point about all the different integrated pieces of it and I was thinking about the April event and how this is going to work, and I like the fact that it is not just a digital experience and that you are forced to think about everything else. Because coming into this morning I thought we were just going to build

a mobile app, but it was much more in the way we did this, and I found it much more meaningful.

CLAIRE

Me too actually because we thought so much about the colour scheme on the walls and what was going on the tablet and that made a huge difference.

RACHEL

I think that what pushed us in that direction is that you gave us the plane of the space and that we all had to think to the physicality of the space in which the digital media were going to be used and where they were going to be and that I think really helped us to bridge that gap.

KRISTEN

That's a great point because I don't think we necessarily would have thought it in that way if we didn't have the site plan.

CLAIRE

And It made us think about the navigation path within the space.

HARALD

I think the block for us as well. We talked a little about this and when we were sketching stuff out on paper we thought "oh we have all that space", but then we tried to translate that into blocks we thought "Oh, it's going to be really crowded in here!". So that changed our we approach our core design automatically and even towards the end thinking about how is this space compared to the room and thinking about our bodies in the space that felt useful as well, where having dimensions that could actually mapped out in the space you were in so you have the sense of how big it is compared to elements.

RACHEL

Yes, I think we did less well on the scale I think. I wonder if there is space in future versions of this exercise for doing the masking tape on the floor thing. Because you could mask out the layout of the room and would give people a sense of the space.

HARALD

I think that could be a really good way to present the prototype as well, because you can do an embodied presentation where you put all the paper elements in your space and you can walk through them.

SARA

I liked the idea... what you were saying about the digital book...that you may have to force people to think about where this digital book is going to be read, think about the physical...because I don't know that it happens that often. I like that idea and that made me think differently about it, because I was wondering what if somebody else comes with a case study that's like "I am going to design a website" , are they going to go through this process ? maybe we have to force them to think about the physical space in which you are going to engage with that website.

RACHEL

we talked about that in the sense that... so your site has this amazing database for ceramics or something like that, if you made this amazing catalogue how this is going to help some ceramicists using it in the middle of nowhere.

B – WHAT PARTICIPANTS LIKED/DISLIKED ABOUT THE WORKSHOP FACILITATOR

Was there something that you didn't like or something that we should have done differently.

KRISTEN

More time!

RACHEL

More time and more breaks and enforcing the breaks.

HARALD

I think for the prototype as well; our group needed a bit more of a push to create paper prototypes, so we could give it to you, so you experience it. And I feel like, yes, maybe we needed more time to be able to do it, but if that had been clearer as a challenge, like this is the goal you are working towards, maybe we would have been able to get closer to that anyway.

RACHEL

But you probably would have to design something much smaller. I think we all tried to design things that were fairly complex.

HARALD

I wasn't clear on that we were supposed to end something over, so if that was the aim, it that had being clear from the beginning I think we would have been closer to that.

SARA

I would have liked to have an actual debrief after the experiences after filling out the questionnaire. I feel unsatisfied, because I want to do more. I think there needs to be a question about the audience because, you guys maybe don't know what audience we were pitching at and we don't know yours either.

HARALD

I think it would have been nice to hear the kind of feedback you guys were writing down and conversely, I don't know if you are curious of what we thought about yours. We presented this thing that we partially love and partially think it is ridiculous, but I am genuinely curios.

C – PARTICIPANTS' PROFESSIONAL AND PERSONAL GAINS FROM THE WORKSHOP**FACILITATOR**

What you professional/gain from participating in this workshop.

CLAIRE

This was the first time I had to design a museum exhibition.

KRISTEN

That has definitely changed how I think about museum displays and also, I think I can incorporate this kind of thinking into the design of my own work.

RACHEL

I really think in term of building you own professional network doing a design focused workshop like this is really a great way to see how your natural collaborator might be.

SARA

I have gotten to work with Ashley and Harald before so I had a sense when we started that this was going to be a nice collaboration, but I was neat to be able to work with Charlotte because we are going to be working together over the next few months, so I liked the idea of...and maybe it is linking to what you were saying Rachel about recognising the things that work and don't work with other people and also being able to recognise people skills set. I think that there is something nice that comes out of that, where they are creative thinkers, or they are good at writing texts or they have wild wacky ideas. I think there is a lot of benefit to that and appreciation of other people's skills.

Personal observations

Pre-pilot

Preparing info about the case study, site and object has been challenging, as the process of condensing and filtering down all the info available is not easy. We tend to think that everything is important, but it is not. This process helps to prioritise and summarise.

During the pilot

UX design

Both groups are working really well, they have all started working immediately on room layout, concepts, media and narrative.

Group 1 started with the design cards, while Group 2 with the object card and the design of visitors' path through the room.

Group 1 is working with concepts on sticky notes, while Group 2 is writing down ideas on a big sheet of paper.

Group 1 is working on practical activities related to textile production to engage visitors.

Group 2 is working on the room layout/visitors' path and the narrative. They are focused on the transition from the previous room and exhibition sections.

Group 1 is focusing on the story, while group 2 is on media, objects, colours scheme and the different kinds of interactions.

1 hour is not enough for the UX design. We stopped design at 12.00.

Rachel and Sara are guiding their groups without imposition, each participant seems equally involved. Groups' dynamic is really good. Rachel feels that the group 1 is more organised-are the group perceived as unbalanced? Harald instead feels that Group 2 is mainly composed by archaeologists (meaning field archaeologists) and that is reinforced by the fact that their prototypes are perceived as more archaeologists-oriented.

Prototyping

Group 1 is working with Lego to visualise the space, while Group 2 with digital wireframe tools (specifically Patrick).

Group 1 is working together, while in group 2 people are working separately on various tasks: Rachel on the room layout, Patrick on the digital media, Claire and Kristen on colours/themes.

Group 2 is using the site publication, Group 1 is not.

Group 1 is building a low-fidelity Lego prototype, while Group 2 is creating a medium fidelity prototype using a tablet.

Improvements for April event

Need for more detailed info on the project:

- Audience
- Aims, takeaway and goals

Re-think the case-study description phase: ask group leaders to prepare a recap/power point presentation (no one for the pilot read the project info in advance!).

Add more time for prototyping.

Add a question regarding the audience of the experience in the questionnaire: who the audience was and did the experience properly address that audience's needs.

Need more time for the evaluation: mid-points throughout the 2 days.

Add group discussion of the comments provided on the questionnaire: participants wanted to know and discuss feedback on their prototypes.

Use cards to print info on the media available for each project.

It is better if group leaders do not work with their group but assume the role of facilitators. During the pilot Harald said that he probably wouldn't have spoken so freely if I were working with them.

Post-pilot

Everything went incredibly well, thanks also to the fact that almost all participants were familiar with PD methods and practices. This exercise was an immediate feedback on

my pre-pilot work selecting info: both groups focused immediately on the key topics of the exhibition and the site without major issues, meaning that the info provided was clear and comprehensive.

Both projects gave me good ideas for the layout of the room, since they both strongly focused on the physical space in terms of set up, lights, pathway and division of spaces. Even if I saw the room, before the pilot I wasn't sure about how to structure the exhibit and use the spaces available, so both projects helped me a lot with that. That is also true in relation to the digital components: Pat and I outlined the resources available, but we never discussed where to put all the interactive parts, how to use them and, more importantly, how to encourage visitors to engage with them.

It has been really interesting to see how people unfamiliar with the site constructed very powerful and evocative narratives about it. Being able to observe the process gave me insights on the meaning-making process of specialists outside the Erimi research team – how do people perceive our work and make sense of our evidence and interpretations?

Design resources

Story Board template

Story Board Title:

Scene



Scene



Scene



Mood:

Script:

Music/Audio Effects:

UX Mechanics:

Other:

Mood:

Script:

Music/Audio Effects:

UX Mechanics:

Other:

Mood:

Script:

Music/Audio Effects:

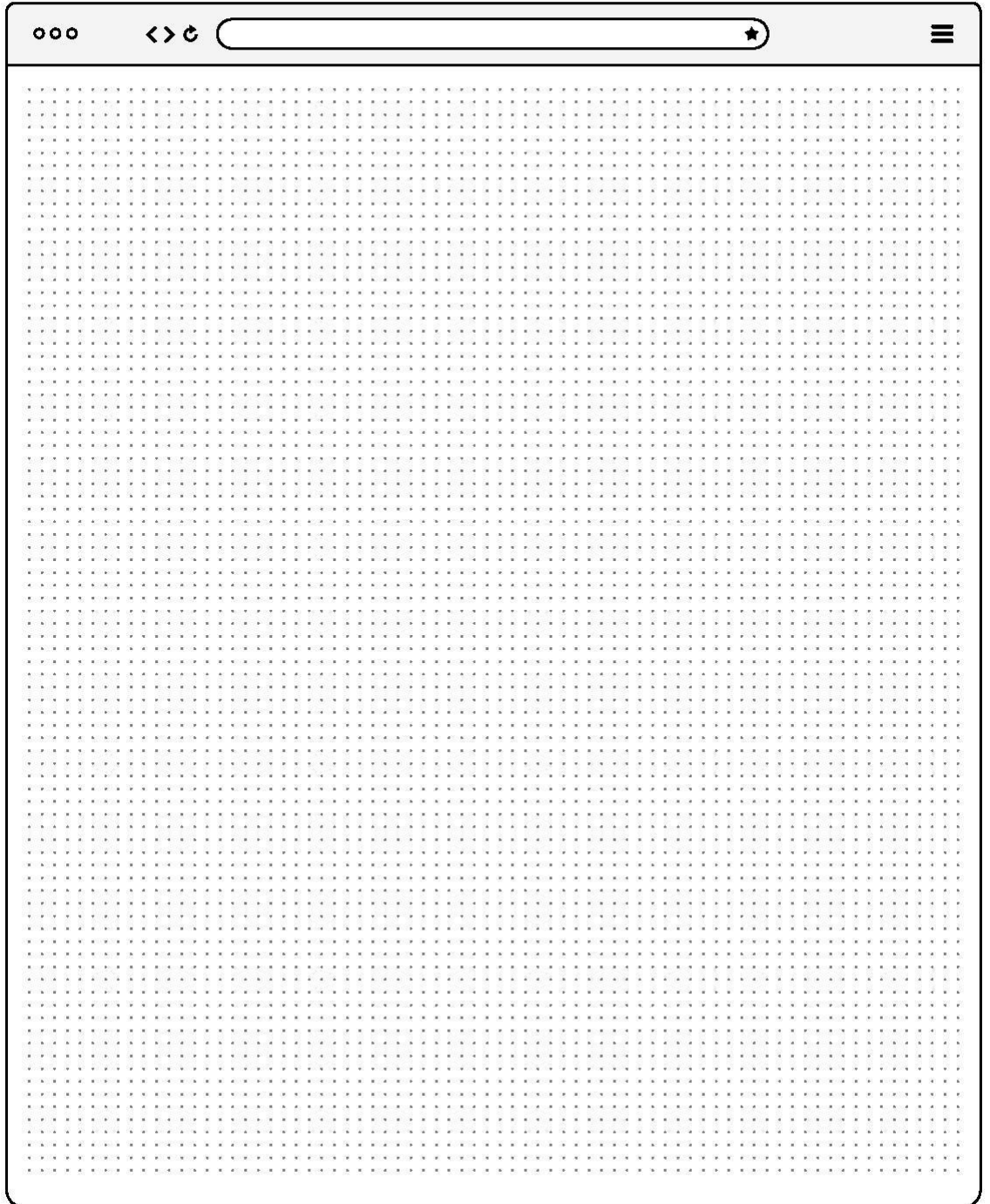
UX Mechanics:

Other:

Browser wireframe template

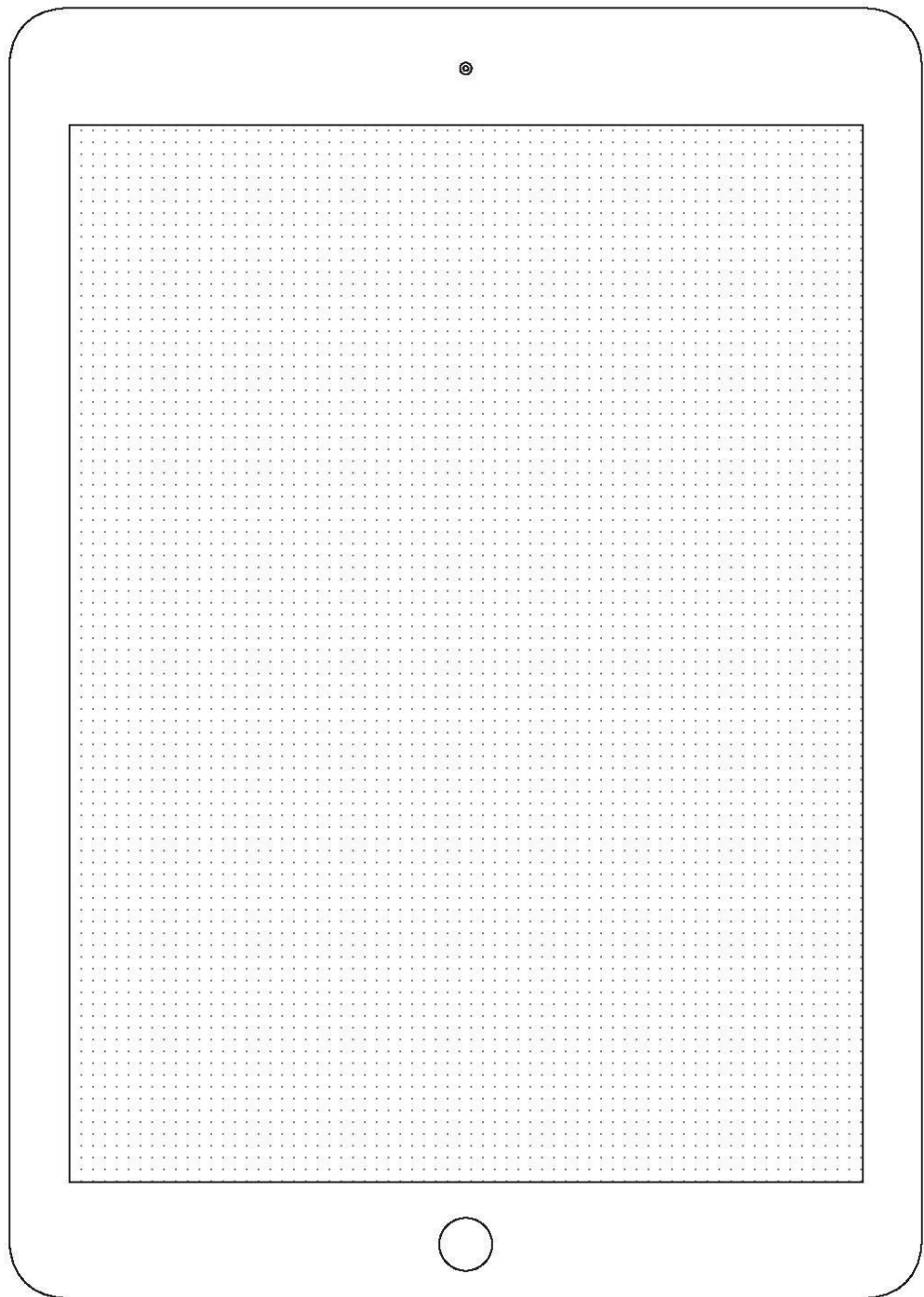
PROJECT NAME

DATE



Tablet wireframe template

TABLET

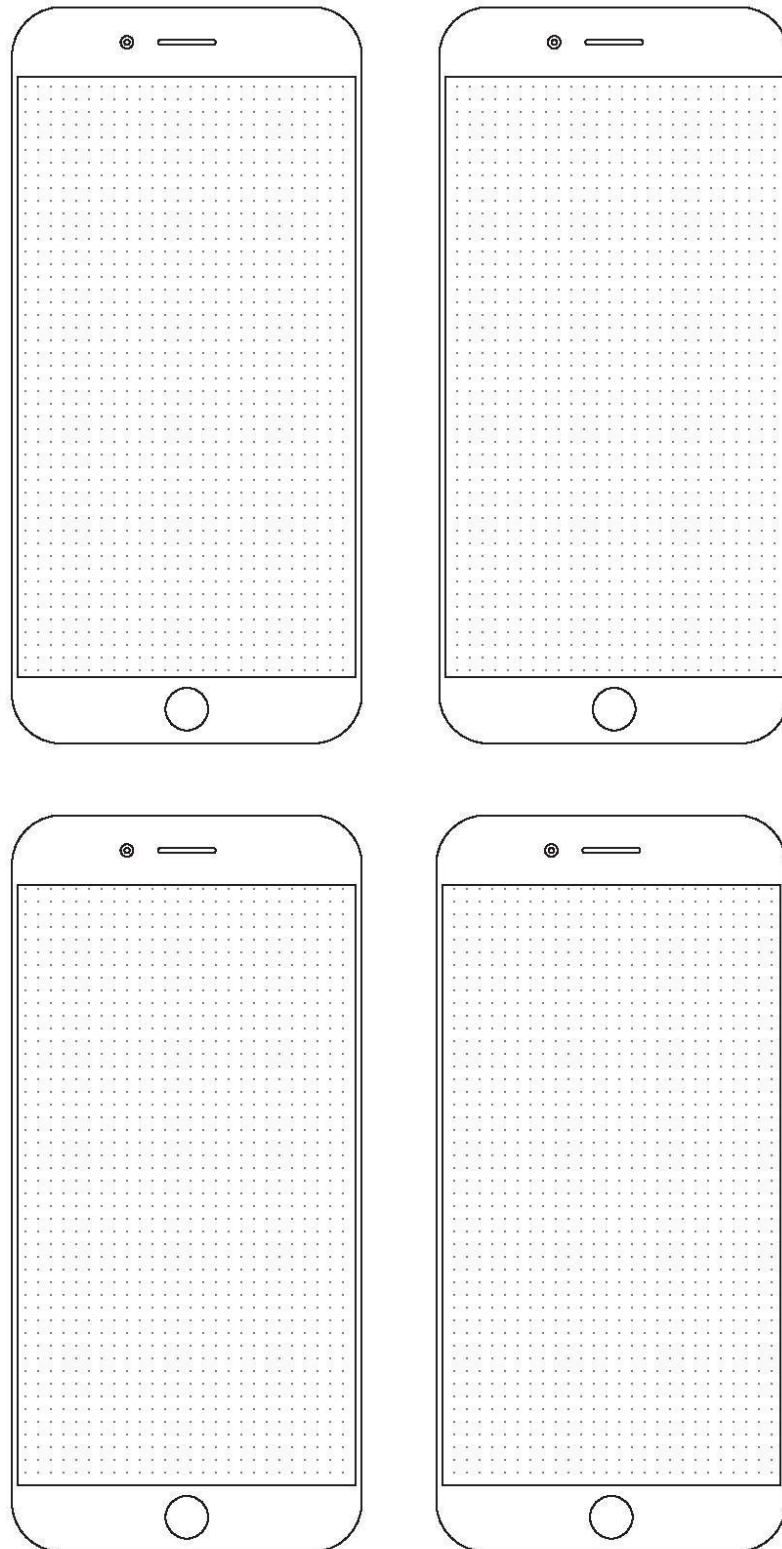


PROJECT _____

☐☐☐ SNEAKPEEKIT

Smartphone wireframe template

MOBILE



☐☐☐ SNEAKPEEKIT

PROJECT

Information about the project

Title of the study

Digital visualisation and interpretation of archaeological sites. A case study from Bronze Age Cyprus

Researcher

Francesca Dolcetti, PhD Researcher, Archaeology Department, University of York, York. North Yorkshire. YO1 7EP. Mobile phone: 07768402306; email: fd648@york.ac.uk.

Description

This research is focused on evaluating the impact that 3D modelling has upon archaeological research, academic and public dissemination. The main aim is to understand how different audiences (experts, non-experts, students) perceive digital visualisation of archaeological sites, interact and learn through them.

This study is based upon data from *Erimi-Laonin tou Porakou* (2200-1600 Before Christ), a Middle Bronze Age site located in the southern coast of Cyprus

Feedback will be collected from different user groups, composed of specialists and non-specialists, through surveys, interviews and focus groups. Audience feedback will then be used to evaluate how the interaction with 3D models affects people's engagements with and perceptions of past cultures.

This valuable insight will help to identify the best way to create digitally-mediated experiences of archaeological sites bespoke to different audiences' needs and expectations.

Methods

Twenty-minute interviews and one-hour focus groups for the qualitative analysis; twenty-minute questionnaires for the quantitative analysis.

Confidentiality and anonymity

Participants may withdraw from the study and withdraw their consent at any stage up until the date of submission of the thesis (30 September 2019). If a participant decides to withdraw from the study, their information and responses will be removed from the research and destroyed.

Quotes and responses obtained from participants in this study will be included in the dissertation and future publications. Survey responses will be treated anonymously. Interviewees may opt to be anonymous, to be identified generically by their job or to be mentioned by name. All data will be stored in a secure place and nothing will be used without the consent of the participants.

Result of the study

A written report with the preliminary results of the study will be available for participants to read. If requested, participants will be provided with an electronic copy of this report.

If you have any questions, please do not hesitate to contact me (fd648@york.ac.uk) or my PhD supervisor, Dr Sara Perry (sara.perry@york.ac.uk).

Consent form

Digital visualisation and interpretation of archaeological sites. A case study from Bronze Age Cyprus: Participant's Consent Form

Francesca Dolcetti, PhD Researcher, Archaeology Department, University of York.

Mobile phone: 07768402306; email: fd648@york.ac.uk.

Please read the points below, check the boxes to acknowledge agreement, sign and return the form to the researcher.

- I agree to participate, by being interviewed, in this research project.
- I have read the participant information sheet for the project.
- I understand that I am free to withdraw from the interview at any time.
- I give consent for the interview to be audio-recorded.

I give consent for the text of the interview to be used and quoted in research and publications produced after this study, under the following condition (tick as appropriate):

- I wish to be identified by name and job title.
- I wish to be identified only by job title.
- I wish to remain anonymous.

NAME:

SIGNATURE:

DATE:

If you would like to receive a copy of the final written report associated with this research, please provide your contact details:

Appendix F

ARKWORK Codesign Workshop April 2019

UX prototypes evaluation

Questions

- Q1. What did you like about this experience? What didn't you like about this experience?
- Q2. Did you have any expectations for what this experience would be like before you tried it? If so, how (if at all) did the prototype match your expectations?
- Q3. Who was the intended audience for this experience? How effectively did the prototype address the audience's needs?
- Q4. How effective was the format for achieving the experience's goals?
- Q5. What was your main takeaway from this experience?

Themes

1. DESIGN:
Participants' comments on what they liked or disliked about the UX format.
2. AUDIENCE:
Participants' comments on their takeaway from the experience, what they perceived to be the UX's intended audience and discussion around audiences' needs.
3. EFFICACY:
Participants' comments on the UX's effectiveness in addressing main aims and audiences' needs.

Theme 1

GROUP 1

Reference 1

I liked the mixture with real life, where other aspects of a commute are included but are not only focused on heritage.

Reference 2

I liked that the app is very integral (different layers), which takes into account different interests of people. However, I have a feeling that too many layers might be a drawback too for heritage experience (too much different links of information, users tend to get fixated on one or two rather than all).

Reference 3

I liked the integration with other layers in digital app (great idea!). Does not separate history from “today life”. I like the way it draws in commerce/car parking as much as the past.

Dislikes: supplying sufficient different info to the regular user and long-term implications for staff/resources and keeping it relevant.

Reference 4

Yet, it’s another app. I find it somewhat implausible that the ecosystem that really brings together all the envisioned actors world-wide, but I may be wrong and with careful planning it could work quite well. The physical/virtual link is nice, and I liked that is based on the technologies people already have.

Reference 5

I had thought that there would be more of an architectural focus, where different kinds of buildings would be suggested. I was pleasantly surprise that the suggested experience was based much more in reality for individuals – thinking about how people navigate through the city; that traffic issues are a daily reality, etc. Also, I really appreciate the collaboration concept with local businesses (e.g.: coffee rewards).

Reference 6

Yes, there are awfully lot of apps in general and specific apps for local, tourists etc. The app is integrated in the landscape (well done), otherwise a lot depends on how well the social, organisational and technical implementations work.

GROUP 2

Reference 1

I liked the simplicity of the main interface. Intuitiveness od where-when-who features. I liked the community archive co-curation layers with archival data. I didn’t like the date, a little overused interface.

Reference 2

I liked how easy the navigation is, the clear interface and that it can be used by different users.

Reference 3

I liked the opportunity for creating community and personal collection.

I didn’t like that it was an incomplete solution.

Reference 4

Good choice of archival database/resource portal + personalised collection.

GROUP 3

Reference 1

I liked that it makes you think about past experiences. The concept/rules of the game seem realistic and consistent with the needs of life in the past. I didn't really have much time to interact with the game, there is nothing I dislike about it.

Reference 2

I liked the learning through play aspect: collaboration=survival. I liked the language (intangible) and the toolkit (tangible).

I didn't really understand the longevity of the game, i.e. what happens after I've played a few times/over a few weeks?

Reference 3

The presentation of a digital game through a board game makes it more real and shows that many aspects were thought through.

Reference 4

I liked its design, the fact that it could have already been played and ready to be tried as a board game.

I would have liked more relation with the historical period (I had the time it could be an all-time survival game instead of Anglo-Saxon only).

Reference 5

I think the format is educational enough. I'm not sure whether there are enough "fun" elements to keep children (whose attention span is really short) engaged.

GROUP 4

Reference 1

It's very visual: images/photo collages make it interesting and inspire to know/view more. At the same time, it's slightly unclear at a first glance what the experience is supposed to offer. I also liked the idea of doing events/dressing up for the party as they would in prehistory - connecting the past with the present.

No search options? I would have liked to have the option to search for sites/learning info.

Reference 2

I like that it was led by my curiosity to click random items, gain information that connect immediately the past and the present. I didn't relate so much to a virtual party.

Reference 3

By looking at the initial page I'm not really interested in what the experience is about. Moreover, it looks a little bit simplistic. I would expect a more sophisticated and interesting info webpage.

Reference 4

It is an intriguing solution for creating a digital learning experience about prehistory – not a typical website/interface, which makes it more interesting. The offer of practical activities is interesting. Thinking outside the box, although slightly unclear about the back-end pages/learning experiences.

Theme 2

GROUP 1

Reference 1

Expected there to be more visual representation of how the app might look but did not expect the app to have so many layers.

Reference 2

Local commuters. I feel that group 3 knew their audience quite well and also thought that it would be of real use for tech-savvy visitors (e.g. "what's on" guides for cities that I usually search for when visiting) since many tourists try to avoid tourist trap and seek out a more "authentic" holiday or visit and live like the locals.

Reference 3

The needs are not probably on the cultural side but how well the app is promoting traffic information, public transport, timetable etc. that people really need in their daily living. Heritage is really a potential distraction and therefore its success depends on how well it really fits in the rhythms of the users' everyday lives.

Reference 4

Considering question on how to better detach physical and virtual, especially not to make everything about virtual (actualisation of a real space/place).

Reference 5

Importance of integrating heritage experiences to normal everyday lives of their "users".

GROUP 2

Reference 1

A more dynamic notion of user characteristic, e.g. matching exhibitions, producing guided tours through map. Accounting more explicitly for hierarchical (ISAD-G) “archival bond” relationships.

Reference 2

Reward for participation is needed, clearer articulation of benefits of participation for users.

Reference 3

Application tied in the “archival resource” model. Perhaps add benefit from a more content/magazine metaphor with thematic essays and UCG (?) more central to the experience.

Reference 4

Archive can be beneficial for the community and different age groups can find it useful.

GROUP 3

Reference 1

I have played the actual computer game designed by the facilitator, which is based on similar concepts. The paper interface reminded me of that experience.

Reference 2

I had no expectations and I thought the prototype was really great...much more developed than I would normally expect from a prototype.

Reference 3

I didn't have an expectation regarding the prototype of the game. Perhaps, I thought it would already be exported into a digital prototype. Other than that, I think the task of creating a game, with rules, situations and resources was respected. Maybe it could have been reinforced more the historical period.

Reference 4

I would like to see more examples of gameplay before coming to conclusions, but I think that this experience showed us that it's feasible to create a game tailored to a specific period of time.

Reference 5

Being exposed to an example of gamification of heritage. Game could be an add-on to an existing popular game (SimCity, Minecraft) rather than a new game developed from scratch

GROUP 4

Reference 1

I didn't have any expectations really and the proposed experience really impressed me because it was well-thought through.

Reference 2

The audience can be anybody, it can be very heterogeneous. You need to guide the audience, especially firstcomers.

Theme 3

GROUP 1

Reference 1

Expected there be more visual representation of how the app might look but did not expect the app to have so many layers.

Reference 2

Local commuters. I feel that group 3 knew their audience quite well and also thought that it would be of real use for tech-savvy visitors (e.g. "what's on" guides for cities that I usually search for when visiting) since many tourists try to avoid tourist trap and seek out a more "authentic" holiday or visit and live like the locals.

Reference 3

The needs are not probably on the cultural side but how well the app is promoting traffic information, public transport, timetable etc. that people really need in their daily living. Heritage is really a potential distraction and therefore its success depends on how well it really fits in the rhythms of the users' everyday lives.

Reference 4

Considering question on how to better detach physical and virtual, especially not to make everything about virtual (actualisation of a real space/place).

Reference 5

Importance of integrating heritage experiences to normal everyday lives of their "users".

GROUP 2

Reference 1

A more dynamic notion of user characteristic, e.g. matching exhibitions, producing guided tours through map. Accounting more explicitly for hierarchical (ISAD-G) “archival bond” relationships.

Reference 2

Reward for participation is needed, clearer articulation of benefits of participation for users.

Reference 3

Application tied in the “archival resource” model. Perhaps add benefit from a more content/magazine metaphor with thematic essays and UCG (?) more central to the experience.

Reference 4

Archive can be beneficial for the community and different age groups can find it useful.

GROUP 3

Reference 1

I have played the actual computer game designed by the facilitator, which is based on similar concepts. The paper interface reminded me of that experience.

Reference 2

I had no expectations and I thought the prototype was really great...much more developed than I would normally expect from a prototype.

Reference 3

I didn't have an expectation regarding the prototype of the game. Perhaps, I thought it would already have been exported into a digital prototype. Other than that, I think the task of creating a game, with rules, situations and resources was respected. Maybe it could have been reinforced more the historical period.

Reference 4

I would like to see more example of gameplay before coming to conclusions, but I think that this experience showed us that it's feasible to create game tailored to a specific period of time.

Reference 5

Being exposed to an example of gamification of heritage. Game could be an add-on to an existing popular game (SimCity, Minecraft) rather than a new game developed from scratch

GROUP 4**Reference 1**

I didn't have any expectations really and the proposed experience really impressed me because it was well-thought through.

Reference 2

The audience can be anybody, it can be very heterogeneous. You need to guide the audience, especially firstcomers.

Questionnaires

GROUP 1

Q1-What did you like about this experience? What didn't you like about this experience?

I liked that it makes you think about past experiences. The concept/rules of the game seem realistic and consistent with the needs of life in the past. I didn't really have much time to interact with the game, there is nothing I dislike about it.

I liked the learning through play aspect: collaboration=survival. I liked the language (intangible) and the toolkit (tangible).

I didn't really understand the longevity of the game, i.e. what happens after I've played a few times/over a few weeks?

The presentation of a digital game through a board game makes it more real and shows that many aspects were thought through.

I liked its design, the fact that it could have already been played and ready to be tried as a board game.

I would have liked more relation with the historical period (I had the time it could be an all-time survival game instead of Anglo-Saxon only).

I was very interested on the learning of the ancient Saxons words, the co-operative gameplay.

I didn't like the fact that we could not test the game playing it

Q2-Did you have any expectations for what this experience would be like before you tried it? If so, how (if at all) did the prototype match your expectations?

I have played the actual computer game designed by the facilitator, which is based on similar concepts. The paper interface reminded me of that experience.

I had no expectations and I thought the prototype was really great...much more developed that I would normally expect from a prototype.

We got a presentation of the game, but to correctly and holistically experience it, we need to play it (I mean the physical prototype).

I didn't have an expectation regarding the prototype of the game. Perhaps, I thought it would already been exported into a digital prototype. Other than that, I think the task of creating a game, with rules, situations and resources was respected. Maybe it could have been reinforced more the historical period.

The experience met my expectations, but I couldn't really get an idea if the game actually worked and it was fun.

Q3-Who was the intended audience for this experience? How effectively did the prototype address the audience's needs?

Age 8-11. I didn't have much time to interact with the paper interface or play the game created during the workshop. My experience from the computer game is that it very well addresses the audience's needs (including devices that trigger emotional reaction from children).

Audience: 8-11 years old. Bright, colourful and simple imagery. Complex ideas, e.g. collaboration, reciprocal giving etc, are experienced rather than explained – really important.

Kids, young adults. Successfully addresses these audiences.

Children 8-11. I think that children might be interested in playing such games, especially since it supports multi-playing and the concepts and characteristics of the game (animals, survival, seasons) can be easily grasped and understood by them.

The audience targeted were children from 8 to 11 years old. I think it addresses perfectly the audience's needs.

Q4-How effective was the format for achieving the experience's goals?

The paper interface was really well made with game board and cards

Gem very effective...keep attention, social. I can imagine children not just playing this but talking about it with friends afterwards.

Physical board game a successful presentation of the digital game. Need to allow time for play.

I think the format is educational enough. I'm not sure whether there are enough "fun" elements to keep children (whose attention span is really short) engaged.

The format was effective. However, it's difficult to judge from the prototype at this early stage of development.

Q5- What was your main takeaway from this experience?

Having experienced the computer game, I could very easily see how ideas can be effectively represented in a paper interface. This makes it easier to design effective digital experiences in the future.

I would like to see more examples of gameplay before coming to conclusions, but I think that this experience showed us that it's feasible to create a game tailored to a specific period of time.

I always thought that game design is primarily about using big technologies right away. Seeing this prototype, I've learned that before jumping to the technical difficulties paper mock-up is a good and useful practice for planning and developing the idea.

Being exposed to an example of gamification of heritage. Game could be an add-on to an existing popular game (SimCity, Minecraft) rather than a new game developed from scratch.

Power of learning through play. These approaches provide multiple levels of learning: history, language, social skills.

GROUP 2

Q1-What did you like about this experience? What didn't you like about this experience?

I liked the designed experiences that are slowly introducing users to the site prehistory. I liked how materials and info are integrated to create different experiences.

It's very visual: images/photo collages make it interesting and inspire to know/view more. At the same time, it's slightly unclear at a first glance what the experience is supposed to offer. I also liked the idea of doing events/dressing up for the party as they

would in prehistory - connecting the past with the present. No search options? I would have liked to have the option to search for sites/learning info.

I like that it was led by my curiosity to click random items, gain information that connects immediately the past and the present. I didn't relate so much to a virtual party.

I liked that it also physical events. I didn't like that it depends a lot on social media, so it targets mainly social media users. I am not sure whether people would spend money for this experience.

I liked the themes. I didn't like the colour codes, the fact that it's not easy to understand (what is this about?) and to navigate.

It's an ingenious idea to provide knowledge in an interesting and didactic way. There are limitations regarding the length of the experience

Q2-Did you have any expectations for what this experience would be like before you tried it? If so, how (if at all) did the prototype match your expectations?

I would have guessed the experience to be more multi-sensory based. However, the result is really engaging despite being quite simple.

I didn't really have any expectations, maybe something more traditional.

I didn't have any expectations really and the proposed experience really impressed me because it was well-thought through.

Not really.

The prototype was way better and more comprehensive than the original communication.

Q3-Who was the intended audience for this experience? How effectively did the prototype address the audience's needs?

The audience has not been defined and the prototype is offering different entry points and connection with the material – sometimes the interpretation with different media looks different.

Younger audiences – to make them interested in prehistory and provide learning experiences. It's pretty engaging and interesting – a good place to explore learning about prehistory in Scotland. Although, it's not clear from the site which sites/objects this is about.

From the first presentation (on Monday) I thought that the target audience was teenagers, but I think that the experience can appeal to a wider audience. Intended audience: all different ages?

I think that this kind of experience is more appealing to children and teenagers. For adults I think that video games are more appealing.

The audience can be anybody, it can be very heterogenous. You need to guide the audience, especially firstcomers.

Archaeo-lovers(?) Very effectively at first, but there are limitations as far as the length of the experience is concerned.

Q4-How effective was the format for achieving the experience's goals?

The format is visually really attractive and gives some opportunity for further engagement.

For a website it works well, and it's well connected with other social media channels.

The format is effective and although it's digital. It is related to events and objects in the physical world in a seamless way.

By looking at the initial page I'm not really interested in what the experience is about. Moreover, it looks a little bit simplistic. I would expect a more sophisticated and interesting info webpage.

WordPress won't do it, but another platform could do it. Perhaps use VR, AR or 3D?

Not much effective. It needs more reflection on the ways the project will be communicated.

Q5- What was your main takeaway from this experience?

Prehistory is cool, and simplicity of interaction is the best way for a sustainable and effective engagement with the physical. It would have been good to include an evaluation after the first day to include comment in the final prototype.

It is an intriguing solution for creating a digital learning experience about prehistory – not a typical website/interface, which makes it more interesting. The offer of practical activities is interesting. Thinking outside the box, although slightly unclear about the back-end pages/learning experiences.

I was inspired to participate in a workshop!

Connection of virtual and physical experiences. This is something that could be really useful.

What a fantastic idea! I hope it will become a reality!

A brilliant idea that can be applied in diverse fields, sustainable and able to sustain future research.

GROUP 3

Q1-What did you like about this experience? What didn't you like about this experience?

I liked the mixture with real life, where other aspects of a commute are included but are not only focused on heritage. Of course, it was only a suggested feature, but I think that being able to be tracked by friends virtually on the city is problematic.

I liked that the app is very integral (different layers), which takes into account different interests of people. However, I have a feeling that too many layers might be a drawback too for heritage experience (too much different links of information, users tend to get fixated on one or two rather than all).

Very good concretisation of user journey/experience of community and how to make them aware of the places they move around. There needs to be a better problematisation of the kind of information or offered experiences that make people care about the place.

I liked the integration with other layers in digital app (great idea!). Does not separate history from “today life”. I like the way it draws in commerce/car parking as much as the past. Dislikes: supplying sufficient different info to the regular user and long-term implications for staff/resources and keeping it relevant.

It taps into the everyday life of people and doesn't expect them to do something extra for heritage engagement. Yet, it's another app. I find it somewhat implausible that the ecosystem that really brings together all the envisioned actors world-wide, but I may be wrong and with careful planning it could work quite well. The physical/virtual link is nice, and I liked that is based on the technologies people already have.

Q2-Did you have any expectations for what this experience would be like before you tried it? If so, how (if at all) did the prototype match your expectations?

I had thought that there would be more of an architectural focus, where different kinds of buildings would be suggested. I was pleasantly surprised that the suggested experience was based much more in reality for individuals – thinking about how people navigate through the city; that traffic issues are a daily reality, etc. Also, I really appreciate the collaboration concept with local businesses (e.g.: coffee rewards).

I thought it will include virtual reality aspect, but it didn't.

I was slightly concerned about the group I would be involved with and all the other groups participating in the experience. The group developed more dense descriptions than prototypes. A low-fidelity prototype of the experience would be useful.

Expected there be more visual representation of how the app might look but did not expect the app to have so many layers.

Yes, there are a lot of apps in general and specific apps for local, tourists etc. The app is integrated in the landscape (well done), otherwise a lot depends on how well the social, organisational and technical implementations work.

Q3-Who was the intended audience for this experience? How effectively did the prototype address the audience's needs?

Local commuters. I feel that group 3 knew their audience quite well and also thought that it would be of real use for tech-savvy visitors (e.g. “what's on” guides for cities that I usually search for when visiting) since many tourists try to avoid tourist traps and seek out a more “authentic” holiday or visit and live like the locals.

Local people or visitors (basically all?). Effective in this way as it is very versatile.

Commuters passing by routinely through historical places.

Commuters and regular users of the space. Yes, it's very effective and there are a lot of variety and levels of details.

The needs are not probably on the cultural side but how well the app is promoting traffic information, public transport, timetable etc. that people really need in their daily living. Heritage is really a potential distraction and therefore its success depends on how well it really fits in the rhythms of the users' everyday lives.

Q4-How effective was the format for achieving the experience's goals?

Apps are a great format for dispensing instant information.

Very effective as apps and mobile phones are widely used.

It is undoubtedly a very compressed experience, but it's very surprising what it can be achieved in a such period of time.

Would like to have seen more "screenshots" of app – how users could use and view the information.

Difficult to say. Worth trying as it does not put too much effort on users – if heritage comes as an extra for other things.

Q5- What was your main takeaway from this experience?

That heritage is more fun when mixed in with the real world – not everyone thinks like heritage workers do.

Considering question on how to better detach physical and virtual, especially not to make everything about virtual (actualisation of a real space/place).

Very enjoyable experience! It challenges some assumptions for present experiences on this topic.

Presentation of prototype not enough. You need to be able to ask questions to truly understand how the prototype works.

Importance of integrating heritage experiences to normal everyday lives of their "users".

GROUP 4

Q1-What did you like about this experience? What didn't you like about this experience?

Map element for navigation was good to have. It's very ambitious about audience competences.

I liked the simplicity of the main interface. Intuitiveness of where-when-who features. I liked the community archive co-curation layers with archival data. I didn't like the date, a little overused interface.

I liked how easy the navigation is, the clear interface and that it can be used by different users.

I liked the opportunity for creating community and personal collection.

I didn't like that it was an incomplete solution.

Q2-Did you have any expectations for what this experience would be like before you tried it? If so, how (if at all) did the prototype match your expectations?

No, it is a tried and tested solution.

A more dynamic notion of user characteristic, e.g. matching exhibitions, producing guided tours through map. Accounting more explicitly for hierarchical (ISAD-G) "archival bond" relationships.

The prototype was very well-constructed, limited text but you can understand well the functionality. It simple and effective, but the big amount of data that it's difficult to handle.

I expected more detailed solution.

Q3-Who was the intended audience for this experience? How effectively did the prototype address the audience's needs?

Already engaged and confident in Southampton with perhaps wider interest on how to master maps. For confident users it was effective, support needed for less confident.

General audience. Specialised user, e.g. researcher may need additional functionality.

General audience: everybody can participate. Wider interest not only from Southampton community. The prototype was effective. User's input.

Citizens of Southampton. The exploration of where, who and when are well conceived.

Q4-How effective was the format for achieving the experience's goals?

Good format.

Good choice of archival database/resource portal + personalised collection.

The format was very suitable for the purpose and easily comprehensible.

Personal involvement planned (e.g. plying music), but not realised in depth.

Q5- What was your main takeaway from this experience?

Reward for participation is needed, clearer articulation of benefits of participation for users.

Application tied in the "archival resource" model. Perhaps add benefit from a more content/magazine metaphor with thematic essays and UCG (?) more central to the experience.

Archive can be beneficial for the community and different age groups can find it useful.

Fits the traditional archival portal and classical approach.

Focus groups transcripts

GROUPS 1-3

GIACOMO:

I would have appreciated to play the game, but I like that you can do thing in the game in a cooperative way.

CLAIRE:

I thought how you didn't shy away from some very complex issues: collaboration and survival are very complex issues especially for children and the fact that they experience these ideas, rather than have them explained I thought it was a real strength of this game.

JUAN:

This is the first time I used participatory design at this stage of the design and one of the main failures that I had in my PhD was actually collaboration, a thing that with this group in this prototype I think works pretty well. The kind of experience that we got playing it in terms of decisions and collaboration or competing for resources it's

something that I did not have in my other prototype even though it was more sophisticated.

JUDITH:

I think that what this has brought up for me is that everybody brings something to the process and I was very happy to do the research, but other people had different skills and you can see that division of tasks in our group too, the strength that people brought. It makes me a bit sad because I think at what I'm doing in my digital life and how little of this collaborative working I actually can afford to have. It's not something that we have time to do very often, but I'm hoping that there is a way to bring this into my work anyway.

JUAN:

It can also be a very frustrating experience when you don't have the right people and I think that with archaeologists is different, they are more social.

REBEKA:

I think that the board game that you made makes clear the amount of work you did and I can see that it's resolved with many details and nuances and I think this schematic planning of the game was very important and made us understand the conversations that you had.

DELIA:

we were actually talking about how to turn the commute into a game in the app to encourage people to explore other areas of the city. I also liked the multilayer.

CLAIRE:

when you are building a connection with a place it makes you feel connected with that place. There is a social and emotional aspect to it. There isn't just one solution and this something we have failed a lot over the years when we tried to design heritage engagements and interactions that are everything for everyone, where actually it is not.

JUAN:

Also, why should you care? How can you make people interested in the information you are sharing and by extension the place where you are?

CLAIRE:

it's hard and comes back to content and creation, to not give just facts but stories from people's perspectives not just historical.

GROUPS 2-4

ANNA:

perhaps add a question: "how would you develop this", because when you look at other people's projects you get ideas so you can get valuable tips from other groups.

ELEONORA:

I would have found the process of feedback more useful if it would have happened earlier in the process so we could have included some of the feedback and made it more explicit.

COSTIS:

I have an idea that I use sometimes in students groups, where you split the groups and 1 or 2 people are pretending to be users. So if you design and produce a paper prototype you have people in the same group who are your debuggers practically and apply a think aloud protocol and with this conversation you gain useful insights whether something works and it's clear enough.

GAVIN:

I think maybe with the feedback goes the issue of the use of term like "like" but maybe we could work around questions on buildability and affordability, because we were making assumptions about things that could work for the platform, but it probably needs programming and it is a little bit ambitious in terms of budget. I think that is critical.

COSTIS:

I would challenge this though as it is doable with a very low budget.

ELEONORA:

but there are experiences created with a very low budget that are really engaging.

COSTIS:

we could have done a 3D environment for the platform but that it's expensive. We could also have done something with just a sequence of illustrations or animations and that works equally if not better.

YA'ARA:

that works even better, because when you explore 3D worlds sometimes it's claustrophobic and you get lost. I really liked your (prototype) graphic and the sketchy more basic layout that you had, makes things pop out more. There is a seamless connection between the digital world and the physical world, you don't feel like you just in a virtual world.

MELIHA

I liked very much the idea of creating your own collection and being involved somehow. In terms of design it's pretty classical I must say, I felt they weren't brave enough to do it in a bit more innovative way.

YA'ARA:

the design was not taken into account, it was just about structure and mechanism and to put in the first and second page to get more attention.

COSTIS:

For the all process I think this is one of the challenges, to know which conversation we are in. Are we talking about low fidelity or high-fidelity prototypes, are we just talking about wireframes, flows and stuff? It's an internal situation in design teams where they talk in intermediate stages. In this I liked the idea of community archive overlay on the actual curated archive, so people can add their own collections, I think it's a great idea. I also liked the facets, the where, when and who. I'm not 100% convinced that you don't need the what as well. I like it because people can understand it. My only criticism is that it is adherent to this archival database notion, so we have screens of archival objects and photos, but I was thinking that maybe if we think of these as places of conversations between people and interpretations, where people can write stories or interpretive blogs. Then the challenge would be how to link the content from these blogs so you have an icon of this item on the archival image or photo and then you can click on the photo or the archival item, while your main way of communicating would be the stories and encounters of people. It is traditional as you say, but it works.

ANNA:

I thought it was a little bit difficult at first to understand what this is, but I liked the colour coding and the name of the themes.

COSTIS:

Can I add a criticism to our prototype? How do you deal with different audiences? This doesn't not scale very much.

PD process evaluation

Questions day 1

Q1. Tell me about your impressions/thoughts about this first day.

Q2. What do you think you've gained so far from your participation in this workshop?

Q3. Can you mention one thing that happened today in terms of interaction with your group that changed your way of thinking?

Questions day 2

Q1. What is your opinion on design method and tools adopted?

Q2. Did you learn something new (knowledge or skills) and if so, was it something that you can or will apply to their own work?

Q3. If, how and to what extent you personally benefited from your participation?

Themes

1. EFFICACY OF PD PROCESS:

Participants' comments on what they perceived to be the strength of a participatory approach to UX.

2. EFFICACY OF DESIGN RESOURCES:

Participants' comments on the design resources effectiveness in supporting the UX design process.

3. FRUSTRATIONS:

Participants' comments on perceived issues within the workshop's structure, design approach and resources.

4. GAINS:

Participants' comments on perceived benefits, both professional and personal, from participation.

5. MUTUAL LEARNING:

Participants' comments on what they felt to have learned from each other during the design process.

Theme 1

Reference 1

REBEKA:

For me, it was not the first time that I'm going through a design thinking process and I really appreciate the method of working because you diverge before you converge, and I feel that at the end of the first day we are still in this divergent stage, that we are ready

to converge now and to become more concrete, which is actually the key to the creative process rather than decide what's the solution.

Reference 2

COSTIS:

I've worked in the banks for about 10 years commercially on designing solutions, so I have experience, but my more recent one was with students where they're all coming with more or less the same expertise and more or less the same kind of intellectual tools. What indeed I was struck today was how, in a small group of people, all of them related with archaeology one way or another, with very different approaches, very different standpoints from which each person contributed. It was very valuable because of that, because it was like everything from a more sort of theory of archaeology kind of perspective to other perspectives that were much more audience and visitor experience related. So it was really, really interesting, and for me that's one of the values of the method is really to somehow create this middle ground between different domains of expertise and negotiate that relationship.

Reference 3

MELIHA:

I certainly heard some different ideas from others. I had my own ideas and I was thrilled to hear that there are people with different ideas about the same thing. We started with relatively different proposals and were able to come to something that's core and common for all, and that was really a great achievement that we could actually agree on something, making some maybe compromises but, yes.

Reference 4

JUAN:

I also think that of having a framework and structure to follow is to prevent what happens a lot in design that people go immediately to prevailed solutions, so you have some sort of problem, and instead of guiding you to through submission of steps, you immediately jump for what you think is there. And in that way the structure needs to be constructed in a way that it helps you avoid that basically.

Reference 5

GAVIN:

It was more about an issue that you can work through some of the discussion, I think some sort of digital analogue, and I think the team has said separating the two out is not

useful in this day and age because we're so digitally enabled it permeates everything now.

So what's interesting in terms of the design process either from a bottom-up or top-down, is there anything intrinsic in the different domains of practice? Is it designing a game, digital analogue, different from designing a media campaign, which is effectively what we're doing, from designing public realm interpretation?

Reference 6

CLAIRE:

I don't know if it changed me, but again, as always, I'm absolutely flabbergasted how so much can be generated in such a short amount of time, you know, ideas, it just amazes me every time. So I suppose it's having confidence in the process and knowing that when you have a group of motivated people, people who want to be here, and just via the process stuff comes out, and it's really, really productive.

Reference 7

ELEONORA:

I have two things. The first one is despite the fact we were all talking about digital interaction, post data still after the table, it's still interacting things in a way that we can touch and move around, which is for me really interesting. The second thing is actually about learning more, about how amazing things are really happening around and just learning from projects that other people are doing. It makes me feel I'm not really the crazy person the things that I'm doing, there are other people like me in the world. So it just made me think that yes, I'm not alone, it's nice to have a group of people that think in the same way, that understand about co-design, which is nice.

Reference 8

JUDITH:

I said this in our earlier group that I actually felt a bit sad that I don't get much chance to co-design, I mean as much as what I'm doing. There's not time and there's not space and there's not the ability necessarily to be able to download something and design it in terms of the things that I work on day-to-day in a day in the life space. There's actually not that much coming to design, so it's needing to appreciate what is possible, but equally I'm very aware that it's not something I can do and I'm just trying to work out ways of how to bring some of these elements into the way we work more regular, if that makes sense. Wistful.

Reference 9

CLAIRE:

I think we often liken something like this process to car design and car manufacture where every year the car manufacturers roll out their concept cars. Now you're never going to see those cars on the road but that's okay but that wasn't the point. The point was to push the design and push the technology and take you to a future place. Then they will take those learnings and they will make next year's saloon or whatever, or energy efficiency or whatever it is. I liken these sessions to that where you come up with something, and it's not necessarily something you pick up in its entirety and take out into the real world, but it's pushed your thinking, it's given you brand new ideas that I wouldn't certainly get on my own, and it always, always gives, if not in entirety, pieces that you can pick up and apply tomorrow. I always look at it not as coming here for a solution, it's coming here for a process really, and the concepts.

Reference 10

GAVIN:

I have to say almost certainly for my practice in different ways, touching on some things that Judith and Claire are saying, that it's actually why not, why don't we use these processes. I think maybe one of the things that this broader discussion that we may be already studying in the context of the research, there'll be a body of work there already for this, what are the benefits that co-design brings and to who. And I think you're right, I think that do the catwalk fashion, sometimes you want to do that, other times you want to do something really rough and ready, other times it's about bringing people together, it's not actually the product, design process as an activity, as community. I think there's a thing for me about that clarity of mission, why are we coming together and what we are trying to achieve through co-design. So yes, fantastic, thank you very much.

Reference 11

CLAIRE:

I think you're exactly right, and there's something in what you've just – I'm making a matrix in my head – it's something about the level, the method, the process itself, and perhaps it's the level of structure and facilitation and the participants involved about where in the process you are employing these, so you're either very close to end delivery, so you want a very structured workshop with end users. Are you a bit like, I feel, the last two days were actually right at the start or closer to the start, and we have a room full of expertise and it's quite open, it's quite fluid, and we've just gone for it and

all these wonderful ideas have come out? There's something about the design process but it's in a bigger process as well and knowing where you are in that process.

Theme 2

Reference 1

COSTIS:

I have a reflection exactly on this and the order, the way in which we use the cards in comparison to the first group that presented. It really comes from the feel of management, the whole of agile, etc. It seems that the way that we use the cards and the way that they were presented to us was like a top-down approach really. We started with understanding who the audience are, understanding what are the assets and what is the material, and going down these objectives, then it's like needs and then specific solutions pack. While what I saw the first group did, so you start really the other way around, started with the product, a prototype in the product, even without speaking at all at that moment about the audience is this and that, the goals, and then you try to reverse engineer effectively: does it serve this objective, does it work well, does it apply to this criteria? So you started maybe with this first at the initial stage, and I was wondering whether some solutions to these kind of co-design workshops, though they're more agile in that sense of given privilege, you know, the waterfall top-down way, but when someone different it might be useful like that.

Reference 2

DELIA:

I don't know, it's going to sound cynical but I'm really pleasantly surprised that so many of the answers are not the usual things you hear at regular heritage conferences. A lot of the ideas are so fresh and new and also seem really based in reality. (Laughter) I think it's really good that there's a mix of people, that it's not all, let's say, about back-patting and saying, "Oh, we're great," but it's collaborative. It also means that there are new ideas and all, so constructive criticism coming in. [Crosstalk 00:01:53].

Reference 3

COSTIS:

One of the challenges, and it was a challenge for me as well because I haven't been very involved with this kind of work in reality for many years, it's like knowing the kind of vocabulary of the field of building these applications. It's the kind of stuff that goes in the UXD under the term of pattern serious. You've got various patterns and people get familiar with those and they know that it's something like how to pattern this guided

tour pattern. There are different kinds, or the card pattern. So one way to piece this out, which was there in the instructions, in a way it was mentioned, was the cards method, the card sorting, etc. I was wondering whether with more time perhaps, it's the time issue, it's time pressure, we'd have this opportunity of just playing with the cards, shift them around and not to have to just go straight on the page, on the storyboard and say this is the layout. But try to somehow see what are the different modes of interaction we want to encourage. We could shift them around, photograph them one way and have a more fluid mechanism.

This is also really good because this card playing, you can feel you're playing as a game really and say each person contributes one card, so we go around contributing cards and lay them out on the board. Then suddenly you've got your pages and your navigation structures for them. One of the things I'd like to have really had more is more collective processes. I found that when you guided us to be together and to do things together, that was better than when you tried to tell us we're working individually as a person now, write stuff on your own or something like that.

Theme 3

Reference 1

CATRIONA:

Yes, I was intimidated to start with because it was a subject I wasn't necessarily comfortable with, but actually I found it really, really engaging, and I think it definitely would be very possible to be engaged a lot more than I thought. I think I became more useful than I thought I was going to be. I thought I was going to sit in silence and not be able to contribute, so that was interesting from my perspective.

Reference 2

JENNIFER:

From an engagement point of view, I found it a little challenging because I never thought I got to know the group very well. We split up very quickly and I guess when I'm designing engagements for community members, for members of the public, there is that always orientation element and the settling down and getting to know your space element. I guess I missed that a bit today. We jumped straight to task rather than grounding ourselves in the space and making it a comfortable place to work, so we had to do that as we went along, as well as the thinking.

Reference 3

ELEONORA:

I said exactly the same before. It would have been really good to have maybe a feedback structure maybe after one day as well. Because you clearly have ideas within the group but the ideas, the work from other teams, would have been, I mean, "Let's see what you've done." I wish we would actually have time to explore it better because you used a different medium to come up with a solution. So, yes, it would be nice to have more and more cross information of ideas. Because we have space to socialise, that was mainly in the team, which is fine, because we had to compress everything in two days, but it's a shame, this is a missed opportunity having so many other people around and then you don't...

The thing is you tend to sit next to each other at dinner and then you actually don't know much about the others...

Reference 4

GAVIN:

I won't disagree with anything that's been said. I think that's fair. I kind of would have welcomed seeing the design part as a toolkit and had a conversation beforehand, because of the limited extent we used them. I think they were useful at times, so that ability to go semi-structured and then sort of break away and go freefall, and to have the confidence to do that was quite good. I think I've mentioned before that while our group had some broad skills and it was really good, I think having what level you're taking your prototype to, having somebody who's very, very visual or having somebody who's very, very technical, I think is probably essential in this context. I'm not saying anybody, we probably have that to enough degree but I think you don't have that in your [main events 00:05:51] what you're going to ultimately present and how manageable it's going to be.

Reference 5

JENNIFER:

I could go, that bit from words of yesterday about this initial very quick start. I still don't know what a wireframe is. I'm still not really sure what this process I've just been through was, if you see what I mean. This is me coming from completely not a technical background or never done anything in this setting before, but I think there was perhaps a step missed at the very beginning to make sure every participant was roughly aware of

what was going to happen, not just in a structural timeframe but what this methodology was, what a design card is, what this stuff was in some way.

Reference 6

COSTIS:

One of the challenges, and it was a challenge for me as well because I haven't been very involved with this kind of work in reality for many years, it's like knowing the kind of vocabulary of the field of building these applications. It's the kind of stuff that goes in the UXD under the term of pattern serious. You've got various patterns and people get familiar with those and they know that it's something like how to pattern this guided tour pattern. There are different kinds, or the card pattern. So one way to piece this out, which was there in the instructions, in a way it was mentioned, was the cards method, the card sorting, etc. I was wondering whether with more time perhaps, it's the time issue, it's time pressure, we'd have this opportunity of just playing with the cards, shift them around and not to have to just go straight on the page, on the storyboard and say this is the layout. But try to somehow see what are the different modes of interaction we want to encourage. We could shift them around, photograph them one way and have a more fluid mechanism.

This is also really good because this card playing, you can feel you're playing as a game really and say each person contributes one card, so we go around contributing cards and lay them out on the board. Then suddenly you've got your pages and your navigation structures for them. One of the things I'd like to have really had more is more collective processes. I found that when you guided us to be together and to do things together, that was better than when you tried to tell us we're working individually as a person now, write stuff on your own or something like that.

Reference 7

JUDITH:

I was going to add to that. The presentations of each of the prototypes as we had them early this afternoon, although it was useful to see what everyone else did, I felt that the only time we ever really properly got to it in-depth with the other group was when we were discussing it around tier one, actually looking at it, and we could ask questions.

I think just being told was useful but it felt like you didn't really understand until you actually got it and played and moved things around and said what's that bit, what's that doing, why did you put it like that. It might be something just to take a look in a reconfiguration in a future workshop.

Reference 8

ELEONORA:

Instead of just presenting, it would have been nice to go around to those who don't know nothing about the project, because the case for designing really was effective, you don't need anyone to explain what it's about, and that is actually what everyone should achieve. So you don't need anyone to explain the rules of the game or reading through you try to interpret them, you should be able to play just reading the tools. The same about apps or anything else. So that would be really a nice way to see how clear we've been into designing all this.

Theme 4

Reference 1

CLAIRE:

I think professionally I'm quite familiar with using techniques of co-design, but what really comes home for me is every project, every workshop is different. They're completely different, and that keeps it fresh but it's also surprising and it makes you think. It turns whatever preconceived ideas you came in with, it challenges them, it turns them upside down. So it's always thrilling and it's always exciting and it's always exhausting.

I don't know why I've really not thought of that before. They're all the same and all different. Yes

Reference 2

MELIHA:

I thought that this will be educational sort of, and it turned out that we are going to go emotional mainly rather than educational, so that was a completely new orientation for me.

Reference 3

GAVIN:

Two things, I realised that my technical competencies are somewhat limited. I think my group has a wide range of skills and understandings but I think some groups had programmers in really technically...people with other skill sets. I'm sorry if any of the group does feel that, and I think that it'd be very interesting to see how that confidence and competence affects the design process. The second thing that it brought home was that kind of challenge in you, for me to force my assumption about why this matters.

There was a lot of talk about it on a high level and I think with this room, the things that we're excited by and take for granted, a lot of this is ultimately about relevance or reach to audiences or groups that actually, this isn't all self-evident.

Reference 4

JUDITH:

I said this I our earlier group that I actually felt a bit sad that I don't get much chance to co-design, I mean as much as what I'm doing. There's not time and there's not space and there's not the ability necessarily to be able to download something and design it in terms of the things that I work on day-to-day in a day in the life space. There's actually not that much coming to design, so it's needing to appreciate what is possible, but equally I'm very aware that it's not something I can do and I'm just trying to work out ways of how to bring some of these elements into the way we work more regular, if that makes sense. Wistful.

Reference 5

JUAN:

As a lecturer I'm picking up a lot of stuff from this event. I quite like trying to have some goals to achieve in a short period of time. I'm a big fan of jams, when people get them, you know, there's a complete development there but also there's this thing about achieving something really rare. In my experience at times I have a lot more going in a jam than we have here in a semester working with students. Like today, again it's like they do in one semester. There is something, and it's sort of like, I don't know, [00:19:59] I will try to see how I can actually identify those elements and bring value to it.

Reference 6

ELEONORA:

I think for me it's been really interesting to see... So when you start to do your life's work and [00:22:46] looks, you're kind of entering the path ____, every time when it works because it's easier, because you're familiar with it, because you know exactly what it's about. For me it's been really useful to critically think about the processes, but I also see what others are doing, so playing the game was actually more structured than probably what I had and maybe helped in different ways participation. Yes, it just made me think about the entire process. That includes different types of these engagement and co-designing activities, so it's literally on a scale. You have the free design one, the matching a need to a final product that you can actually go out there or a game you can

play, and the other one maybe more structured, and it would definitely have some delivery at the end. It just depends, [Crosstalk 00:23:45]. It also depends on the list of ____, on who's participating, because you can have somebody incredibly structured but ____ people and ____ in that, engage in different ways. It just made me think about the way the facilitation requirements.

Reference 7

JENNIFER:

Back to your point about users and confident users. To me it's been an incredibly valuable experience taking part in a co-design activity in a topic that I know nothing about, because I've been thrown into the role of a very unconfident user and that's enabled me to reflect very strongly on my practice as a facilitator and about if I was facilitating my experience over the last few days how would I have anticipated some of those challenges that I faced. I guess I would really strongly recommend trying to go to an event like this, that it's completely outside your realm of experience. I think for me that's been very valuable.

Reference 8

MELIHA:

I decided to introduce what we were doing into class, so I will be teaching a similar thing, of course adapting from Scottish to Bosnian but basically adapt a little bit but repeat, redo the experiment that we had here, with me as the facilitator.

Reference 9

CLAIRE:

I think you're exactly right, and there's something in what you've just – I'm making a matrix in my head – it's something about the level, the method, the process itself, and perhaps it's the level of structure and facilitation and the participants involved about where in the process you are employing these, so you're either very close to end delivery, so you want a very structured workshop with end users. Are you a bit like, I feel, the last two days were actually right at the start or closer to the start, and we have a room full of expertise and it's quite open, it's quite fluid, and we've just gone for it and all these wonderful ideas have come out. There's something about the design process but it's in a bigger process as well and knowing where you are on that process.

Theme 5

Reference 1

GAVIN:

I think I probably came with a reasonable idea about what I thought we might produce inevitably when you've been thinking about things for some time. I think for me the process of co-design and listening to people – I hope I did – and actually coming to a slightly different solution, a slightly different understanding, has been really powerful for me. I think for me that culture of coproduction beyond just the technical process is an interesting dimension as well, particularly if we were working with those not in the sector. I think taking this out, in that situation, co-design enthusiasts could be very interesting.

Reference 2

ELEONORA:

I have two things. The first one is despite the fact we were all talking about digital interaction, post data still after the table, it's still interacting things in a way that we can touch and move around, which is for me really interesting. The second thing is actually about learning more, about how amazing things are really happening around and just learning from projects that other people are doing. It makes me feel I'm not really the crazy person that I'm doing, there are other people like me in the world. So it just made me think that yes, I'm not alone, it's nice to have a group of people that think in the same way, that understand about co-design, which is nice.

Reference 3

DELIA:

I figured out what I can do for one of my cases, our PhD, and I also learnt loads of things about what happened during the year in Anglo-Saxon England. [Crosstalk 00:32:49]

Day 1 focus groups transcript

A – REVIEW OF DAY PROGRESS

FACILITATOR:

I'd like to start this discussion with each group starting maybe with group one giving a brief summary of what they've done today, a review of your progress for today.

JUAN:

Hello. We started having again a prototype based on, well, it's more or less very loosely based on the site. To do that, we moved to different decisional steps. First we talked about the design goals. We defined some issues of design goals, like for example, we defined something like a cool factor, which is the game needs to be cool, and the fun factor, which is it needs to be fun and motivate people to play it. There's an engage value as well that incorporates challenging preconceptions. There's an interesting bit about the past-present which is like connecting the past with the present and when. Instant play was a very important one which is supposed to be in schools so we don't have time to actually read a huge memo. Also it's knowledge limitations that we're facing. So all those were like the initial design goals. Now, the purpose of what we were doing was going to prototyping and then going back and assessing those goals and whether they will stand or will be divided into subgroups. From there we move into substantive concepts which is based on what the game needs to communicate, what is this game about. So we found some initial ones like everyday life and also realistic aspects like the differences in that. So those were the core concepts that we will develop to the prototype. From there we move into conflicts where the translation of these substantive concepts into a way using the language of the game which is about conflicts, about challenges and actions. From there we were ready to start from the type. So we built from the type. As we played the game we started feeling out all the mechanics. So our difference with this process is that we don't want to process it without the participation of all the team through play. So as we play we started basically filling in the gaps of the rules. We have very initial basic rules, and as we move along and play a sequence of cycles we ended up with very complex rules actually. These are the rules that we ended up, this is the sequence, and that's where we are now at the moment.

FACILITATOR:

Can I ask you what kind of resources did you use today, cards or templates, notes?

JUAN:

Yes, the classic one from design thinking is taking notes, there's going to be some presentation that we can build together, but I think the game itself, like prototyping for the game, paper prototyping was the main resource that we did, with scissors cutting stuff and putting that in. But at the end that is the instrument, so actually figuring out rules to a game is the rules. The rules made the game, so to figure out the rules we need to start making the game first.

FACILITATOR:

Thank you. Gavin?

GAVIN:

Right, you'll have to bear with me as I hold these up. I think the brief, I probably had a slightly more problematic challenge with my brief in the sense that it's kind of quite high level and we're trying to deal with prehistory and all this development and a whole load of themes moving there. So we spent some time thinking about why, what's the purpose of this platform and the experience they're offering, which became quite interesting, and more importantly the conversation about who. Ultimately, we kind of reconciled that we want to do something that is attractive to our target audiences but it's then got to motivate them to go on and encounter the other offers, the other experiences, the other materials we might offer. We talked a little bit about the kind of expectations of those users and then went on to use the resource in terms of the solar cards, not quite in the sequence which we had a few like this. I don't know, were they useful?

GAVIN:

I certainly found it useful because then we found we talked about caricatures that had personality types and realities, it made it less abstract. So we did aggregate around one user, Dave, who had a certain personality type and certain barriers that really made us think about those audiences we weren't able to reach through engagement work and through the brand's prehistory, and then of those personas. Many of them were fairly well skilled, well technology enabled, which is one of the big issues we're facing in a digital environment. So it's really forced us then to refine in rising to our overarching vision some common themes. We took a bit of time thinking about what we're trying to achieve through this platform.

GAVIN:

It was, yes, everybody inputting from different perspectives, as it should be.

We then went through the process in terms of the res, in terms of the three key themes, and boiled it down to serious things such as dynamic, engaging, intuitive, phenomenological. So it was a good process I think to find some common grounds because I think the design process was as much about what this platform might be, and we'll come back to that. Then we looked at the overarching, shall we say, interpretive themes for our target audience ,those who may have an interest in prehistory already, but more importantly those who might not, why should this be of relevance or interest to them. That was quite useful because then we could group our overarching themes about why is prehistory relevant into three groups that I think gave us a way into some of the design side, the content, that we'll come back to tomorrow. Then ultimately, that gave us a basis to think about that platform, I'd use the term website, and there were a few people who rightly were saying, "No, no, that's not going to work." I think there was a suggestion that a [precis 00:08:48] style platform was more dynamic, more intuitive, could be really interesting. The phrase that I think we mobilised around for a while was: It's got to sparkle for Dave. We're not singling out Dave but the idea that we want people to arrive on our platform and go, not even think that's of interest but click to a next encounter. So what we've started to do, this framework, effectively a multichannel, multimedia content and marketing campaign to different users. The idea that for example Dave might be more active on Facebook means we've got compelling content on Facebook, whereas some of our others, I think it was Marta who spends more time on Insta, she's going to have a different interest and we need to correct content for her. That's where we've reached, and I think tomorrow we'll start getting into the really correct for size. Does anybody from the group want to add anything else?

CATRIONA:

I think the idea of idea of the platform was, yes, it's going to be kind of website, whereas
instead of, I described it as like a reverse Twilight. So instead of landing on home and then finding our story out from there, you're finding your story and finding your way in with information instead. So the sparkle was different for everyone. So the sparkle for Dave was different to the sparkle for Marta, and how do we get from those ideas to create like, it's getting everyone interested in prehistory as much.

FACILITATOR:

Brilliant, thank you. Claire?

CLAIRE:

We started out by having a bit of a field trip so we walked down to the Eye of York, and we had half an hour or so walking around there, which I thought was really useful because we were walking and talking. But at least it gave us the sense of the place and scale of the place, and you got that idea, you could then hear the traffic, you could see the people, you could see what was going on in that space. When we came back, looking around the table, actually we did an awful lot with very little. We started out by creating personas, and what we did is we had two in the end, to make sure we're not trying to do too much from the outset. So we've got two types of commuters. One is a working age commuter who passes through this space solo during the week but with the potential to be a weekender and come back with family and friends on the weekend. We also had, because here in York the Eye of York is on a direct path between the two campuses, so the main campus of the university and King's Manor. So we also had a student commuter who came through this space. We created an empathy map through talking with each other, some of us playing commuters, some of us playing students, others being interviews, and we were really looking at for an empathy map, if you're not too familiar with them. What this person says, thinks, does and feels about, in this case, this place or this experience.

So we had a starting point, we knew who we were aiming to engage with. The real breakthrough for me in thinking about the possibility and how this might shape up and look and feel was Rebecca's matrix, we'll call it Rebecca's matrix, which is based on the framework, the concepts involved in the historic urban landscape management or approach, which is not something we use in the UK, so thank you for branding that literally to the table today. Because what that allowed us to do was, yes, have this idea of a heritage experience but in context. In context with all the other types of engagement, information, you as the residents of a city town, city are going to be engaged with, whether that's transportation, events, commercial aspects. It's a real place for locals, and that for me made it instantly different to a visitor offering. We've said it's an app but we've really not worried about tying down the technology at this point. It was that concept that we were going to take this experience for these people into that virtual space, whatever it turns out looking like, and we will do that tomorrow. What I thought was wonderful for this afternoon was that we instinctively knew this wasn't just about the digital, it was about the physical as well. We've thankfully got an architect on the team, well done, whoever decided that. So it was about what could we also augment in that place, which was part of the experience. Either it signposted it or it was built into a

bigger story. Just to give you an example of the kind of things we were thinking about, again, inspired, the Victorian prison on the site has a very distinctive fan-shaped Victorian prison yard to that.

So one of the ideas was to, in this place, now the car park's moving, let's put that back on the floor and let's do that with different textures. So someone can come along and stand in that place and we can say, "Hah, you're actually inside the exercise yard of a Victorian prison. How do you feel? Did you know that?" It's about also making changes to that physical environment, and in the law that you can do. Those were our ideas. Obviously we're not putting any constraints in this like budget or planning permission or anything like that, and that's absolutely fine. And tomorrow we will look at things like storyboarding, or that journey through this space. We're going to transfer the many layers of this urban landscape, switch it and make it stratigraphy. We like that, put the layers horizontal and on top of the map so we can see all the different layers of information. And we're going to start thinking about what the digital might look like. Team, anything else?

FACILITATOR:

Thank you so much, Claire.

ELEONORA:

I think we've done a lot of talking today. We actually spent most of the morning to look at some of the materials there. It's currently being digitised because it's on postcards and pictures and music scroll and maps, so there are actually a lot of things that they're not always matching in terms of size and content. We thought about how we can make it together in a kind of crazy way and how we can link things through. We look at having to create in only the community in terms of people they go and they act within the museums, so the younger kids are involved. We came up with the number of signals, and they help us clearly define, you can see here, a lot of the things that we talked about. We discussed the need for a structure and solid meta data that will help to search the collection happening. We talked about stories that can be talked about, we talked about how to engage, so we talk about the engagement side, some themes, we talk about a function that the platform will have, so if we want to engage with the community and we want them to share their stories, how can they upload information, how can they share this information. At this stage, if I share everything I want, is there a creation underneath, is there someone that will do it? By the end of the day we talked about a collegiate peer review, so opening up even more, and that's pretty much a lot of the

things that we need to factor in. The last one, we talk about way to engage, which could be the story of the week, tag where you can, an archivist, a collection to go with the stories, so it's led by the archivist and a specialist. I also think that the, I don't know if the committee wants to say the most viewed feature of the last week or the most clicked video. Also on how you think- Well, we thought about using images and how actually crowdfund information from the community, how they can tag and how was your tagging for the materials that we have. Or perhaps play the scrolled music and upload your interpretation. We talked about all those things and then we started generally to sketch how we'd group and how things will be most relevant, so in the top of the app or on the bottom of the app. This is just a general idea, we haven't gone into details. We spent a lot of time talking about search buttons. (Laughter) And how we actually search, and then realising when we talk about collection we actually talk about different things, because in activist terms a collection is the collection they're working on, but then it's actually we're talking about, "Oh, but this is a thematic collection," but it is a collection. So we're spending a lot of time in definition and, from a user perspective point of view, if we want to engage only with a particular type of material, what are the searches that you want to do. If there is a lot of input from the community, do you want to be able to switch it on and off so that you can just search for a particular type of comments or added value information in that? Yes, we just spent a lot of exchange of ideas, but I don't know if I missed...Yes, so we explored, if you added a map on there with a lot of layers, and then we thought about how to integrate then a website without it taking the entire screen and how actually people interact. So if you see a map, what would you click on it, do you know how to search it? We explored different ways of entering the collection and seeing the collections from that. Anything else? No.

B – FIRST IMPRESSIONS

FACILITATOR:

Great. Thank you so much. Now there are few topics that I'd like to discuss with you so I'm going to ask all of you a few questions and we're going to talk about it for 10 minutes each question because I don't want to keep you here any longer than we thought. First of all, I'd like you to tell me about your impression and thoughts about this first day.

YA'ARA:

It's fun.

FACILITATOR:

Okay, that's good.

CATRIONA:

Yes, I was intimidated to start with because it was a subject I wasn't necessarily comfortable with, but actually I found it really, really engaging, and I think it definitely would be very possible to be engaged a lot more than I thought. I think I became more useful than I thought I was going to be. I thought I was going to sit in silence and not be able to contribute, so that was interesting from my perspective.

FACILITATOR:

Thanks.

REBEKA:

For me, it was not the first time that I'm going through a design thinking process and I really appreciate the method of working because you diverge before you converge, and I feel that at the end of the first day we are still in this divergent stage, that we are ready to converge now and to become more concrete, which is actually the key to the creative process rather than decide what's the solution.

FACILITATOR:

That's a really interesting thought, thank you.

COSTIS:

I've worked in the banks for about 10 years commercially on designing solutions, so I have 1 experience, but my more recent one was with students where they're all coming with more or less the same expertise and more or less the same kind of intellectual tools. What indeed I was struck today was how, in a small group of people, all of them related with archaeology one way or another, with very different approaches, very different standpoints from which each person contributed. It was very valuable because of that, because it was like everything from a more sort of theory of archaeology kind of perspective to other perspectives that were much more audience and visitor experience related. So it was really, really interesting, and for me that's one of the values of the method is really to somehow create this middle ground between different domains of expertise and negotiate that relationship.

JUDITH:

Like Kat, I was coming to this with that singular knowledge of having [00:22:48] in

archaeology whatsoever. I appreciated the learning through doing. That definitely appeals to me as the kind of learner I think I am. I find it very hard to think about things and starting something like that. But I got into this group this morning.

FACILITATOR:

Thanks.

IAN:

Okay, I'm continuing on that, we were looking very much at agreeing on that, nobody of us knew anything about that, it was actually not [00:23:18]. Not quite sure whether that was really true, probably we knew much more than we acknowledged. I don't know that much, okay, now you're going to beat me up for this, but it was interesting to follow, even if we clearly had a rather reasonable kind of very in-depth subject knowledge about the topic.

Still, because people had some sort of background in the field in archaeology or working with archaeologists or stuff like that, so there was that kind of a way of reasoning, so there was very much kind of interesting archaeological aspects in it, how archaeologists and how in archaeology people think. We wouldn't know that much about the specific theme.

JUAN:

I'm quite impressed of the different levels of discussion that can go when you're developing some of these, although we were concentrating on trying to actually solve the mechanics. You were looking into a [Crosstalk 00:24:25], like, "Is this accurate?" but that was just as valuable as we were developing this, there were all levels around meta and those actually were quite interesting. For example, at some point somebody said, "But is this archaeology? Are we really teaching archaeology through this thing or how that works?" So those discussions actually weren't related to the object itself, they were more related of the encounter between participants, and I think this kind of process triggered those dialogues that you don't see actually...

FACILITATOR:

Thank you, that's great. Anyone else want to share their thoughts?

GAVIN:

I think I probably came with a reasonable idea about what I thought we might produce inevitably when you've been thinking about things for some time. I think for me the process of co-design and listening to people – I hope I did – and actually coming to a slightly different solution, a slightly different understanding, has been really powerful

for me. I think for me that culture of coproduction beyond just the technical process is an interesting dimension as well, particularly if we were working with those not in the sector. I think taking this out, in that situation, co-design enthusiasts could be very interesting.

FACILITATOR:

Yes, it relates to the next question that I wanted to ask you-

SARA:

Wait a minute, what was your impression, since you were observing, Francesca?

FACILITATOR:

Yes. I really enjoyed this first day, I really did, because I really find fascinating observing group dynamics. I think it's really insightful, especially in this occasion when you are observing people that don't know each other, that they met here for the first time, at least some of you, and see how these different people, they don't know each other, that have different background and different expertise and skill set, share their knowledge and who work together and try to create something from scratch. That's my first impression for today, that's what I really enjoyed in my observational role for today.

C – GAINS

FACILITATOR:

I also wanted to ask you and talk about what do you think you have gained so far from your participation in this workshop both in a professional and personal way. You have gained something from today. Yes, Claire?

CLAIRE:

I think professionally I'm quite familiar with using techniques of co-design, but what really comes home for me is every project, every workshop is different. They're completely different, and that keeps it fresh but it's also surprising and it makes you think. It turns whatever preconceived ideas you came in with, it challenges them, it turns them upside down. So it's always thrilling and it's always exciting and it's always exhausting.

I don't know why I've really not thought of that before. They're all the same and all different. Yes.

FACILITATOR:

So true. Thanks. Anyone else?

MELIHA:

I certainly heard some different ideas from others. I had my own ideas and I was thrilled to hear that there are people with different ideas about the same thing. We started with relatively different proposals and were able to come to something that's core and common for all, and that was really a great achievement that we could actually agree on something, making some maybe compromises but, yes.

FACILITATOR:

Thanks.

ELENA:

Perhaps it's obvious but I found that [00:29:24] guidance we had with the materials we used, actually how the materials help you sell ideas, you know, these colourful papers and the different...We proposed three or four ways of sketch ideas in the prototyping and so on, this is actually something that one which has something, you know, you have to participate in one, you don't just don't go for it, because it's not the same as being in a room with people and exchanging ideas and brainstorming. I think the way it's done really helped you think better, concentrate, understand the difference of what we have done, so I think this was really helpful, actually something you could have some training, I think, or at least some basic ideas on outline of protocols...

FACILITATOR:

That's an interesting thought actually, thank you. Does anyone else agree or disagree?

GAVIN:

I would agree in the sense that it's kind of confirmed, Sara and I had a brief chat about the need to work with a toolkit approach in terms of different materials and different methods, and then be flexible depending on the grid dynamics and preparing a full workshop to tailor toolkits that were appropriate for the project, which is what you were saying, Claire, as well.

ELENA:

Also so your [emotive parts 00:30:46], I mean we didn't actually have the time to look over the maps in full, but I liked the fact that there is some structure and from people that have done this process many times, and it would be very good actually if there were some materials you can download and think how you can ___[00:31:05] instead of starting from scratch. So yes.

ELENA:

Exactly, because it's simple things but it's actually many ways of achieving an outcome and it's actually useful you have a guidance that this method of wisdom. I think it's helpful.

FACILITATOR:

There was a website where they're developing and putting some free design cards to download.

SARA:

Yes, there are quite a few. Gavin were talking about this earlier that the cards that you have there, we developed in the first month of the overall project, that was in 2017. We researched, there's oodles of these cards out there that are especially using the game design world, but also worked as well. We did a scan of all of them and then basically stuffed all of the information we could find into what is like five times as many cards as you actually have right now. Then we decided to abandon them in the project for various reasons. Then we revisited them for this workshop. They're still really in the early prototype phase, and when I was chatting with Gavin about it, I think there are a lot of things we can do. This is something we would like to follow up with you all on going forward because there are different types of ways that I think that we can consolidate the information further and actually help them to make them tailorable to different audiences or different user groups and different situations of design. The one that Francesca is talking about is there's another project, [GIFT 00:32:58], that they are developing their own cards, and I know the Heritage Futures project which is based in the UK, they have their own cards. They're a bit ubiquitous now but I think that the idea of tailorable ones is not, and that's a pretty unique suggestion. I think there's a lot of possibility this way.

IAN:

I think having these kinds of cards so when you're, this kind of you do it more mobile phone process, we didn't use the cards that we had, you had been working like this before so you were our card, and you were putting, discussing another project onwards and you used certain kinds of things to lead the discussion and structure it in a way. But if you were new in this kind of process, then it's a whole [00:33:49] that you're developing but kind of a blueprint to follow. Then when you are experienced and you would really mostly do things in a different way, so then again you probably need to take this kind of batch of cards, but in between when you are rather satisfied with what

you are doing and you are achieving things, so you probably think that they are not necessary.

FACILITATOR:

It's funny you say it because we were talking and said exactly what you said which was that Juan was your card in your seven cards.

SARA:

Because you could actually see the ones the practice follows, the way that the cards were meant to work. But as I said, we abandoned them originally because they didn't work quite so great, and partly because we were not great users and you do, the facilitator.

So my observations today, the thing that I really took away, is that the facilitator makes all of the difference in it, and the facilitator, the cards are designed to be effectively facilitator s but you still need the facilitator on top of it, I think, somebody who has a little bit of sense in how they could be used and how you can engage with it. One was amazing in that in yours. Also, all the other facilitators are amazing. (Laughter) [Crosstalk 00:35:17] Just to be clear.

COSTIS:

I have a reflection exactly on this and the order, the way in which we use the cards in comparison to the first group that presented. It really comes from the feel of management, the whole of agile, etc. It seems that the way that we use the cards and the way that they were presented to us was like a top-down approach really. We started with understanding who the audience are, understanding what are the assets and what is the material, and going down these objectives, then it's like needs and then specific solutions pack. While what I saw the first group did, so you start really the other way around, started with the product, a prototype in the product, even without speaking at all at that moment about the audience is this and that, the goals, and then you try to reverse engineer effectively: does it serve this objective, does it work well, does it apply to this criteria? So you started maybe with this first at the initial stage, and I was wondering whether some solutions to these kind of co-design workshops, though they're more agile in that sense of given privilege, you know, the waterfall top-down way, but when someone different it might be useful like that.

JUAN:

I also think that of having a framework and structure to follow is to prevent what happens a lot in design that people go immediately to prevailed solutions, so you have

some sort of problem, and instead of guiding you through submission of steps, you immediately jump for what you think is there. And in that way the structure needs to be constructed in a way that it helps you avoid that basically. I've seen many [00:36:59] falling.

GAVIN:

It was more about an issue that you can work through some of the discussion, I think some sort of digital analogue, and I think the team has said separating the two out is not useful in this day and age because we're so digitally enabled it permeates everything now.

So what's interesting in terms of the design process either from a bottom-up or top-down, is there anything intrinsic in the different domains of practice? Is it designing a game, digital analogue, different from designing a media campaign, which is effectively what we're doing, from designing public realm interpretation?

SARA:

There is no I think pure top-down or bottom-up but rather a mix. You go a bit top-down and then you go back, so it's circular, I would say, rather than just being top-down or bottom-up, so you go up and down.

YA'ARA:

From taking design processes, game design, the idea I think everything, in all types of designs, you have to consider your end user or your kind of audience and what you want to give out, what you want them to receive, what they want to receive. Then you go from both sides and meet in the middle. As you say, it's that importance in the iterative process, so it takes time until you eventually get something that works. But I applied my game design skills in what we did which is different, it's not a game but it works, I think.

ELEONORA:

One of the things that we actually discussed was about having some analytics to actually test what the users want to know in the long run. So it could be then five years to make it sustainable. Whatever we're designing now will not work for the audience because the management will evolve and users will interact with the materials in a different way. So how do you make sure that you have, still controlling the data you predict trends... Now I'm getting more technical. But that's pretty much what it is to make it always really attractive, so what makes you go on the website and interact, or what makes you play with it again. Just to make sure that we keep that in mind to make sure that we

always target whichever user group that we're targeting, and if they move the goalposts we can actually change it too.

D – GROUP DYNAMIC AND INTERACTION

FACILITATOR:

Thanks. There's one last question I want to ask you. If you can mention at least one thing that happened today in terms of interaction with your group that you think it somehow changed or is going to change your way of thinking, your approach.

JUDITH:

When we all had lunch together, I don't know about the other groups but I felt that the dynamic of the group changed because we didn't talk about what we were doing.

FACILITATOR:

Okay, you bonded over lunch. [Crosstalk 00:40:35]

JUDITH:

We got to know, well, it became really quick that, I think, so I think that was when the group dynamic changed.

MELIHA:

I thought that this will be educational sort of, and it turned out that we are going to go emotional mainly rather than educational, so that was a completely new orientation for me.

FACILITATOR:

Okay, thanks. Anyone else, something happened today that changed you a little bit in that

CLAIRE:

I don't know if it changed me, but again, as always, I'm absolutely flabbergasted how so much can be generated in such a short amount of time, you know, ideas, it just amazes me every time. So I suppose it's having confidence in the process and knowing that when you have a group of motivated people, people who want to be here, and just via the process stuff comes out, and it's really, really productive.

FACILITATOR:

That's great, thank you, Claire.

JUAN:

I think a very good point is that you feel comfortable with the group you're working with, so you're comfortable with the people. It takes some time, it's not something that is automatic that actually you can relate to the other people and have fun with them. Yes, I think the pint yesterday was quite a good. (Laughter)

FACILITATOR:

Okay, that was a good idea.

JENNIFER:

From an engagement point of view, I found it a little challenging because I never thought I got to know the group very well. We split up very quickly and I guess when I'm designing engagements for community members, for members of the public, there is that always orientation element and the settling down and getting to know your space element. I guess I missed that a bit today. We jumped straight to task rather than grounding ourselves in the space and making it a comfortable place to work, so we had to do that as we went along, as well as the thinking.

FACILITATOR:

Gavin.

GAVIN:

Two things, I realised that my technical competencies are somewhat limited. I think my group has a wide range of skills and understandings but I think some groups had programmers in really technically...people with other skill sets. I'm sorry if any of the group does feel that, and I think that it'd be very interesting to see how that confidence and competence affects the design process. The second thing that it brought home was that kind of challenge in you, for me to force my assumption about why this matters. There was a lot of talk about it on a high level and I think with this room, the things that we're excited by and take for granted, a lot of this is ultimately about relevance or reach to audiences or groups that actually, this isn't all self-evident.

COSTIS:

I have another observation. [Crosstalk 00:44:25]. It's about diagramming, and I sort of suspected quite recently actually with that informal diagramming, where there are no specific rules, there's no clear semantics, it can be really useful as a tool for [00:44:39]. Today confirmed this to me very, very much, the fact that you don't establish some clear rules of what the meeting means, you just start jotting things and scratching things

on a piece of paper, and it can be really, really useful, so indeed I was learning in both the learning groups.

ELEONORA:

I have two things. The first one is despite the fact we were all talking about digital interaction, post data still after the table, it's still interacting things in a way that we can touch and move around, which is for me really interesting. The second thing is actually about learning more, about how amazing things are really happening around and just learning from projects that other people are doing. It makes me feel I'm not really the crazy person the things that I'm doing, there are other people like me in the world. So it just made me think that yes, I'm not alone, it's nice to have a group of people that think in the same way, that understand about co-design, which is nice.

YA'ARA:

Yes, I second that, and I found another person who goes games for archaeology.

MELIHA:

Our group used mind map strategies rather than post [00:46:03] for them, so we were more drawing and adding.

FACILITATOR:

Anyone else want to add something? I do realise that it's late, we had a very long day so I think it's time for us to wrap up this first day. Thank you so much again, everyone. We have dinner in a couple of hours. [Aside conversation 00:46:36 - 00:47:24] A couple of other things. We're also keen for critical feedback, so along the lines of what [Jen] was talking about, things that we could have done better to set it up better for the groups, things that you didn't like and would want to have done differently. That last question was also about us being able to better articulate what specific interaction with other people, how those have affected your thinking. That's maybe one to reflect on overnight and tomorrow I think in some ways it's easier to think about general experience but we also want to be able to tease out particular moments. A perfect example is Claire saying: Rebecca presented this framework which I hadn't heard about and which actually has changed the way that our group has worked. So we're interested in those kinds of moments as well, which might be negative moments too, ones that led you all astray, and sometimes it's easier to share those in private or whatever, so we'll be able to follow up afterwards but feel free to come up and let us know. [Aside conversation 00:48:41 - 00:49:06] Any questions or concerns? Amazing work, especially thanks to

the facilitators because it's hard work for them and takes a lot of energy, so thank you for doing this.

Day 2 focus groups transcript

A – GENERAL IMPRESSION ON PD PROCESS

FACILITATOR:

Okay, we're now ready for the final evaluation, and that's it, I promise, no more evaluation for today. [Crosstalk 00:00:22]. I'd like to start the discussion with your general impressions of the event. I'd like to start with all participant group members and then I'll ask specifically to facilitators because I want also to gather your point of view. I'm going to start with all the other participants, what are your general impressions of this event or this workshop.

DELIA:

I don't know, it's going to sound cynical but I'm really pleasantly surprised that so many of the answers are not the usual things you hear at regular heritage conferences. A lot of the ideas are so fresh and new and also seem really based in reality. (Laughter) I think it's really good that there's a mix of people, that it's not all, let's say, about back-patting and saying, "Oh, we're great," but it's collaborative. It also means that there are new ideas and all, so constructive criticism coming in. [Crosstalk 00:01:53].

FACILITATOR:

Anyone else? How about you, talking about you as facilitators, Claire, Leonora, Gavin, Juan, what are your opinions or general impressions on this event from your perspective?

JUAN:

I think it was very good but it was a very good prize, I think we tried to do a lot, and that's great, but also I missed a little bit to know about it, perhaps being more involved [0:02:38] willing and have some instances which we could participate with some feedback maybe, something like that. I think that although our presentations were actually very good, it was a bit short without [00:02:52].

FACILITATOR:

Had no time for the interaction.

ELEONORA:

I said exactly the same before. It would have been really good to have maybe a feedback structure maybe after one day as well. Because you clearly have ideas within

the group but the ideas, the work from other teams, would have been, I mean, “Let’s see what you've done.” I wish we would actually have time to explore it better because you used a different medium to come up with a solution. So, yes, it would be nice to have more and more cross information of ideas. Because we have space to socialise, that was mainly in the team, which is fine, because we had to compress everything in two days, but it’s a shame, this is a missed opportunity having so many other people around and then you don’t...

The thing is you tend to sit next to each other at dinner and then you actually don’t know much about the others...

CLAIRE:

I think it’s something that comes with practice and when you've done a few of these, but in hindsight I think my brief was very large in quite common lengths. So we were busy and we were very successful but I just wonder if I did it again I would have perhaps put more constraints around it and said, “Right, it’s just this and that,” because it was huge. We did get it down to some workable couple of personas, a couple of scenarios, but it could have gone horribly wrong, to be honest. Yes, that’s something I will take away, and I don't think there's any way to know that until you do execute them and then go okay.

FACILITATOR:

Thanks, Claire.

GAVIN:

I won’t disagree with anything that’s been said. I think that’s fair. I kind of would have welcomed seeing the design part as a toolkit and had a conversation beforehand, because of the limited extent we used them. I think they were useful at times, so that ability to go semi-structured and then sort of break away and go freefall, and to have the confidence to do that was quite good. I think I’ve mentioned before while our group had some broad skills and it was really good, I think having what level you're taking your prototype to, having somebody who’s very, very visual or having somebody who’s very, very technical, I think is probably essential in this context. I’m not saying anybody, we probably have that to enough degree but I think you don’t have that in your [main events 00:05:51] what you're going to ultimately present and how manageable it’s going to be.

B – OPINIONS ON PD METHODOLOGY

FACILITATOR:

This actually, it's related to informing the questions about the questions about the whole view, it's your opinion on the participatory design methodology that we use for this event: what do you like, what didn't you like, was it useful or not, was it effective or not, how can you prove it, or can we do better?

JENNIFER:

I could go, that bit from words of yesterday about this initial very quick start. I still don't know what a wireframe is. I'm still not really sure what this process I've just been through was, if you see what I mean. This is me coming from completely not a technical background or never done anything in this setting before, but I think there was perhaps a step missed at the very beginning to make sure every participant was roughly aware of what was going to happen, not just in a structural timeframe but what this methodology was, what a design card is, what this stuff was in some way.

FACILITATOR:

Sorry. (Laughter) –to do better next time.

ELEONORA:

We're being very honest.

FACILITATOR:

It's completely fine, yes, we need that as well.

CLAIRE:

Yes, because you had such different levels of experience, so it's easy to make assumptions about what people do or don't know and race ahead perhaps a little, so I think to, or give out information beforehand or whatever it is.

SARA:

I agree. I don't know if that's what you meant but to know in each person's expertise. We present ourselves but some people are not that outspoken, but they may have valuable information and skills that we're not aware of, but since there's a pressure of time, so you want to get things going and you might be missing some very important information that someone else can contribute. So just knowing what forces, what skills may be in our teams. There was a reason, I'm not trying to defend it at all because we both realise there are loads of problems with this process and things that could have been done better. But we have spoken about doing many co-design sessions before and had experience with them. The more the people know about fellow participants the

more they try to get paired with certain people, the more that they know about different aspects of things the more that they often try to conform to things that they're already familiar with. Part of the value of this type of process is the surprises that come when you don't know certain things, when some things happen in the moment, which is where Jen's point about having more orientation when you're here becomes very critical because if you don't have that trust ahead of time you need to be able to build it some other way. But I personally prefer not to provide a lot of that information because I worry that the natural inclination is to try to match yourself with different folks. We did accommodate a couple of people that asked to be in certain groups for this but we try very hard to not have that happen in order to keep people split apart and doing different things. And because we also do various work with strangers working together at cultural heritage sites, we've experienced this quite a bit where many people will say, "I don't want to be paired with strangers." Then when you get into the situation where you've given them enough resources to be able to break the ice and get to know one another, their opinion changes. So it's finding that balance I think between providing the information but not so much that everybody's like, "Well, I need to be in Ellie's group" or whatever, "because that's the thing that I do." Anyway, I'll stop now.

COSTIS:

One of the challenges, and it was a challenge for me as well because I haven't been very involved with this kind of work in reality for many years, it's like knowing the kind of vocabulary of the field of building these applications. It's the kind of stuff that goes in the UXD under the term of pattern serious. You've got various patterns and people get familiar with those and they know that it's something like how to pattern this guided tour pattern. There are different kinds, or the card pattern. So one way to piece this out, which was there in the instructions, in a way it was mentioned, was the cards method, the card sorting, etc. I was wondering whether with more time perhaps, it's the time issue, it's time pressure, we'd have this opportunity of just playing with the cards, shift them around and not to have to just go straight on the page, on the storyboard and say this is the layout. But try to somehow see what are the different modes of interaction we want to encourage. We could shift them around, photograph them one way and have a more fluid mechanism. This is also really good because this card playing, you can feel you're playing as a game really and say each person contributes one card, so we go around contributing cards and lay them out on the board. Then suddenly you've got your pages and your navigation structures for them. One of the things I'd like to have really

had more is more collective processes. I found that when you guided us to be together and to do things together, that was better than when you tried to tell us we're working individually as a person now, write stuff on your own or something like that.

JUDITH:

I was going to add to that. The presentations of each of the prototypes as we had them early this afternoon, although it was useful to see what everyone else did, I felt that the only time we ever really properly got to it in-depth with the other group was when we were discussing it around tier one, actually looking at it, and we could ask questions. I think just being told was useful but it felt like you didn't really understand until you actually got it and played and moved things around and said what's that bit, what's that doing, why did you put it like that. It might be something just to take a look in a reconfiguration in a future workshop.

ELEONORA:

Instead of just presenting, it would have been nice to go around to those who don't know nothing about the project, because the case for designing really was effective, you don't need anyone to explain what it's about, and that is actually what everyone should achieve. So you don't need anyone to explain the rules of the game or reading through you try to interpret them, you should be able to play just reading the tools. The same about apps or anything else. So that would be really a nice way to see how clear we've been into designing all this.

SARA:

It's an interesting thing, I mean, I don't know how you reconcile it because we also want to make obvious the development, because everybody here as far as I understand came because you were already doing co-design or are interested in pursuing co-design. So part of the workshop was also structured for your to be able to see as you're going along how the other groups are coming along. So it's a weird one because how do you reconcile that? Is there a way that this group could have known what's your process without hearing anything about your process until they played your game or whatever? Do you know what I mean? I don't know that there's an answer.

ELEONORA:

Then for example, you actually have, okay, you're designing a game and I think you have an idea of what it's about but you know you never explain the rules. So if we come around for 10 minutes and actually go on to play and then with processes, "Oh, that

actually is very clear,” or, “Actually, this doesn't make any sense.” And the same for any other apps and probably with design, so it would be nice to actually add in, without explanation what we're trying to achieve would you be able to not get it completely with all the different processes in the stages. Then probably we're going to [00:14:36], but...

SARA:

That's similar to what very many people have said that there needed to be more opportunity to actually use it over the course of the two days rather than just once at the end, although, maybe yours is a little bit different. Because I don't know how you still allowed a vision of the process for people that are doing co-design if they can't test, do the usability testing across the whole two days of the workshop.

GAVIN:

I wonder as well, it's been very interesting working with you all and there's various degrees of experience technically, but actually I think everybody in the room is highly confident in some field or other and have a number of degrees probably each in different ways. I think it'd be very interesting to do this process with a group that isn't all professional in the sense we all work in a context, we co-design. So actually, being sensitive about it and being a process like you're saying over a much longer period, much shorter periods of working and people who might have some real challenges in terms of accessibility we touched on. For example, there are things we've done, Jen knows that, people who just have no IT skills as well. I think that would be very interesting to explore that further.

JUDITH:

I really deeply appreciated [00:16:19] support, the facilitators, ____, in advance because it just helped give shape with the input. Two days seems like a long time, it is a long time, but actually it really helped for us certainly to dive in and get started straight away. I think that was really important conditions then for the success of the workshop is how much preparation in terms of working.

C – PROFESSIONAL AND PERSONAL GAINS

FACILITATOR:

Anybody else? I'd like to move on to talk a little bit about what do you think of your professional and personal gains from your participation at this event. I want to ask you how, if at all, obviously, did you get a better insight into your own professional practice

from participating in this event. I'd like to ask these two group members before because then I want to ask a more specific question to the facilitators about this.

JUDITH:

I said this in our earlier group that I actually felt a bit sad that I don't get much chance to co-design, I mean as much as what I'm doing. There's not time and there's not space and there's not the ability necessarily to be able to download something and design it in terms of the things that I work on day-to-day in a day in the life space. There's actually not that much coming to design, so it's needing to appreciate what is possible, but equally I'm very aware that it's not something I can do and I'm just trying to work out ways of how to bring some of these elements into the way we work more regular, if that makes sense. Wistful.

FACILITATOR:

Yes. Anyone else? Maybe the facilitators can tell us more. I want to ask you how and to what extent do you think this design workshop is going to do for your work on these projects in the future.

JUAN:

As a lecturer I'm picking up a lot of stuff from this event. I quite like trying to have some goals to achieve in a short period of time. I'm a big fan of [jams 0:19:33], when people get them, you know, there's a complete development there but also there's this thing about achieving something really rare. In my experience at times I have a lot more going in a jam than we have here in a semester working with students. Like today, again it's like they do in one semester. There is something, and it's sort of like, I don't know, [00:19:59] I will try to see how I can actually identify those elements and bring value to it.

CLAIRE:

I think we often liken something like this process to car design and car manufacture where every year the car manufacturers roll out their concept cars. Now you're never going to see those cars on the road but that's okay but that wasn't the point. The point was to push the design and push the technology and take you to a future place. Then they will take those learnings and they will make next year's saloon or whatever, or energy efficiency or whatever it is. I liken these sessions to that where you come up with something, and it's not necessarily something you pick up in its entirety and take out into the real world, but it's pushed your thinking, it's given you brand new ideas that I wouldn't certainly get on my own, and it always, always gives, if not in entirety,

pieces that you can pick up and apply tomorrow. I always look at it not as coming here for a solution, it's coming here for a process really, and the concepts.

FACILITATOR:

Thank you. [Crosstalk 00:21:41]. Do you want to go first?

GAVIN:

I have to say almost certainly for my practice in different ways, touching on some things that Judith and Claire are saying, that it's actually why not, why don't we use these processes. I think maybe one of the things that this broader discussion that we may be already studying in the context of the research, there'll be a body of work there already for this, what are the benefits that co-design brings and to who. And I think you're right, I think that do the catwalk fashion, sometimes you want to do that, other times you want to do something really rough and ready, other times it's about bringing people together, it's not actually the product, design process as an activity, as community. I think there's a thing for me about that clarity of mission, why are we coming together and what we are trying to achieve through co-design. So yes, fantastic, thank you very much.

FACILITATOR:

Oh, thank you.

ELEONORA:

I think for me it's been really interesting to see... So when you start to do your life's work and [00:22:46] looks, you're kind of entering the path ____, every time when it works because it's easier, because you're familiar with it, because you know exactly what it's about. For me it's been really useful to critically think about the processes, but I also see what others are doing, so playing the game was actually more structured than probably what I had and maybe helped in different ways participation. Yes, it just made me think about the entire process. That includes different types of these engagement and co-designing activities, so it's literally on a scale. You have the free design one, the matching a need to a final product that you can actually go out there or a game you can play, and the other one maybe more structured, and it would definitely have some delivery at the end. It just depends, [Crosstalk 00:23:45]. It also depends on the list of ____, on who's participating, because you can have somebody incredibly structured but ____ people and ____ in that, engage in different ways. It just made me think about the way the facilitation requirements.

CLAIRE:

I think you're exactly right, and there's something in what you've just – I'm making a matrix in my head – it's something about the level, the method, the process itself, and perhaps it's the level of structure and facilitation and the participants involved about where in the process you are employing these, so you're either very close to end delivery, so you want a very structured workshop with end users. Are you a bit like, I feel, the last two days were actually right at the start or closer to the start, and we have a room full of expertise and it's quite open, it's quite fluid, and we've just gone for it and all these wonderful ideas have come out. There's something about the design process but it's in a bigger process as well and knowing where you are on that process.

ELEONORA:

I think it's actually about moving between. In my group we were talking about designing something and then I was talking a bit, and actually we were talking about different things. So we actually had to stop, hang on a second, put the structure back in place, can we go back to the basics because we missed the point here. And it's about being able to jump from structure to other structure and identify if within the team are we saying the same things. Is this word represents exactly the same meaning for everyone? Sometimes, because we all come from different backgrounds, we found we couldn't run those __[00:25:49] events because, you know, background, that word means a slightly different meaning with my talking a lot of same things and then actually achieve anything or collaborate and then get frustrated.

GAVIN:

I think it's a similar way for ___[00:26:06], just listening and reflecting that, again, the culture of the heritage sector in many cases due to funding is highly managerial. There's a managerial process and operational processes, the set cultures and practice. I think the UX design approach, maybe those kinds of uniforms of management perhaps are more agile forms of organising teams. There's a broader kind of cultural context that we all are situated within that it's just making me reflect on that. So it articulates not just about a particular design process but it makes something ___[00:26:43] if you're in a culture that just doesn't see the value of this, it's never going to get given a priority.

JENNIFER:

Back to your point about users and confident users. To me it's been an incredibly valuable experience taking part in a co-design activity in a topic that I know nothing about, because I've been thrown into the role of a very unconfident user and that's

enabled me to reflect very strongly on my practice as a facilitator and about if I was facilitating my experience over the last few days how would I have anticipated some of those challenges that I faced.

I guess I would really strongly recommend trying to go to an event like this, that it's completely outside your realm of experience. I think for me that's been very valuable.

SARA:

This has been really meaningful, I think, something that Francesca has struggled with a lot on putting together the programme, and it's not until right now we really understand what the problem was. It was that because we were basically designing a programme that's around the facilitation of these types of co-design activities, but we were designing it through the lens of people that... We're, like, it's the next level up from facilitating a co-design process. You're, like, the co-design of the co-design process. I think that listening to all of your comments has been hugely meaningful because it does make you think that some of the resources that we supplied are useful in the co-design process but weren't useful enough for the facilitation of the co-design of the co-design, if you know what I mean. I don't know, because some of you were doing co-design already and some of you haven't done it before, so I think those of you who have already done co-design will maybe be able to, maybe what I'm saying will be a little less incomprehensible. I think we struggled with this thing because we were trying to fit in all of these different

evaluations and give everybody time to see everything and then figure out how you evaluate the tool and evaluate the process at the same time. I wonder if we had come at from a higher level which is not that it's just about doing co-design, it's about...whatever the next level up [Crosstalk 00:30:29]. For those of you who have been doing co-design before, I wonder from your perspective, if you're training co-designers, what are the things that we could have provided that would have enabled, made it easier, or maybe you already use different tools for co-design, for teaching people how to be the facilitators of co-design. And that's the thing is you're struggling with levels of people who haven't done co-design and people who have done co-design but haven't facilitated before and people who have facilitated it before, etc.

I guess if there's anything that you think that we could have provided, if you have experience with this already, that would be really meaningful, whether you can think of it now or...

CLAIRE:

I will reflect on that, but there's something about there's nothing like practice, and you get better by doing, and it's I guess in terms of training. The problem is at the moment there are so few opportunities to do this because it's not our standard, the ways we work necessarily. So you might not have forgotten anything, is what I'm trying to say. It's just you do and then you go, "Okay, that didn't work, I'll do it differently next time," and you do it again, and it's a very iterative learning process.

SARA:

Jen and I talked about it before, there are things that we've been planning and that's one where the resources for the facilitators are different than the resources for participants in it. It would be nice to be able to articulate that a little bit more and a little bit more clearly.

Especially, conversation that we've been having is also about how do you have a facilitator that's amongst a group of non, like who've never facilitated before, can you also equip them to become a facilitator really rapidly in the co-design process. I think that this workshop, from my perspective, I don't feel I have any answers. It has really opened up a lot of space to be able to think about tools and strategies, so thanks, everybody, for participating in the experiment. (Laughter).

D – MUTUAL LEARNING

FACILITATOR:

There is one more question that I have for all of you. In your opinion, what did you learn from your participation and from the other participants as well? So it's something that you learnt.

DELIA:

I figured out what I can do for one of my cases, our PhD, and I also learnt loads of things about what happened during the year in Anglo-Saxon England. [Crosstalk 00:32:49]

MELIHA:

I decided to introduce what we were doing into class, so I will be teaching a similar thing, of course adapting from Scottish to Bosnian but basically adapt a little bit but repeat, redo the experiment that we had here, with me as the facilitator.

IAN:

I guess I learnt more about archaeologist's things, about archaeology things, although I'm pretty sure that it's not representative of how, in general, people are thinking. I

think that we were a fairly unusual group of people. (Laughter) [Crosstalk 0:34:35]. But people were in all of the groups capable of thinking other than what's that. That's not necessarily a good thing about having it everywhere.

FACILITATOR:

That's great, thank you. Anyone else? I guess we are all tired. It's been a pretty intense couple of days.

SARA:

I'll say it, because Francesca did so much work and I wanted to be the person who'll say thank you for all that work, the coordination, the programming ___[00:35:25]. Thanks so much. [Applause] Especially to the facilitators, we couldn't have done any of it without you, and I think your guidance through the process has taught us a lot as well.

So I hope you don't mind if we keep tapping into you for more details as we move forward with this, because as we said yesterday, it's part of a longer term thinking about what this means, how you do this kind of work and how you support others in doing it in relation to the cultural heritage practice, however you want to conceive of that., so thank you.

Thank you all, and I know you guys all did a lot of extra work on your own time, so that is appreciated, thank you so much.

Design process - group activities

Themes

1. **AUTHENTICITY:**
Discussion around authenticity and its meaning in relation to audience engagement.
2. **UX SOCIAL IMPACT:**
Discussion around the meaning of engagement and what impact the user experience should have on the audience.
3. **UX SOCIAL AND PHYSICAL COMPONENTS:**
Use of technology to promote social interaction within the physical space.
4. **ACCURACY:**
Accuracy in terms of archaeological information and how to convey them in a compelling way for the target audience.
5. **SOCIAL PRESENCE:**
Social presence as a component of interactions in a virtual environment and defined as the feeling of being “there” with a real person (Oh et al., 2018).
6. **UNCANNY:**
Creating conflicts between the children’s everyday reality and the past daily life to foster learning. Related to the theory of uncanny (Auger 2012).

Theme 1

Reference 1

COSTIS

I think authenticity is another important question, as it drives all the make-believe literature in the field of VR for example.

Reference 2

JENNIFER

but it also about audience, because all forms of narrative that we don't believe are expressing truth are popular. There is a danger that we preclude.

Reference 3

CATRIONA

It very hard to create an audience-evocative narrative and be completely authentic. Is very hard to generate completely authentic or real or truthful stories if one has to be confined to what we know, we have got to introduce an interpretation somewhere.

Reference 4

COSTIS

I think I didn't express myself clearly, what I mean is that in the discussion of constructing the past, this quest of authenticity as a way to find a meaning, a grasp of the past does not preclude at all. At the contrary the notion that the relation to the past is constructed, even if it constructed in distance. People like Maria Roussou when they talk about make believe, this regime of representations where people feel that is real. Maybe the word authenticity is not right, but what I want is this kind of sense that the experience should be believable and put people in the shoes to be in the past.

Reference 5

JENNIFER

I was thinking about practical experience, what brings people to our event and it is very often things that we wouldn't approve of. There is not a delineation between active learning and the entertainment element of their life. What we are trying to do is to use it as a window in, so what it is being presented is probably not authoritative, but it brings people to you, so you have the opportunity to give them the other bit. I guess it worries me to put authenticity as an overarching theme because it is ruling out a lot of potential avenues into getting into people's lives.

Reference 6

GAVIN

I think we need to be sensitive of this issue, a word I would use is integrity rather than authenticity. I think there is a sense that some of the work we do where there are interpretive or storytelling approaches, we don't want to push the boundaries of ethical concerns about how we are representing or mediating possibilities of the past.

Reference 7

COSTIS

When I was referring to authenticity, I meant to refer to psychology literature, when a person feels authentic. I think one of the main reasons why people are interested in the prehistory it is because somehow seek this kind of field of existence, where they feel authentic, human in the essence of human.

Theme 2

Reference 1

JENNIFER:

what impact would it have in their lives? what would change in their life after this encounter? We need to start thinking about a visitor journey, so we need to increase awareness as it is where knowledge comes from, there is a participation element to be brought in but there is a signpost you need to engender that engagement. If success is that they have encountered this new world and they have become interested and they are inspired to do more, to act, then we need to have a sign post element that leads people in that journey. I would suggest it would be that if you are going on this journey you have to be already a confident user of heritage and culture to make that a logical journey, a journey that you are used to take.

Reference 2

COSTIS:

What I have heard is also impact, changes in people's lives, because a lot of criticism in the current participation and engagement literature has been really on the fact that it is something that you just measure and just stick off. What is it meaningful engagement? I actually want to ask you if this is the case, it is the issue here that we want people more engaged for instance in participation, in the sense of co-responsibility for land management, for protection. Is this the way that we want to engage people, so they become more mindful of the needs to preserve historic and material heritage?

Reference 3

COSTIS:

what about for instance if I were an economic migrant and I didn't feel very much included in society, so the notion of Scottish Bronze Age doesn't mean much to me. So, what does it mean for me to be somehow included enough to be able to go into the cycle? There is a cultural exclusion here that we need to address somehow.

Reference 4

JENNIFER:

What you are alluding to is that everybody's past is different and that is why I think it is dangerous to handle things like prehistory where prehistory start depends much on where you stood in the world, so it is relevant to the place rather than the person. We have to make it more about human experience, using art as our initial co-hanger that we

hang staff on, is how you make to relate and you bring in the difference in time, the academic content once you have made the connection through art.

Theme 3

Reference 1

CLAIRE:

there is something about the experience of being a tourist in your own city and also about the physicality of the space and the fact that it's free.

Reference 2

REBEKA:

that's why I think the space should be an amphitheatric plaza so it can be a space for performances as well and we can use the platform to encourage people to go and spend more time there.

Reference 3

ELENA:

If it is good app people will use it regardless of the content, because technology is cool and can promote socialising for example among people waiting at the bus stop.

Reference 4

REBEKA:

Here is where we can combine technologies with the social component of the experience , because the platform has a social networking aspect that gives people information about events or makes them aware of events from friends sharing them.

Reference 5

REBEKA:

we are not designing a digital experience, but a digitally-mediated experience which means that there are actual experiences in the physical space and there a digital layer. I am thinking about the prototyping phase tomorrow and how do you represent something like this. We can represent the physical space and then add layers for each category and show what each layer brings to the space. It would be a physical expression of the digital world.

Reference 6

GIACOMO:

maybe we can also add physical elements, like lights, that mark the space where the prison used to be, because people might prefer something physical, so they don't have to stare at a screen.

Theme 4

Reference 1

JUAN:

I asked archaeologists about fences made of in Anglo-Saxon farms and they told me that probably there weren't any as they were really expensive and it was cheaper to have children taking care of flocks. So, what do you do then with your sheep, if there are no fences?

Reference 2

IAN:

Should we reflect on what kind of idea we are giving about Anglo-Saxon times if we let characters go out and pick sheep like they pick berries as it was unlikely that there were wild sheep just hanging around waiting to somebody to pick them.

Reference 3

JUDITH:

We have to think about the 'cool' factor and that they are children, so it doesn't have to be super realistic.

Reference 4

JUDITH:

the difficulty that I see is that there is a lot of real archaeology going into this, whereas with a lot of games you don't know whether they are truthful or not or what evidence are they based on. You don't know if they have extended too far beyond evidence and considering that this game is educational too, we have the licence to go little bit beyond of what the archaeology has got to say.

Theme 5

Reference 1

JUAN:

there are a lot of similarities between what I did and what we did yesterday, but I found that there are also differences. Potentially a lot better differences with this one that can

be incorporated. One of the things that I love about the game we are developing is cooperation that I don't have in the game I did. I thought I gave the sense of it because I made it multiplayer but still, I didn't get that idea of what a family is. I think this game is a lot better, because the dynamic that appears when we are cooperating, I didn't have it in the other game. That game didn't have a social presence. I also never developed a game with archaeologists before, which I think it's quite useful.

Theme 6

Reference 1

JUAN:

We define here everyday life and language as the substantive concepts of the game. We need to move to conflicts because that is how games work, a game is for definition a system of conflicts that is built around challenges and actions. How everyday life can be viewed as a conflict.

Reference 2

DELIA:

maybe we can put it down as labour, like we don't have enough resources to trade or if you owe another character you should put some days of free labour.

Reference 3

IAN:

maybe adding the idea that characters can sell themselves as slaves would be a nice way to handle slavery and point out that it was part of that life but it not a good thing.

Reference 4

DELIA:

maybe we can add a negative aspect to it, like a penalty that affect you as a player if part of your time is dedicated to slavery to make them understand that it is not fair. Ian. but do you become a slave in those times?

Reference 5

JUDITH:

the slavery aspects were also something that my son was interested in when I was describing the game to him last night.

Reference 6

DELIA:

I think that there are a lot of elements of the game that we can relate to.

Reference 7

JUAN:

They need to build that tension between the present and the past to start learning about the latter. By creating conflicts in the game between our understanding of the present and how things were done in the past is how you create some educational experience. Also is going to affect your emotion because at the end it makes you care.

Activity 1 transcripts

GROUP 1

[0:00:00 - 0:01:07] Juan: We define here everyday life and language as the substantive concepts of the game. We need to move to conflicts because that it is how games work, a game is for definition a system of conflicts that is built around challenges and actions. How everyday life can be viewed as a conflict. [0:01:07 - 0:06:03] Group brainstorming ideas for conflicts: survival, animals running away/stolen, disease (i.e. plagues), threat to resources, social relationships, issue with communication and language barriers (encounters between foreigners and different culture).

[0:06:03 - 0:42:00] Group working on the paper prototype, working on spatial representations (i.e. maps, or more abstract representations), core mechanics, type of interactions (single player or collaborative) and consequences for actions. Discuss whether they want children to learn about building techniques and processes during the Anglo-Saxon period or rather convey the different archaeologists' interpretations about the site. Delia is suggesting that in the context of this specific game it could be more interesting to link information about building techniques to the importance of the resources necessary to the construction process. Juan is also saying that they need to develop something that helps to track the passing of time, such as a calendar. Judith is suggesting to add seasonal tasks.

[0:42:00 - 0:56:00] Juan is now directing the group on the definition of actions that characters can complete. They are discussing the possibility of developing actions that can be completed only by groups of players as a family. They are also constraining how characters can move within the environment. The definition of actions also relates to the selection of the appropriate tool which can be a useful educational experience in terms of critically reflecting on artefacts and how they were used, as well as fostering collaboration as they can share tools to complete a task. Interestingly they are also discussing how the selection of artefacts can help to break down stereotypes on gendered activities, as female character can choose objects usually associated to men [0:55:08] Ingrida: I am a woman with a sword!).

[0:56:00 - 1:02:00] Discussing issue related to accuracy. Juan: I asked archaeologists about fences made of in Anglo-Saxon farms and they told me that probably there weren't any as they were really expensive and it was cheaper to have children taking

care of flocks. So, what do you do then with your sheep, if there are no fences? Judith: You collect them and they come with you. Ian: Should we reflect on what kind of idea we are giving about Anglo-Saxon times if we let characters go out and pick sheep like they pick berries as it was unlikely that there were wild sheep just hanging around waiting to somebody to pick them. Judith: We have to think about the 'cool' factor and that they are children, so it doesn't have to be super realistic. Ian: Yes, but if it is something that they are going to remember... Juan: maybe they can get resources from sheep such as wool, so you don't keep them as an action, but you get resources from it. Ingrida: but do we start with a wild environment or there was already some sort of village. Delia: Yes, so you would have had some sheep with you. I think it's easier if there is already a village established. Juan: so, if we want to move to the concept of property, we can create it as a token. So, what are we doing with the sheep, is it a possession or resource? Ingrida: it is a possession. Juan: But would that be personal property or family property? Ingrida and Delia: family.

[1:02:00 - 1:06:25] Discussing resources and property.

[1:06:25 - 1:13:00] Delia: there is also the trade aspect too. Juan: Maybe we can add the option to trade, but if there is a dispute players can roll the dice. Judith: so, they need objects to trade, such as medicine or beads. Delia: maybe objects that are imported, not local resources, and things with a higher value. Juan: Should we put slaves? Delia: maybe we can put it down as labour, like we don't have enough resources to trade or if you owe another character you should put some days of free labour. Ian: maybe adding the idea that characters can sell themselves as slaves would be a nice way to handle slavery and point out that it was part of that life but it not a good thing. Delia: maybe we can add a negative aspect to it, like a penalty that affect you as a player if part of your time is dedicated to slavery to make them understand that it is not fair. Ian. but do you become a slave in those times? Judith: it says here that it was 12% of the population so quite a high number. Juan: we could make it as if you are a slave you have to follow your owner, do work for them but nor be allowed to keep resources. Judith: they should be able to keep money though, so they can buy themselves out of slavery.

[1:13:00 - 1:22:23] the group continues playing with the game and defining actions and resources.

GROUP 2

[0:00:00- 0:04:16] The group is resuming the work from the previous activity where they discuss the relevance of prehistory for different audiences. They then move to using design cards, starting with the common vision and following the instruction on the cards.

[0:04:16- 0:19:07] Catriona: I went with non-linear as a starting point as I think we are all keen on this idea, transcending as I have this idea of a digital thing or a real-life experience that transcends between the two as a mechanism for engagement. I have also written provocative because the all point is to have something that is provocative not strictly educational but it something that you can walk away with something more. Andriana: I wrote down meaningful because we want the participants to gain something that they can remember, then I wrote approachable so we need a balance if we are going to do something quite traditional or very digital, we need a balance so we can approach all the audiences. Then I wrote interactive, so we can have more interactive features and make it more interesting and dynamic. Meliha: I was thinking of linking past and present, dynamic and interaction, and I like in terms of content this idea of a ritual festival. Jennifer: so, the idea for me is time as spiral so people can go back to the past and unravel the meaning of it. Gavin: I probably don't get a vote, but I have dynamic, engaging and intuitive as it is something that is meant to be easy to understand and use and meaningful, in a sense that there is some sort of gain and you carry something with you. Costis: phenomenological world, point of view and maybe objects/biography. Gavin. so, we have to take three, so we maybe need to group them. Catriona: I think the non-linear is in relation to time and time travel. Gavin: so, I'll put non-linear time in the middle. Meliha: I think we need to group the events related to the ritual aspect and the objects. Catriona: I guess it related to the interactive element, being approachable. Gavin: so, there are both the issues of the objects being passively/actively encountered so there is a challenge in doing that, but also the fact that we are concerned about narrative forms. It could be the story of how the house is constructed. Costis: but also, it is about the interface and the experience, how would it be to live in a place where a thing stokes. Jennifer: is the present evidence of stocking that we are generating the story from. Catriona: experience really, is all about an experience. Jennifer: the time travelling objects seem to be a connected theme. Gavin: the experience also needs to be embedded in the platform. Catriona: it also needs to be provocative and dynamic, the dynamic is a really important element. Gavin: but an experience can be dynamic without being provocative, so I think we need both. Costis: I think authenticity in

another important question, as it drives all the make-believe literature in the field of VR for example. Jennifer: but it also about audience, because all forms of narrative that we don't believe are expressing truth are popular. There is a danger that we preclude. Catriona: It very hard to create an audience-evocative narrative and be completely authentic. Is very hard to generate completely authentic or real or truthful stories if one has to be confined to what we know, we have got to introduce an interpretation somewhere. Costis: I think I didn't express myself clearly, what I mean is that in the discussion of constructing the past, this quest of authenticity as a way to find a meaning, a grasp of the past does not preclude at all. At the contrary, the notion that the relation to the past is constructed, even if it constructed in distance. People like Maria Roussou when they talk about make believe, this regime of representations where people feel that is real. Maybe the word authenticity is not right, but what I want is this kind of sense that the experience should be believable and put people in the shoes to be in the past. Meliha: It needs to be related to a specific place so it can be related to reality. Jennifer: I was thinking about practical experience, what brings people to our event and it is very often things that we wouldn't approve of. There is not a delineation between active learning and the entertainment element of their life. What we are trying to do is to use it as a window in, so what it is being presented is probably not authoritative, but it brings people to you, so you have the opportunity to give them the other bit. I guess it worries me to put authenticity as an overarching theme because it is ruling out a lot of potential avenues into getting into people's lives. Gavin: I think we need to be sensitive of this issue, a word I would use is integrity rather than authenticity. I think there is a sense that some of the work we do where there are interpretive or storytelling approaches we don't to push the boundaries of ethical concerns about how we are representing or mediating possibilities of the past. Costis: when I was referring to authenticity, I meant to refer to psychology literature, when a person feels authentic. I think one of the main reasons why people are interested in the prehistory it is because somehow seek this kind of field of existence, where they feel authentic, human in the essence of human. Jennifer: they want to feel, it is the generation of feeling.

[0:19:07- 0:30:40] The group is moving the following cards, starting with goals. The main one is increasing engagement and participation to events. Jennifer: would it have an impact on their life. Catriona: is the goal having more people to come, or it is having them walk away with more engagement? Jennifer: what does more engagement mean? Catriona: knowledge of it, more interest? Costis: making the past more relevant to their

lives maybe. Gavin: we need to raise awareness as the first step to a wider and broader engagement, and engagement implies that there is some sort of interaction and action. Meliha: maybe this awareness can be evoked before they start the engagement. Jennifer: what impact would it have in their lives? what would change in their life after this encounter? We need to start thinking about a visitor journey, so we need to increase awareness as it is where knowledge comes from, there is a participation element to be brought in but there is a signpost you need to engender that engagement. If success is they have encountered this new world and they have become interested and they are inspired to do more, to act, then we need to have a sign post element that leads people in that journey. I would suggest it would be that if you are going on this journey you have to be already a confident user of heritage and culture to make that a logical journey, a journey that you are used to take. Gavin: I think that the meaningful, dynamic, provocative and non-linear are what brings people is the second goal to sign post of action? Costis: what I have heard is also impact, changes in people's lives, because a lot of criticism in the current participation and engagement literature has been really on the fact that it is something that you just measure and just stick off. What is it meaningful engagement? I actually want to ask you if this is the case, it is the issue here that we want people more engaged for instance in participation, in the sense of co-responsibility for land management, for protection. Is this the way that we want to engage people, so they become more mindful of the needs to preserve historic and material heritage? Catriona: I think we need to put a goal above the awareness idea? Jennifer: we need the sparkly glamour. Costis: what about for instance if I were an economic migrant and I didn't feel very much included in society, so the notion of Scottish Bronze Age doesn't mean much to me. So, what does it mean for me to be somehow include enough to be able to go into the cycle? There a cultural exclusion here that we need to address somehow. Gavin: perhaps it is implicit on some narrations of national identities. Frankly, we can argue that Scotland is very inclusive country and the debate that goes around land access and ownership is very current. The Scottish government have a clear position on wanting more migrants and the conversation on the landscape we share as a community, the responsibility of stewardship, there is a context. Jennifer: what you are alluding to is that everybody's past is different and that is why I think it is dangerous to handle things like prehistory where prehistory start depends much on where you stood in the world, so it relevant to the place rather than the person. We have to make it more about human experience, using art as our initial co-hanger that

we hang staff on, is how you make to relate and you bring in the difference in time, the academic content once you have made the connection through art.

[0:30:40- 0:55:21] Group keep discussing the key themes and goals of the experience. Then they move to the visitors' takeaway, persona cards, each participant is encouraged by the facilitator to design a persona. Jennifer developed a male persona, George, 63 years old truck-driver who left school when it was 15 and doesn't enjoy reading very much. George also has mobility issues and he is grumpy. He is a conglomeration of people that Jennifer work with on a regular basis as part of her outreach work at York Archaeological Trust. This persona represents people who often feels that heritage has a profession isn't for them, that they don't pursue heritage in a way that is approved and their way of viewing the world is often looked down. Meliha developed a male persona, young economist Nick who likes travelling and having new experiences, tech-savvy, single and wears glasses. He doesn't present particular challenger, apart from the fact that he has limited time. He represents young professional who are curious about prehistory in Scotland and are wealthy. Andriana developed a male persona, Andy 23 years old, non-native speaker but fluent in English, physics student who loves videogames and basketball. Tech-savvy and not very interested in heritage and history in general and he's forced by his family to engage with this experience, so they need to find a way to use digital technologies to make him interested. Catriona developed a non-binary persona, Alex 30 years old non-native speaker but fluent in English, researcher at the University whose hobby are dog walking and heritage. They are interested in new experiences and getting to know the area better with their partner as they are relocated recently. Their challenge is that they worry about the experience being targeted mainly to families and the absence on gender neutral facilities in the experience's location. Costis developed a female persona, Martha 23-year-old Polish students, she speaks some English and she is in Scotland working as au pair. She is interested in trekking and photography, outdoorsy kind a person who likes to know more about Scotland in her free time, alone or with friends, and she uses social media very often, especially Instagram. Her challenge is the language barriers that make difficult for her to engage with a lot of written contents. Nobody presented a family persona with children.

GROUP 3

[0:00:00 - 0:20:27] Group starts working on personas and Rebeka suggest she starts creating a matrix to visualise all the aspects of the digital platform they are designing

and then they can use to see which aspects addresses better the persona's needs. They identify two main personas, a student and a commuter/weekender, going through the space on his own during the week and with their family during the weekend. The group then moves on to going through the specifics of the Castlegate area. They decide to interview each other to develop personas while Rebeka works on the matrix, adding categories for the platform: historical, social, cultural and commercial.

[0: 20:27- 0:35:09] Elena: I think the student can be stressed while they go from campus to King's Manor and can appreciate have a space where they can relax, so I think this should be facilitated in the experience, they can grab a coffee for example. Irina: the commuter I think it also stressed and, in a hurry, to get to their jobs. Claire: imagine this is a trip the students does 3/4 times a week, they live on campus, but they go to King's Manor for classes. I know that when I go through spaces that I see every day I stop seeing them. Elena: In this sense York is a very unusual place because when I was student here, I used to go places like the bridge to relax and take a break. Claire: so, you think students would potentially enjoy spending more time in this space than commuters. Elena: yes, I think so. This is providing that there is a green space to lie down. Giacomo: why as a commuter you don't visit cultural heritage sites? Why you don't find the time to do it? Claire: It is a good question. It is expensive and there is something about that fact that when something it is at your doorstep you always mean to go, and you never do. Rebeka: maybe we can target users with our platform notifying free or late-night events for locals. Claire: There is something about motivation. Elena: There are also things that a student you never do in a city until your parents come to visit. Claire: there is something about the experience of being a tourist in your own city and also about the physicality of the space and the fact that it's free. Elena: if there were performances or cultural events...Rebeka: that's why I think the space should be an amphitheatric plaza so it can be a space for performances as well and we can use the platform to encourage people to go and spend more time there. Irina: what would make a commuter change their plans and stop there instead of going home? Rebeka: let's say that I am a York commuter and through the platform I find out about a farmers' market event on this area, I would come back for that maybe during the weekend with my family. Or if I am student, I get a push notification in the moment I go through the space about a concert on Saturday night.

[0:35:09 -0:49:55] The group is discussing according to Rebeka's suggestion on the

adoption of historical urban landscape management approach, where heritage is part of an experience what other elements are incorporated, not limiting it to historical facts and information. The group is then discussing on community activities available for residents and Claire explains that local in York feel disenfranchised from their own city because of the turistification and that is the issue that the Council is trying to address through this project.

[0:49:55 - 0:57:00] Rebeka: I am going to write down versatile, dynamic public space which means that this space is always changing, and it makes it relevant to locals. If there is a special event every week people would go to the area. Claire: it is important to let people in, we don't worry now about the specifics. Irina: I was thinking how to create a path that people follow through the Eye of York, as students and commuters don't use google maps and they have their routine and predefined routes. Claire: if we are using geo-location it is not a problem. The group is discussing the transportation habits of students and commuters and to use bus stops for example as potential social space to attract people's interest on the surrounding area.

[0:57:00 - 1:01:00] Claire: as a student what would be relevant to me in terms of heritage? Elena: I would be interested in cultural events, music or cinema or theatre. Irina: language course for non-native speakers. Claire: So how could we engage those people with this space? Elena: if you are there for these cultural events then you see the space and you learn more or just see the heritage around. Claire: There is a local resident here who researches and creates alternative histories of York and that made me think about alternative histories around this space. how to create and use them. Elena: if it is a good app people will use it regardless of the content, because technology is cool and can promote socialising for example among people waiting at the bus stop. Rebeka: here is where we can combine technologies with the social component of the experience , because the platform as social networking aspect that give people information about events or made them aware of events from friends sharing them.

[1:01:00- 1:40:20] Group discussing how to make it the area a public space where people could stay maybe until late, relax and have a drink with friends while respecting city regulations (i.e. alcohol consumption). Then the move on discussing different institutions administrating the area and the various stakeholder for the project: city council, residents, English Heritage and York Museum Trust. Elena worries that they

are not developing something new, but Rebeka replies that they don't have to reinvent the wheel, but reuse existing technologies that fit their purposes and meet audience's needs.

[1:40:20 - 1:42:20 Rebeka: we are not designing a digital experience, but a digitally-mediated experience which means that there are actual experiences in the physical space and there a digital layer. I am thinking about the prototyping phase tomorrow and how do you represent something like this. We can represent the physical space and then add layers for each category and show what each layer brings to the space. It would be a physical expression of the digital world. Giacomo: maybe we can also add physical elements, like lights, that mark the space where the prison used to be, because people might prefer something physical, so they don't have to stare at a screen.

[1:42:20 - 2:12:27] Group then brainstorming how to add physical elements to the experience, such as lights or visual projections and audio. Maybe something that people can control using the app, so it is not passive but active engagement. They decide to put it down as part of the cultural aspect of the experience. Claire then prompts the group to reflect on how they can link the app/platform they want to develop to the city archive and data about the area.

GROUP 4

[0:00:00 - 0:41:50] Marina and Lampros are talking about a project they have been working on, the digitisation of manuscripts from a monastery in Greece that otherwise would only be physically accessible to monks. Eleonora is then discussing the issue of preservation of digital born materials or digitised objects and who decides what is relevant, important and worth of preservation. The group is discussing whether or not to create personas and Ya'ara is saying the in-game design is something that comes up later on in the process and that they should just focus on the design right now and not on potential users. Eleonora is replying that she uses personas to identify and broadly define the target audience for the design. The group starts working on a map of Southampton to try linking various elements of the archived collections to it, discussing the use of symbols or icons related to the collections contents. The Titanic can be one of the stories related to Southampton. They are brainstorming ideas for the contents and ways for people to actually contribute to the digital archive: music, art and photographs. Discussing how they can allow people to be creative with the archival materials and be

creative. Anna is suggesting AR, but Ya'ara and Eleonora are bringing up issues related to the technology and the problem with geotagging. Marina is suggesting to link the archive to other digital archives and libraries, but Eleonora is replying that she wants the local community to engage with that collections not others, as local community is the target audience. The main aim for her is to have people from Southampton engage with the archive and discover more information and stories about their city, be more aware of what happened.

[0:41:50 - 0:44:00] Anna: we can use the knowledge that people have. Like younger and older people meeting and telling stories and if you have a lot of old maps you could also see how the city has changed through the maps and where older houses were and adding layers on the old maps. Because if you live in a city and are interested in it and the first thing you look is your street, your house and where your work...You can go all the way to the archaeological stuff and this is what people are interested in because they are interested in the space they moved every day. Marina: and this way you connect people to places. Anna: people who are experts can put tutorials or podcasts where they could tell about the collections and what they have been used for.

[0:44:00 - 1:54:09] Ya'ara is raising the issue of defining themes for collections otherwise it's too generic and the need of mediators for content uploaded by the public, or an editor. The group is defining the main components of the experience: maps, narratives, competition and call for actions. Discussing the option of interactive maps: Ya'ara is challenging the group on why people should be interested in clicking on a specific point in the maps. The group is discussing the issue of how to draw people's attention and encourage them to explore the map. Discussing features such as the story of the day, to make people interested. Something along the line of "did you know that". Anna is saying that this what people like, little pieces of information that can become the talk of the day at work, for example. Group then starts discussing search options for the interface, such as search by feature and option for screening materials, and also trying to understand why people should be interested in the collections in the first place. Have thematic collections or search for file type (photos or video or documents for example).

Activity 2 transcripts

GROUP 1

[0:00:00 - 0:19:00] Group adding Anglo-Saxon words to the game. Juan goes through the specifics of game-development and shows the group a similar game he developed in Unity for his PhD.

[0:19:00 - 0:23:04] n Juan: there are a lot of similarities between what I did and what we did yesterday, but I found that there are also differences. Potentially a lot better differences with this one that can be incorporated. One of the things that I love about the game we are developing is cooperation that I don't have in the game I did. I thought I gave the sense of it because I made it multiplayer but still, I didn't get that idea of what a family is. I think this game is a lot better, because the dynamic that appears when we are cooperating, I didn't have it in the other game. That game didn't have a social presence. I also never developed a game with archaeologists before, which I think it's quite useful.

[0:23:04 - 0:23:18] Delia: I think also seen this completed makes me less stressed about what we are going to present later, because we can now concentrate more on how it actually works.

[0:23:18 - 0:38:46] Juan showing how Unity works and characters animation and rigging.

[0:38:46 - 0:42:30] Judith: the difficulty that I see is that there is a lot of real archaeology going into this, whereas with a lot of games you don't know whether they are truthful or not or what evidence are they based on. You don't know if they have extended too far beyond evidence and considering that this game is educational, we have the licence to go little bit beyond of what the archaeology has got to say. Juan: this is a very good question. How do you pour archaeology in the game? I think that there is also some archaeological imagination involved: one thing that distinguishes archaeologists from everybody else is that you put on a map and archaeologists see things that I am not able to see. Delia: What is hitting me is that it is so much better to work together, because you know how to code and develop games and we know about archaeology. It makes more sense to me to collaborate rather than me learning

something poorly. Juan: I believe in participatory practice but to allow participation you need to have understanding of the other side.

[0:42:30 - 0:54:00] The group continues discussing the creation of archaeogames and Juan shows a map based on the game he developed for his PhD and the themes he explored within his research, particularly during a pilot session with children.

[0:54:00 - 0:56:19] Judith. the slavery aspects were also something that my son was interested in when I was describing the game to him last night. Delia: I think that there are a lot of elements of the game that we can relate to. Juan: They need to build that tension between the present and the past to start learning about the latter. By creating conflicts in the game between our understanding of the present and how things were done in the past is how you create some educational experience. Also is going to affect your emotion because at the end it makes you care.

GROUP 2

[0:00:00 - 0:14:00] Gavin: the overarching issues or concern here is "how we might make prehistory relevant to people?". The idea is material culture that leads into the landscape aspect, the houses, the woodlands, the ceremonial sites (stone circles) and the cosmology aspect. For George we can use Facebook to draw him in, while with Marta we can use Instagram. Something here can be very aesthetic and sensorial, like an animated video with sounds. Then there is the Scottish prehistoric material culture. like rocks and bones...We can create hotspots that people can explore...We should each try to work up our own elements of the experience, what it's going to draw George and Marta in... We are actually creating this for people who wouldn't come on their own. Jennifer: For me it's logical, you go for the audience who hasn't come in yet. Meliha: I think it's interesting, I found out yesterday that there are a lot of bands who relate to prehistoric music. I was surprised.

[0:14:00 - 1:23:53] The group then starts discussing layout and design for the platform/website, moving to working in groups on developing content based on each persona's interests. The group chose George and Martha as potential visitors. Group working separately on different tasks for the prototype development: content, user journey, modalities of interaction with the platform, type of events to organise at the site.

[1:23:53 - 1:56:11] Costis is presenting the group the storyboard he developed, with the visitor journey through the platform. Andriana developed elements of the experience that will interest Marta, one of their personas: workshops to create leather shoes, social events, good pictures on Instagram and mixing archaeology with contemporary art installations. Meliha developed content for the historical landscape and information about prehistoric objects and material culture. The group then continues discussing details regarding both contents and UI.

GROUP 3

[00:00:00 - 1:22:46] Claire is explaining the group how to develop scenarios for their experience, while Rebeka keeps working on the matrix. Then she's asking how they envision different scenarios and would like to develop that in terms of prototypes. Claire then suggests developing storyboards, to tailor their experience to their personas. The group then starts developing their personas: a female undergraduate student named Anna, who lives on campus but studies at King's Manor and she walks through the Castlegate Area. After developing the persona, the group starts discussing what to do to draw her attention and make the experience interesting. They are thinking of planting QR codes around the area to download the app. Then, they start working on the scenario for Anna, five minutes from the moment she steps out the bus.

Personal observations

ACTIVITY 1: CASE STUDY DEFINITION (K/159)

Groups 2-4

11.00 Gavin is leading the discussion, while Eleonora's group members are asking questions and working together. After a while, Gavin's group is also asking questions and discussing issues re: the case study. Eleonora is leaving participants free to make decisions on the UX design, while Gavin is taking a more leading role.

11.30 Now both groups' members are participating without the facilitators leading them.

NOTE: both groups are taking into account the physical space. At this point almost everyone

is actively participating, but none of the group members is emerging as leader. Some people

are more relaxed, while other are more restrained and "formal" in their approach (like

Lampros, who lately will become a disruptive element of the group dominating the conversation without offering any constructive input to the activity and discussion).

11.45 Group 2 started working with markers and white sheets. Gavin still tends to take a leading role, but caring and making sure that everyone feels comfortable and integrated within the group's discussion. In Group 4 Marina is not participating much (lately it will become clear that her and Lampros have no interest in the workshop).

NOTE: both groups now are discussing the design in terms of experience.

ACTIVITY 2: UX DESIGN (G/60)

Groups 1-3

13.00 Both Juan and Claire are leading the groups through the design phase. In Group 1 all members are following Juan's directions and decision, while in Group 3 Rebeka and Elena tend to dominate the discussion.

NOTE: both groups are not using the cards, but they are using white sheets and sticky notes.

In Group 3 Rebeka is drawing a Matrix

Now Group 3 is using the cards to develop personas: some members are impersonating users while the others are interviewing them. In general, both groups seem to be working well together, there is a very good dynamic between participants. In Group 1 Delia and Juan are drawing components of the paper prototype. They are not using cards, because Juan planned every step of the design in advance so they don't actually need them.

13.40 Group 1 is now quiet and working separately on different tasks, as planned by Juan

Beforehand. Group 3 is still having a collective discussion, but Irina and Giacomo are not

intervening much. Group 1 is now laying out the paper prototype/board game and playing with it. Both groups seem to be having fun. In Group 3 Rebeka and Elena are still prevailing in the discussion and presenting various ideas, Claire is facilitating the process asking them questions on how to practically put their concepts into the design.

14.00 Group 3: Irina and Giacomo seem more comfortable now and are participating more in the discussion. Group 1 is bodystorming with the board game. Both groups are collectively discussing issues related to design features, concept and contents.

14.30 Both groups are still discussing and brainstorming about the UX design. Group 1 is bodystorming (see pictures) and going through the game's rules and actions.

NOTE: none of them is using wireframe templates.

Rebeka and Elena are so serious! Claire's trying to lighten the mood.

14.45 In both groups the conversation is still lively, but people are showing the first fatigue sign (Group 3 is losing Irina and Giacomo!). Group 3 is now talking about the physical space

where the digital experience is going to take place).

ACTIVITY 3: PROTOTYPING (G/60)

Groups 1-3

9.30 Both groups have the same dynamic observed yesterday. Group 3 is discussing storyboard, while Juan is showing a game he's developed that is similar to the one they are working on. Group 3 is working on different tasks and discussing the possibility of integrating 3D models in their design, as suggested by Giacomo. They are now developing personas and scenarios, while in Group 1 Juan is lecturing his group on Unity and 3D models. Group 3: Rebeka is drawing maps for the prototype, while the other members are developing scenarios.

10.30 Now in Group 1 all members are debating the game contents from an archaeological perspective. Juan is still pushing them to follow his pre-planned workflow and asking them to focus on the characters' development.

NOTE: went to K/159 and apparently Eleonora's group is more problematic than we thought.

Lampros is dominating the group in a disruptive fashion, critiquing everything without offering practical solutions. Eleonora's struggling in her facilitator role.

11.00 Group is working in groups on different tasks assigned by Juan: Juan with Ian, Judith alone, Delia with Ingrida. Group 3: Claire's guiding people through the definition

of personas while Rebeka's still working on the maps. Giacomo and Irina seem way more comfortable today as they are actively participating in the discussion.

11.30 both groups are still very focused on their work but they all seem to be having a lot of fun (Ian is laughing a lot!!!). They are both well on track with the timeline. Group 3 is using Lego (see pictures) and smartphone wireframe templates for their app prototype.

NOTE: in general, all groups didn't use the cards much, expert for the ones to create personas. Also they didn't use much wireframe templates.

Notes from activities' recordings

Activity 1

GROUP 1

No one is familiar with the Anglo-Saxon period. Juan chose it because it is part of the primary school history programme, but it's not thought well and there are a lot of misconceptions and preconceptions about that period, mostly fostered by movies and tv (Juan said that his kinds have an idea about that period as extremely violent).

Delia says something similar happens in Sweden and in general we also think in terms of violent invasion.

They are discussing the main goals and developing tasks for game characters. Juan is talking about the cultural clash between Anglo-Saxons and Roman-British and that fact that is often thought in violent terms (conflict).

Make it more about everyday life challenges. Different ways of solving problems and a reward system not only for killing. Cool factor and fun factor capture immediately kids' attention.

Juan strongly guided the process from the beginning, assigning tasks since activity 1 and leading the goals discussion. Group members are participating a lot, but on something already set up by Juan.

Ian is suggesting a game where anybody loses, based on different steps of progressions. Then they moved to substantive concepts: what the game is about from the historical perspective. Now the discussion is led by group members. Everyday life, language, what is relevant to the target group like food, how to produce things and how things were about and what was different from the Anglo-Saxon period compared to the periods before and after, animals. Language: topography, people's names, meaning of

places. How do you make Anglo-Saxon language cool for kids, without giving them too much text to read?

Then they are moving to substantive concepts to historical conflicts, again according to Juan's plan. Conflict because you need something to trigger the story, as it is essential for a game. Everyday life is informative but boring, you need to frame a conflict to start the game.

GROUP 2

Gavin says that there is an interest in Prehistory experience, but there are a lot of preconceptions regarding that period. He wants to explore topics in a sort of pedagogic way to why does prehistory matter? Why is it relevant? How can we make the difference?

Contemporary relevance. Find a way to be appealing to different audiences. Not education resources per se, thinking more in terms of experience.

During the first phase of this activity Gavin led pretty much the entire discussion. He is very caring though, making sure that everyone feels comfortable and at ease. He asks everyone to present themselves again with more details.

Discussing multi-sensoriality and authenticity (3D prints) – develop a more dynamic platform and avoid too much text to also improve accessibility from people, for example, with learning disability

Create stories and experiences game-style. Make people feel part of the story-
Storytelling and gaming

Build expectations online and then provide something more tangible. What are the main characteristics of prehistory? People engage with the now and here, the information comes later (Jen's opinion).

They started with why and moved on to who-reflections on audiences and users' expectations. Used cards to develop personas.

Activity 2

GROUP 1

The group is creating the paper prototype board game-again under the strict supervision of Juan.

He's having the group define the core mechanic of the game, like the survival challenge or the language challenge. He's steering them to the survival one because it is well established in games.

Space presentations. Talking about maps, as archaeologists understand them better!

Open path vs Structured path for players to follow.

Discussing archaeological evidence of that Anglo-Saxon settlement while creating the board game.

Collect things to build the village.

Now they are discussing seasonality and when during the year to carry out specific activities.

Juan's assigning characters on a gender-base and they're playing the game going through the allowed actions. They're splitting up in groups as families (in the game).

Tackling also sensitive topics like slavery and how to make it a penalty in the game to convey the gravity of the topic.

GROUP 2

Discussing scenarios and using the cards. Write key words on post-its to identify themes to discuss together later. Gavin assigned the task to write down 3 words each participant stating key elements of the experience/platform to be designed.

Gavin is leading the activities but he's not imposing his idea/vision.

After they decided to pick 2-3 key words and see if there was an overlapping of it was possible to group some of the key words. Common themes: time travel/objects; interactive/approachable; experience/provocative/dynamic. Costis is bringing up the notion of authenticity. Jenny is mentioning the issue of authoritative interpretation and how it can be excluding of the public. Moving the discussion to the emotional aspect of the experience, people want to feel.

1st goal: more engagement with prehistory (Jenny asks what that means): improve awareness first step for wider engagement in Gavin's opinion. What impact would that have in their life? How would their life change after this encounter?

Is a journey: increase awareness of where the knowledge base comes from to foster engagement (listen better minute 23:40 Jenny is talking about what success would look like in that design). There is the participation element to be brought in, there is a sign-posting element to engender the engagement, lead people in the journey and let them know where they are

2nd goal: relevance to the audience. Be sensitive and also aware of the fact that everybody's past is different (Costis mentioned migrants and how they relate to the past and the landscape in Scotland).

Non-linear and dynamic approach

Gavin steered the discussion back to the UX design. Back to the cards. They are now discussing personas: Gavin's asking each participant to define a persona based on their knowledge/previous experience/personality.

Jenny, Andriana and Meliha developed male personas, Cat created a gender-neutral persona and Costis a female persona. No group or family personas.

GROUP 3

Claire's proposing people to start creating personas. Rebeka is proposing the idea of creating a matrix of the digital platform/designed experience and sticky notes to add ideas for each category.

Rebeka is always trying to take the lead on the discussion and work organisation.

Discussing physical and digital space. Rebeka is proposing AR for the platform; developing scenarios for commuters.

Talking about being a tourist in our own city, sharing personal experiences/stories to inform their choices.

Using the square as a performances/experiences place. Adopt an urban landscape approach, it can't be just about heritage.

The discussion is really focusing on the physical space where the experience is going to take place. And the potential of the space for social interaction.

Claire's bringing back the discussion to heritage: as a student, what do I care about? Do I care about this heritage? How do we engage people with that space? Discussing alternative history.

Socialisation around cool technology, that also attracts people to the content. SOCIALISATION AS MAIN THEME. Public space where people can hang out.

How to combine heritage and socialisation: selfies, Instagram and social media.

Discussing how to structure the experience from a heritage management point of view: use urban historical materials to create boundaries and trigger more info on buildings and history of the space. People want to know where the Castle was for example, as emerged from public consultations with York residents. Use AR to show how the place used to be.

How to engage people with difficult past (prisons, forced-mass suicide Jewish community on the tower, etc.)? Rebeka has a more practical approach and suggests a series of trivia info/push notifications that commuters get daily using the platform.

Elena suggests focusing more on user groups at this stage to better define contents and ways to deliver info and engagement.

Also think of leaving physical clues all over the place to narrate the story of the place, multi sensoriality involving other senses (i.e. rougher aggregates on the pavement where the castle used to be) and trigger feelings. Giacomo is very much focused on using 3D models and reconstruction using the historical map.

They are also considering gamification: use historical avatars.

Elena is saying that they need to come up with something new and what they are doing it is not: app, QR codes, AR, etc. Rebeka is replying that there is no need to reinvent the wheel and what they are developing is more of a framework to be used all over the city in other projects. Needs to connect the site to the rest of the city.

Physical space with digital layers: Rebeka's view for the design. Giacomo suggested using lighting to create evocative experiences: projections and lighting installations

GROUP 4

Discussing physical and digital accessibility in relation to a project Lampros and Marina are working on.

Digital born information, issues regarding digitisation and curation in the long term – who decides what is important and not, what needs to be digitised and made accessible to others.

Discussing whether or not developing personas. Ya'ara thinks that they are more useful in the scenario of use not in the design; Ele replied that she uses personas in the design stage to better identify the target audience.

Anna: how to get the coolness out of archives.

QR codes as in Group 3. Decide what story and symbols to use to create narratives about Southampton.

Discovery things and add metadata: layering info. Idea of adding and tagging. Focus on functionality. Lampros is not clear about this process.

Ya'ara is proposing a call for action for people to upload music and audios to the platform and art as well, pictures or drawings – brings us copyright issues. Competitions or exhibitions of work inspired by the archive collections, upload your own interpretations. Using AR for this purpose.

Eleonora is bringing back the discussion to the target audience, saying that the design should focus on residents' engagement with the archive.

Activity 3

GROUP 1

Juan again is structuring the activity, telling people that they should focus on developing the game to make it more complete. He's showing them how they develop games in Unity.

According to Juan this game is better than the others he developed, even though they are very similar, because it has a social presence as there are family groups characters (you can play it as family/clan with other people).

Delia's saying that the fact the activity is so structured makes her less anxious about the presentation of the prototype that they have to do later to other participants.

Juan's is showing them how to develop animated characters in Unity.

Judith is raising issues on how to represent archaeology in games in a way that is faithful to the evidence (authenticity and authority). Delia's advocating for multi-disciplinarity and working together with developers instead of archaeologist coding or developing games poorly in Unity.

Need to create tensions in the game so kids can start learning something new (relates to Paola DiFranco project in Tunisia and the theory of uncanny: the need to be put in front of something that is strange and not related to your reality to foster curiosity and learn about that). If tension affects emotion they make you care in the end.

They are working on actions consequences for the game: harvesting, collecting wood or food and other seasonal activities that if you don't do have consequences, like if you don't take care of crops or animals you die of starvation. Seasonal tasks.

Resources cards=archaeological object cards in our design cards deck

Collaborative aspect is important: play as a family. Kids learn to interact as a group and learn skills from the past that can be used in the present as well.

Learning through the past. Competition and collaboration

GROUP 2

Gavin's asking the group what they can do digitally to design their platform.

Develop personas' interests (scenarios for them to be attracted and drawn to the experiences. Discussing Instagram and Pinterest aesthetics. Build something for people that wouldn't actually be drawn to this, that are not interested yet.

Working in groups – Gavin is managing the activities but not in an intrusive way.

They are deciding to use storyboards templates to create screenshots for their personas, George and Marta.

Start with the digital, then move to the physical experience and generate more contents for the digital platform. Build social content and sharing, leave tokens or objects behind or exchange in the virtual path/landscape/place to build relationships with the past.

Concept: performing through Prehistory.

People sharing videos and artistic performances on the platform. People can create their own art, use hashtags and share events on Instagram. Social aspect of the experience. Multi-platform (Facebook, Twitter, etc.) marketing campaign for this place called Pastlandia. They are developing a promotion strategy that follows the following steps/stages

- Connect objects to the people's skills: show videos on social media platforms to promote events, like performances, workshops for experimental archaeology.
- Prepare for events that you want to attend select objects or accessories, like beads, virtually or in person.

Adding content online: podcast and dressing activity. Then physical activities/events: leather workshop and knapping workshop

GROUP 3

Claire's guiding the group through the prototyping phase: use wireframe templates for the presentations. She's suggesting using low-tech stuff and focus on developing the scenarios: think more about the experience and the physical space where the experience is going to take place, instead of spending too much time on the interface in terms of technology. Claire is asking how they envision the prototype.

Giacomo is suggesting 3D sketches to represent how the landscape looked like in the past. Claire is suggesting storyboards. Rebeka again is being very pragmatic and proposing to use the matrix and schematic maps she's going to create using permatrace and the develop only 1 storyboard.

Claire is making the group constantly focus on the audience: who are we developing this for?

Elena is suggesting putting physical reconstruction on a plastic transparent board in front of a building: old version of AR! Rebeka says that it's better to do this for the Castle, as there are no physical remains for the prison.

They are developing scenarios for their personas. Discussing the possibility of using light and sounds, QR cords. Putting posters and banners around the area.

They are having a very deep discussion on what heritage is. According to Claire is historical, but also social and political.

Elena is struggling imagining how this experience can work for commuters that go through that area in a very short time. How can they make them interested in heritage in 5 min for a place that they see every day? Claire says that even a fraction of engagement is still engagement!

Rebeka is telling everybody not to add ideas, but just develop what they have discussed the day before, otherwise they are not going to finish in time!!! Irina is responding saying that they are not adding ideas but conceptualising and developing them better!!! Claire is shutting down Giacomo's idea about developing a 3D model/sketch as there is no time for that!!!

Rebeka is imposing explaining how things are done in design thinking as she is sure that's what we wanted to develop for this workshop.

Claire's really helpful, guiding them through the process and challenging their preconceptions. She's asking them to imagine being their hypothetical user. Elena finds it difficult to imagine that kind of engagement, something that is not strictly cultural and for someone who's rushing through the place going to work.

Claire's proposing a compromise: develop a scenario for a commuter but with more time, no weekdays as it might be more realistic.

They have decided to work separately in groups after the lunch break.

Irina suggests using a sort of wheel of filters to add layers on the app showing the chronological evolution of the place. Giacomo is suggesting to add trivia info, like things that happened this day in the past. Elena is being quite negative, objecting to all Irina and Giacomo's ideas, Claire's trying to mediate

Pick users' attention with trivia so they will come later and explore it further.

GROUP 4

Ya'ara discusses the idea of making people able to comment on stuff in the archive and actively contribute like review a collection of the pic of the day contest.

Eleonora is talking about crowdsourcing and adding metadata. Make people contribute to increase the collection through targeted campaigns. Anna is saying that it's easier and maybe more engaging for people to interact through a campaign as it's focused on a specific amount of time. Maybe also promote contests/competitions.

Lampros is expressing concerns about the fact that they are developing just another "Europeana" and they are doing something similar to what already exists. He doesn't

like the buttons for the interface. Ya'ara is replying that it's not a design, it's just features that need to be or already are on the webpage.

Participants are sharing their previous experiences, but sometimes not in a useful and constructive way. It doesn't transfer previous experience into the task at hand.

They seem to be repeating the same info on the case study all over again, not moving forward toward the prototyping phase. There is a serious communication problem, especially with Lampros. He hasn't understood the purpose of the workshop and he's a disruptive presence. Seems like people are pitching ideas to Eleonora, instead of designing something together. Maybe also Eleonora failed in explaining in the best way possible what they were supposed to do: aims, audience and outcomes are too vague. She didn't bring a case study suitable for the event.

Information about the project

Title of the study

Digital visualisation and interpretation of archaeological sites. A case study from Bronze Age Cyprus

Researcher

Francesca Dolcetti, PhD Researcher, Archaeology Department, University of York, York. North Yorkshire. YO1 7EP. Mobile phone: 07768402306; email: fd648@york.ac.uk.

Description

This research is focused on evaluating the impact that 3D modelling has upon archaeological research, academic and public dissemination. The main aim is to understand how different audiences (experts, non-experts, students) perceive digital visualisation of archaeological sites, interact and learn through them.

This study is based upon data from *Erimi-Laonin tou Porakou* (2200-1600 Before Christ), a Middle Bronze Age site located in the southern coast of Cyprus

Feedback will be collected from different user groups, composed of specialists and non-specialists, through surveys, interviews and focus groups. Audience feedback will then be used to evaluate how the interaction with 3D models affects people's engagements with and perceptions of past cultures. This valuable insight will help to identify the best way to create digitally-mediated experiences of archaeological sites bespoke to different audiences' needs and expectations.

Methods

Twenty-minute interviews and one-hour focus groups for the qualitative analysis; twenty-minute questionnaires for the quantitative analysis.

Confidentiality and anonymity

Participants may withdraw from the study and withdraw their consent at any stage up until the date of submission of the thesis (30 September 2019). If a participant decides to withdraw from the study, their information and responses will be removed from the research and destroyed. Quotes and responses obtained from participants in this study will be included in the dissertation and future publications. Survey responses will be treated anonymously. Interviewees may opt to be anonymous, to be identified generically by their job or to be mentioned by name. All data will be stored in a secure place and nothing will be used without the consent of the participants.

Result of the study

A written report with the preliminary results of the study will be available for participants to read. If requested, participants will be provided with an electronic copy of this report.

If you have any questions, please do not hesitate to contact me (fd648@york.ac.uk) or my PhD supervisor, Dr Sara Perry (sara.perry@york.ac.uk).

Consent form

Digital visualisation and interpretation of archaeological sites. A case study from Bronze Age Cyprus: Participant's Consent Form

Francesca Dolcetti, PhD Researcher, Archaeology Department, University of York.

Mobile phone: 07768402306; email: fd648@york.ac.uk.

Please read the points below, check the boxes to acknowledge agreement, sign and return the form to the researcher.

- I agree to participate, by being interviewed, in this research project.
- I have read the participant information sheet for the project.
- I understand that I am free to withdraw from the interview at any time.
- I give consent for the interview to be audio-recorded.

I give consent for the text of the interview to be used and quoted in research and publications produced after this study, under the following condition (tick as appropriate):

- I wish to be identified by name and job title.
- I wish to be identified only by job title.
- I wish to remain anonymous.

NAME:

SIGNATURE:

DATE:

If you would like to receive a copy of the final written report associated with this research, please provide your contact details:



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The University of York often takes photographs or video film for publicity purposes. These images may appear in our printed publications, on our website, or both. We may also send them to the news media. We require your permission to do this.

Please read the information below, circle **yes** or **no**, then sign and date the form where shown.

I agree to the use of my image(s), in printed publicity or promotional literature produced by The University of York, including leaflets, posters, newsletters and other display material; on The University of York's website and other social media sites, including Facebook, Twitter and YouTube; and in any publicity material about our services sent to the news media.

I understand that websites and other online media can be seen throughout the world, and not just in the United Kingdom, where UK law applies.

I have read and understand the above Yes / No (circle)	
Forename	Surname
Signature	Date

I have read and understand the above Yes / No (circle)	
Forename	Surname
Signature	Date

I have read and understand the above Yes / No (circle)	
Forename	Surname
Signature	Date

I have read and understand the above Yes / No (circle)	
Forename	Surname
Signature	Date

Appendix G

Follow up Interviews with ARKWORK Workshop Participants June - July 2019

Questions

- Q1. What is your opinion on design method and tools adopted?
- Q2. Did you learn something new (knowledge or skills) and if so, was it something that you can or will apply to their own work?
- Q3. If, how and to what extent you personally benefited from your participation?

Themes

1. **EFFICACY OF PD PROCESS:**
Participants' comments on what they perceived to be the strengths of the collaborative design approach adopted during the workshop.
2. **EFFICACY OF DESIGN RESOURCES:**
Participants' comments on the design resources effectiveness in supporting the UX design process.
3. **FRUSTRATIONS:**
Participants' comments on issues within the workshop's structure, facilitation methods, design approach and resources that ultimately led to frustrations.
4. **GAINS:**
Participants' comments on what they gained from participating in the workshop, new outlooks on their own work and practices and what they learned from each other.
5. **ROLE OF FACILITATOR:**
Participants' comments on how the approach adopted by the facilitator of their group shaped the design process and ultimately affected their perceived benefits.

Theme 1

Reference 1

ANDRIANA

I think for two days the preparation was solid, so we could make the most out of it. In general, the preparation you did was really important to help us adjust and feel familiar with the rest of the group, which I think it's very important to produce and achieve a final outcome. The materials were very interesting and solid, as well as the instructions.

The whole process was very helpful for the facilitators as well. It was really interesting to be able to combine different methods to get new perspective. The cards were useful to get ideas for our personas and different elements of the project. I really like the idea to have people with different background on each group, all of us have different perspectives and this help to run things smoothly and I like that the facilitator respected that, so he gave us the same amount of opportunities to express our ideas individually and combine all of these ideas. I don't have something negative to say, but maybe have more time to meet each other before to get more familiar with the other participants.

Reference 2

COSTIS

I was very interested in the process and design methods and I think that there are issues that can't be resolved by just looking to what happened. I was really interested in seeing how this would work and I felt that the challenge was to steer people that are already diverse, that are from different background and experience, in such process in something that look like a common path in order to gain something that is based on reliable evidence, on a common set of rules. So, I think that our group receive gracefully the instructions for the process, but I'm not sure that didn't stifle possible creativity from participants and in many ways what we offered ourselves was as resources to solve the problem of the facilitator. It always takes some time to get familiar with each other, so maybe we spent an hour getting to know each other and it was very natural and reasonable within the process and maybe this is part of the learning, for people to be creative together they need to overcome issues of social capital and recognition of professional expertise. That was very fluid for us, there were interesting ideas on the table, and we liked the paper prototype approach, I think it works very well because it doesn't presume any kind of technical competence. My take on this is that we did perform well, the workshop worked well for us, I think it was driven very much by the performative task of producing the prototype. If there was more time, different conversation might have materialised and take place, on the other hand we were very much driven by the imperative of making it good and maybe better than the others. I think we used the cards to some extent in the beginning, but it was almost heuristic in a sense, we didn't really use them very much, but it doesn't mean that they weren't useful. It might be overloading the role of these cards because they are trying to play many different goals at the same time, so my feeling is that the real value comes from using these cards at a heuristic level, maybe a more open-ended approach as that might yield different results from different groups of people. It might be more chaotic on the other

hand. I think the value of the cards was that they made us focus on some other question rather than when we used them step by step. It was certainly a phase in the process, and that was how the facilitator structured the process so that's why it is such an important role, where we just brainstormed and exploring different ideas, discussing everybody's opinions and then there was this process of reinterpretation and that was driven by the needs of the client. So, in many ways, the instruments that drove this process were conversations and writing things down and making drawings. The time was not enough to make conceptual analysis and mapping. The dynamic in our group developed really well, there were different perspectives, it was a little hierarchical, but it is not just a matter of character but also because we were all under the pressure to finish the work. I think that we all enjoyed the debrief at the end with the presentations, but that was also a performance so maybe it would have been better to have some time for each group to debrief with the investigators (organisers) to talk about the process at that point and reflect on what the group did.

Reference 3

INGRIDA

I think everything for us was fine and I was really happy to be in that group. I don't know if you selected the participants, but I felt I was in the best group, because it was interesting to me as I have experienced how games are made. As for resources, amazingly so even if we were designing a digital game, I didn't open my computer. So, we used a lot of paper and colouring pens and it was very material and we talked a lot about how it would have looked like it the digital, but we were creating this (referring to the prototype) we didn't go as far as that. It was all very hands-on. I enjoyed the process very much, because the facilitator was really nice, knowledgeable and open minded. He was brainstorming the ideas and we were really happy to provide those ideas. It was a little bit like a creative brainstorming session, and we did really well as a team, because we were very different, but we found a common ground while working on the task. We were having fun during the process, maybe it was the idea that if you create a game you play also. For me everything was really fine.

Reference 4

IAN

I think that even if we didn't use the cards it was good to have them as a backup if we were to find ourselves not to know what to do it. It depended a lot on the facilitators, how the task was introduced and on what would be the purpose of the workshop as a

whole. So, of course it could have been done in many different ways, but I get that that was some kind of an experiment to introduce these processes in archaeology. Maybe it was a bit unclear, in a sense that we were kind of left out and it was up to the facilitators to decide where to go and what to do and we just had to accept that. I think our group worked really well and were surprisingly good at working together, with complementary expertise and competences. But then again, I think that what was really good is it that we achieved the game prototype at the end, but I was also kind of disturbed when Juan showed us the game he has done as a part of his PhD and it was fairly closed to what we were working on, so I suspected he was facilitating us quite a lot, in a sense that the process wasn't quite opened as it might have been. It might have been just my problem as I didn't get at the beginning a clear enough picture of what he wanted us to do, but I was under the impression that it was going to be a more open ended thing, whereas it turned out to be developing ideas he had about the game he design and I think he told us he got useful feedback to continue developing the game.

Reference 5

JUAN

It was a good experience actually. I am familiar with participatory design and the only thing is that the set of materials you developed was quite standard, in the sense that it's difficult to have something that works for every different project. I think we (facilitators) needed some sort of meeting before to coordinate things. My group was fantastic, we have a very good mix of different skills. I think that our conversation was more interesting than the prototype itself. All the discussions that you have while moving along are quite interesting. It was challenging for me to work with people from different disciplines as I am used to work with designers and developers so you kind of know what to expect from them. What we were trying to do there was to make definitions as we were moving along with things, by making we got actually some definitions. I find it quite interesting to work with archaeologists and historians and it is something I am interested in continuing doing, as I think there is a natural link between designers who make things and archaeologists. I find it easier for me to work with archaeologists, as there are similarities in the way we work.

Reference 6

MELIHA

The process is perfect, I found those cards really helpful in the beginning, but my group didn't use them much in the prototyping phase as we relied more on our own

experience. When I read the cards I realised we used all the suggestions, but we didn't read them. I have a suggestion: you always need a designer in each group.

Reference 7

MELIHA

I liked the storyboarding part, I knew about it, but I have never used it, so I learned something new. It is a nice way of thinking when you want to tell a story, it is a good tool and it was new for me to use it. We were really lucky in our group, because we had different expertise, it was a good combination for the development of personas. It is absolutely necessary to have a facilitator for this kind of activity, otherwise you can lose yourself, as the facilitators reinforce the process and converge after diverging.

Theme 2

Reference 1

ANDRIANA

I think for two days the preparation was solid, so we could make the most out of it. In general, the preparation you did was really important to help us adjust and feel familiar with the rest of the group, which I think it's very important to produce and achieve a final outcome. The materials were very interesting and solid, as well as the instructions. The whole process was very helpful for the facilitators as well. It was really interesting to be able to combine different methods to get new perspective. The cards were useful to get ideas for our personas and different elements of the project. I really like the idea to have people with different background on each group, all of us have different perspectives and this helps to run things smoothly and I like that the facilitator respected that, so he gave us the same amount of opportunities to express our ideas individually and combine all of these ideas. I don't have something negative to say, but maybe have more time to meet each other before to get more familiar with the other participants.

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reliable evidence, on a common set of rules. So, I think that our group received gracefully the instructions for the process, but I'm not sure that didn't stifle possible creativity from participants and in many ways what we offered ourselves was as resources to solve the problem of the facilitator. It always takes some time to get familiar with each other, so maybe we spent an hour getting to know each other and it was very natural and reasonable within the process and maybe this is part of the learning, for people to be creative together they need to overcome issues of social capital and recognition of professional expertise. That was very fluid for us, there were interesting ideas on the table, and we liked the paper prototype approach, I think it works very well because it doesn't presume any kind of technical competence. My take on this is that we did perform well, the workshop worked well for us, I think it was driven very much by the performative task of producing the prototype. If there was more time, different conversations might have materialised and take place, on the other hand we were very much driven by the imperative of making it good and maybe better than the others. I think we used the cards to some extent in the beginning, but it was almost heuristic in a sense, we didn't really use them very much, but it doesn't mean that they weren't useful. It might be overloading the role of these cards because they are trying to play many different goals at the same time, so my feeling is that the real value comes from using these cards at a heuristic level, maybe a more open-ended approach as that might yield different results from different groups of people. It might be more chaotic on the other hand. I think the value of the cards was that they made us focus on some other question rather than when we used them step by step. It was certainly a phase in the process, and that was how the facilitator structured the process so that's why it is such an important role, where we just brainstormed and exploring different ideas, discussing everybody's opinions and then there was this process of reinterpretation and that was driven by the needs of the client. So, in many ways, the instruments that drove this process were conversations and writing things down and making drawings. The time was not enough to make conceptual analysis and mapping. The dynamic on our group developed really well, there were different perspectives, it was a little hierarchical, but it is not just a matter of character but also because we were all under the pressure to finish the work. I think that we all enjoyed the debrief at the end with the presentations, but that was also a performance so maybe it would have been better to have some time for each group to debrief with the investigators (organisers) to talk about the process at that point and reflect on what the group did.

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JUAN

It was a good experience actually. I am familiar with participatory design and the only thing is that the set of materials you developed was quite standard, in the sense that it's difficult to have something that works for every different project.

Reference 5

JUDITH

We ended up not using the cards, even though they looked like they would have been more useful for me, personally, because especially given the context within which I work, I think having those as a sort of prompt on how to design things it would have proven been more useful for me [...] I think it was helpful having Juan there to guide us, but maybe he guided us more than we initially thought he was going to, but I think overall at the end we were happy to use papers, pens and scissors and we were quite creative in what we were doing.

Reference 6

MELIHA

I liked the storyboarding part, I knew about it, but I have never used it, so I learned something new. It is a nice way of thinking when you want to tell a story, it is a good tool and it was new for me to use it. We were really lucky in our group, because we had different expertise, it was a good combination for the development of personas. It is

absolutely necessary to have a facilitator for this kind of activity, otherwise you can lose yourself, as the facilitators reinforce the process and converge after diverging.

Theme 3

Reference 1

ANDRIANA

I have learned a lot of things. At the moment I am doing a master's degree in Interactive Design and unfortunately, I don't have the chance to fully apply what I am learning at my full-time job, as the digital libraries I have been working on are not big enough to have user testing. So, it was really useful for me to be able to practically apply the knowledge I learned. I have actually applied what I learned in my job after the workshop, because what we do is creating digital libraries, but we don't test them in advance. So, after I came back, I developed a low fidelity prototype and tested it with some of my colleagues and I also created personas about potential users of the virtual library and applied some evaluations methods like focus groups and interviews. It was very interesting because I work with a lot of academics and mentioned them that we needed some prototyping and user testing, but they thought we didn't have time nor resources and that it wasn't so useful, but in the past our digital libraries had problems and users were facing technical issues. So, after I came back, I told my colleagues that it was important that we adopted UX methods and they couldn't really understand the point until we tried, and they found it really useful and interesting to participate. It is very difficult when people don't understand the importance of UX in digital heritage, because they are thinking very academically, and they don't pay so much attention to the design. Now, I am learning how to use a software for creating high-fidelity prototypes and I have got inspired by the workshop to look into prototyping techniques and I did some research by myself, so now I am building a prototype for this new digital library we have been working on and I am so happy that we are slowly integrating these approaches in my work because now people can see how important it is to avoid future mistakes.

Reference 2

ANDRIANA

It was the first time for me attending a workshop, from a personal perspective it was very nice to see how I work in a group team and to hear from other participants' experiences and background. Also, it was really good for networking and you created a

very nice environment to work. I liked the idea that Group 3 did a field trip, maybe it would be nice in a future event to have projects where participants can go to real spaces.

Reference 3

COSTIS

I think it gave me the opportunity to think again on how to integrate some ideas about users' interests, using the personas methodology, within scenarios for user interaction. We used these notions in our group, I was reflecting we can better develop a proper interaction model with different personas and I think to our extent our paper prototype storyboarding helped a little and I would like to more of that in the media course if I will teach next year.

Reference 4

INGRIDA

Yes, I guess every workshop or event you participate actively makes you smarter and more of an expert. I don't know how you have done that, but congratulations. It really worked, as the skills in our group were so complementary, we were all contributing in our own way. I only knew two members in my group, but the funny thing is that I tend to talk more to the people I don't know. It worked really well for our group, it was well balanced. I think he (the facilitator) was really great at what he had done and having in mind the time pressure we would have never been able to create a digital game from scratch, but he knew that, and I think we did the best we could and he also benefited from our brainstorming session. So, I think he also got some good ideas for his work and he was kind to show us how the product could have looked like. I haven't thought about the workshop as an experiment, I didn't feel like it was, everything was so natural and genuine. I was just enjoying the process.

Reference 5

IAN

I was thinking quite a lot about that after the workshop, because I had the feeling that I learned quite a lot, but I can't point directly at what that could be. what I might have learned, even though it wasn't entirely new to me, it was not to expect much about the participants' expertise and keep it really open. Let people to take the roles that they are good at. I will be working in groups with multidisciplinary teams and so yes, I will do it definitely. We didn't kind of follow the approach we were supposed to be following, so I'm not quite sure, we didn't really work with the approach and tools you provided us as

it was described. I didn't much learn about the participatory approach, so I am probably going for some of it but maybe with a higher level of abstraction.

Reference 6

IAN

It tends to be productive and useful, as we had the chance to focus on something different from what we usually do in our everyday life, working together with new people that's intellectually rewarding and it's beneficial for thinking. I've been thinking about design based approaches and how to relate it to the research I'm doing, so in that sense I think I got something it helped thinking forward on how to integrate design-based approaches in my own work.

Reference 7

JUAN

I think there is an overlapping, both tend to do design and understand methodologies. It was interesting for me to see professionals from creative background working with archaeologists in the same room, I found that illuminating. I find it easier to work with archaeologists, so the workshop led me toward the conclusion that there is something between interdisciplinarity and those fields that makes things easier. The workshop gave me the opportunity to test a framework for game developments that was part of my PhD research, so it was quite interesting and I think it worked quite well.

Reference 8

JUAN

In terms of networking yes, I have been in touch with people in my group and we are planning collaborations for the future. I think we missed the opportunity to engage with other groups and to have meaningful discussions with them. In the last bit there was a "show and tell", but that instance was really short, and I wanted the opportunity to talk more with other participants about their projects. A good thing about these events is that it triggers conversation that you normally wouldn't have on a more theoretical level. If you get things right, you can get some interesting theories that you can apply to other contexts and that what it makes these processes so powerful. I think that was the weakest part of the workshop: we focused on our work, has little bit of show and tell and that was it. Also, during these workshops there is a tendency to find solutions immediately, so we should try to lead people to think more abstractly. Also, it would be great to have other people come in and test prototypes, but in that case, you need something workable.

Reference 9

JUDITH

It's quite difficult to see how I could implement it in the journal, but I could definitely see that if I were to implement a project I would actually try and get more people at the early stage to collaborate and design. There is a little bit of collaboration that happened between myself and the authors but it's always virtual. I think if there were new projects coming in, I would definitely advocate for more that kind of brainstorming because I can see it can lead to very interesting things and sometimes go to directions that you don't necessarily expect. Maybe people need to understand more about the role they like to play to get the best out of the project they are face with. Because I was very happy to be the person that flip through the book to look for the individual archaeological evidence to back up the ideas that we had, whereas there were other people that were very much happy to help with the game structure. I suppose that would be a consideration for a project if you were starting anew, to understand the kind of roles you require people to play and therefore select or encourage people to play those roles because you know they can contribute the best if they play them. The facilitator it's a hard role to play especially if they don't know the people in advance and the role they are most comfortable with. I need to set parameters and structures, but you can't force creativity. We had really mix of people on our group, it was just a proper mix of people and we had fun. I think it really worked because we were different characters. Our dynamic worked quite well. maybe it would be interesting to go back as a group and tackle one of the other tasks (project). It felt that in our case a lot of conversation had gone before we started, whereas it was clear that some of the other groups were starting from scratch, whereas we were more focused.

Reference 10

JUDITH

I've made some friends and that was nice, I had a proper catch up with Gavin so wad a bit of a long talk about potential outputs for the journal. It has opened my eyes on other potential way of working, even though given the nature of my job is hard to see how I can implement those. It has opened my eyes to some of the tools that I could bring to projects in the future and I suppose the need to ultimately a lot of more planning even if you want the things to be spontaneous. It actually still needs someone with a vision to set those things in advance so people can take the most out of the opportunity. I definitely would encourage other people to do.

Reference 11

MELIHA

I liked the storyboarding part, I knew about it, but I have never used it, so I learned something new. It is a nice way of thinking when you want to tell a story, it is a good tool and it was new for me to use it. We were really lucky in our group, because we had different expertise, it was a good combination for the development of personas. It is absolutely necessary to have a facilitator for this kind of activity, otherwise you can lose yourself, as the facilitators reinforce the process and converge after diverging.

Reference 12

MELIHA

For me there was a great learning about archaeology and knowledge management. Some parts of our work were too detailed though, I would have liked more freedom, less constraints in the cards. More time for the exchange of ideas within the divergent phase.

Reference 13

COSTIS

I think it gave me the opportunity to think again on how to integrate some ideas about users' interests, using the personas methodology, within scenarios for user interaction. We used these notions in our group, I was reflecting we can better develop a proper interaction model with different personas and I think to our extent our paper prototype storyboarding helped a little and I would like to more of that in the media course if I will teach next year.

Reference 14

COSTIS

I liked the people and the process and for me it was good because it gave me the opportunity to talk to practitioners in cultural heritage about something that is central in a way "how does this play on the construction of knowledge". For me it was interesting as an exercise of how people dealt with these concepts, so this open for me the perspective of how I should been working more on this kind of knowledge because of my interest of digital curations in the wild and what happens after the scholarly stage in which knowledge is constructed, when we put it out there, So, for me it was a big take on the value of such thing and such interaction that might bring subject specialists with people how might see the whole thing from a different perspectives. This kind of workshop could be different if it involves local knowledge and people that are like

regular users, we might learn different things from them, and the process might open in different directions. I am interested to find out about the process itself and what kind of staff this yields because you allowed different dynamics to evolve in different groups.

Reference 15

INGRIDA

Yes, I definitely learned something. Firstly, about games and I was really interested as I have never thought about how they are created. I remember asking the facilitator a lot of questions about how they are created, and he was really kind to show us about that. I really don't know if and how I will apply that to my work, but now I feel I am more knowledgeable on the subject and technicalities of it, so if I am going to a conference or a workshop whose topic is fictional games, I would definitely have something to say. I probably might follow the way you structured the event if I have to organise one.

Reference 16

IAN

It tends to be productive and useful, as we had the chance to focus on something different from what we usually do in our everyday life, working together with new people that's intellectually rewarding and it's beneficial for thinking. I've been thinking about design based approaches and how to relate it to the research I'm doing, so in that sense I think I got something it helped thinking forward on how to integrate design-based approaches in my own work.

Theme 4

Reference 1

ANDRIANA

I think for two days the preparation was solid, so we could make the most out of it. In general, the preparation you did was really important to help us adjust and feel familiar with the rest of the group, which I think it's very important to produce and achieve a final outcome. The materials were very interesting and solid, as well as the instructions. The whole process was very helpful for the facilitators as well. It was really interesting to be able to combine different methods to get new perspective. The cards were useful to get ideas for our personas and different elements of the project. I really like the idea to have people with different background on each group, all of us have different perspectives and this helps to run things smoothly and I like that the facilitator respected that, so he gave us the same amount of opportunities to express our ideas individually and combine all of these ideas. I don't have something negative to say, but

maybe have more time to meet each other before to get more familiar with the other participants.

Reference 2

COSTIS

I was very interested in the process and design methods and I think that there are issues that can't be resolved by just looking to what happened. I was really interested in seeing how this would work and I felt that the challenge was to steer people that are already diverse, that are from different background and experience, in such a process is something that looks like a common path in order to gain something that is based on reliable evidence, on a common set of rules. So, I think that our group received gracefully the instructions for the process, but I'm not sure that didn't stifle possible creativity from participants and in many ways what we offered ourselves was as resources to solve the problem of the facilitator. It always takes some time to get familiar with each other, so maybe we spent an hour getting to know each other and it was very natural and reasonable within the process and maybe this is part of the learning, for people to be creative together they need to overcome issues of social capital and recognition of professional expertise. That was very fluid for us, there were interesting ideas on the table, and we liked the paper prototype approach, I think it works very well because it doesn't presume any kind of technical competence. My take on this is that we did perform well, the workshop worked well for us, I think it was driven very much by the performative task of producing the prototype. If there was more time, different conversations might have materialised and take place, on the other hand we were very much driven by the imperative of making it good and maybe better than the others. I think we used the cards to some extent in the beginning, but it was almost heuristic in a sense, we didn't really use them very much, but it doesn't mean that they weren't useful. It might be overloading the role of these cards because they are trying to play many different goals at the same time, so my feeling is that the real value comes from using these cards at a heuristic level, maybe a more open-ended approach as that might yield different results from different groups of people. It might be more chaotic on the other hand. I think the value of the cards was that they made us focus on some other question rather than when we used them step by step. It was certainly a phase in the process, and that was how the facilitator structured the process so that's why it is such an important role, where we just brainstormed and exploring different ideas, discussing everybody's opinions and then there was this process of reinterpretation and that was driven by the needs of the client. So, in many ways, the

instruments that drove this process were conversations and writing things down and making drawings. The time was not enough to make conceptual analysis and mapping. The dynamic on our group developed really well, there were different perspectives, it was a little hierarchical, but it is not just a matter of character but also because we were all under the pressure to finish the work. I think that we all enjoyed the debrief at the end with the presentations, but that was also a performance so maybe it would have been better to have some time for each group to debrief with the investigators (organisers) to talk about the process at that point and reflect on what the group did.

Reference 3

IAN

I think that even if we didn't use the cards it was good to have them as a backup if we were to find ourselves not to know what to do it. It depended a lot on the facilitators, how the task was introduced and on what would be the purpose of the workshop as a whole. So, of course it could have been done in many different ways, but I get that that was some kind of an experiment to introduce these processes in archaeology. Maybe it was a bit unclear, in a sense that we were kind of left out and it was up to the facilitators to decide where to go and what to do and we just had to accept that. I think our group worked really well and were surprisingly good at working together, with complementary expertise and competences. But then again, I think that what was really good is it that we achieved the game prototype at the end, but I was also kind of disturbed when Juan showed us the game he has done as a part of his PhD and it was fairly closed to what we were working on, so I suspected he was facilitating us quite a lot, in a sense that the process wasn't quite opened as it might have been. It might have been just my problem as I didn't get at the beginning a clear enough picture of what he wanted us to do, but I was under the impression that it was going to be a more open ended thing, whereas it turned out to be developing ideas he had about the game he design and I think he told us he got useful feedback to continue developing the game.

Reference 4

IAN

I was thinking quite a lot about that after the workshop, because I had the feeling that I learned quite a lot, but I can't point directly at what that could be. what I might have learned, even though it wasn't entirely new to me, it was not to expect much about the participants' expertise and keep it really open. Let people to take the roles that they are good at. I will be working in groups with multidisciplinary teams and so yes, I will do it

definitely. We didn't kind of follow the approach we were supposed to be following, so I'm not quite sure, we didn't really work with the approach and tools you provided us as it was described. I didn't much learn about the participatory approach, so I am probably going for some of it but maybe with a higher level of abstraction.

Reference 5

IAN

Maybe a more steered approach could be considered, just to see what happen. Also, to certain extent I was disappointed with some of the ideas, both from our group and the others, they weren't as wild as they could have been, not that much out of the box. In our group there were moments when we were wilder and moments when we were focused on deliver something and making things work and you need this kind of escalation between being realistic and being visionary, but I guess somebody should have encouraged us to be more creative. Both from the facilitators and the organisers.

Reference 6

JUAN

It was a good experience actually. I am familiar with participatory design and the only thing is that the set of materials you developed was quite standard, in the sense that it's difficult to have something that works for every different project. I think we (facilitators) needed some sort of meeting before to coordinate things. My group was fantastic, we have a very good mix of different skills. I think that our conversation was more interesting than the prototype itself. All the discussions that you have while moving along are quite interesting. It was challenging for me to work with people from different disciplines as I am used to work with designers and developers so you kind of know what to expect from them. What we were trying to do there was to make definitions as we were moving along with things, by making we got actually some definitions. I find it quite interesting to work with archaeologists and historians and it is something I am interested in continuing doing, as I think there is a natural link between designers who make things and archaeologists. I find it easier for me to work with archaeologists, as three are similarities in the way we work.

Reference 7

JUAN

In terms of networking yes, I have been in touch with people in my group and we are planning collaborations for the future. I think we missed the opportunity to engage with other groups and to have meaningful discussions with them. In the last bit there was a

"show and tell", but that instance was really short, and I wanted the opportunity to talk more with other participants about their projects. A good thing about these events is that triggers conversation that you normally wouldn't have on a more theoretical level. If you get things right, you can get some interesting theories that you can apply to other contexts and that what it makes these processes so powerful. I think that was the weakest part of the workshop: we focused on our work, have little bit of show and tell and that was it. Also, during these workshops there is a tendency to find solutions immediately, so we should try to lead people to think more abstractly. Also, it would be great to have other people come in and test prototypes, but in that case, you need something workable.

Reference 8

JUDITH

We ended up not using the cards, even though they looked like they would have been more useful for me, personally, because especially given the context within which I work, I think having those as a sort of prompt on how to design things it would have proven been more useful for me [...] I think it was helpful having Juan there to guide us, but maybe he guided us more than we initially thought he was going to, but I think overall at the end we were happy to use papers, pens and scissors and we were quite creative in what we were doing. I don't think that there was something we found not useful, the task was really clear. I got the feeling that for the other groups that was more nebulous. It might have been more useful to have more time to discuss each project/output at the end and even at the start it would have been nice to understand a little bit more what the other groups were doing, because I was aware they were being directed in a very different way from our group. I wanted to know more about what they were doing and some of the questions they were trying to answer. Just so were clear on what direction they were going and what they were trying to achieve. And I know someone felt they achieved more than other groups, but I think that was just the nature of their projects. I wonder afterwards if it would have benefited to have one person moved across each group so that to have a better flow and pushing and pulling from other groups throughout the day. I don't know how that would have worked in practice, but I think it would have meant more conversations about some of the ideas that other groups were working on. I might have been useful to have a brief, I'm thinking if I was in one of the other groups, more of a structure for the other groups on what we were supposed to achieve. Staff for the day itself, a little bit more structure at the beginning. It was really useful to have facilitators there. I can't think of anything that was missing

or lacking. I think the main thing that could have been better was actually to have been give more structured time, so that each group could have presented properly as opposed to people just wandering around the table and having a look, but you don't know what you are looking at if you're seeing scribble and some notes and something made of paper. So, it would have been nice to have an actual pitch by the group, I know we had that, but it felt it wasn't wrapping up some of the ideas, or maybe have a discussion about why we did something the way we did and how we reached some decisions.

Reference 9

MELIHA

For me there was a great learning about archaeology and knowledge management. Some parts of our work were too detailed though, I would have liked more freedom, less constraints in the cards. More time for the exchange of ideas within the divergent phase.

Reference 10

INGRIDA

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Theme 5

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Reference 6

MELIHA

I liked the storyboarding part, I knew about it, but I have never used it, so I learned something new. It is a nice way of thinking when you want to tell a story, it is a good tool and it was new for me to use it. We were really lucky in our group, because we had different expertise, it was a good combination for the development of personas. It is absolutely necessary to have a facilitator for this kind of activity, otherwise you can lose yourself, as the facilitators reinforce the process and converge after diverging.

Transcripts

INTERVIEWER:

What is your opinion on design method and tools adopted during the workshop?

ANDRIANA

I think for two days the preparation was solid, so we could make the most out of it. In general, the preparation you did was really important to help us adjust and feel familiar with the rest of the group, which I think it's very important to produce and achieve a final outcome. The materials were very interesting and solid, as well as the instructions. The whole process was very helpful for the facilitators as well. It was really interesting to be able to combine different methods to get new perspective. The cards were useful to get ideas for our personas and different elements of the project. I really like the idea to have people with different background on each group, all of us have different perspectives and this helps to run things smoothly and I like that the facilitator respected that, so he gave us the same amount of opportunities to express our ideas individually and combine all of these ideas. I don't have something negative to say, but maybe have more time to meet each other before to get more familiar with the other participants.

INTERVIEWER:

Did you learn something new (knowledge or skills) and if so, was it something you can/will apply to your own work?

ANDRIANA

I have learned a lot of things. At the moment I am doing a master's degree in Interactive Design and unfortunately, I don't have the chance to fully apply what I am learning at my full-time job, as the digital libraries I have been working on are not big enough to have user testing. So, it was really useful for me to be able to practically apply the knowledge I learned. I have actually applied what I learned in my job after the workshop, because what we do is creating digital libraries, but we don't test them in advance. So, after I came back, I developed a low fidelity prototype and test it with some of my colleagues and I also created personas about potential users of the virtual library and apply some evaluations methods like focus groups and interviews. It was very interesting because I work with a lot of academics and mentioned them that we needed to some prototyping and user testing, but they thought we didn't have time not resources and that it wasn't so useful, but in the past our digital libraries had problems and users were facing technical issues. So, after I came back, I told my colleagues that it was important that we adopted UX methods and they couldn't really understand the

point until we tried, and they found it really useful and interesting to participate. It is very difficult when people don't understand the importance of UX in digital heritage, because they are thinking very academically, and they don't pay so much attention to the design. Now, I am learning how to use a software for creating high-fidelity prototypes and I have got inspired by the workshop to look into prototyping techniques and I did some research by myself, so now I am building a prototype for this new digital library we have been working on and I am so happy that we are slowly integrating these approaches in my work because now people can see how important it is to avoid future mistakes.

INTERVIEWER:

If, how and to what extent you personally benefited from your participation and how important personal benefits were to?

ANDRIANA

It was the first time for me attending a workshop, from a personal perspective it was very nice to see how I work in a group team and to hear from other participants' experiences and background. Also, it was really good for networking and you created a very nice environment to work. I liked the idea that Group 3 did a field trip, maybe it would be nice in a future event to have projects where participants can go to real spaces.

INTERVIEWER:

What is your opinion on design method and tools adopted during the workshop?

COSTIS

I was very interested in the process and design methods and I think that there are issues that can't be resolved by just looking to what happened. I was really interested in seeing how this would work and I felt that the challenge was to steer people that are already diverse, that are from different background and experience, in such a process is something that looks like a common path in order to gain something that is based on reliable evidence, on a common set of rules. So, I think that our group received gracefully the instructions for the process, but I'm not sure that didn't stifle possible creativity from participants and in many ways what we offered ourselves was as resources to solve the problem of the facilitator. It always takes some time to get familiar with each other, so maybe we spent an hour getting to know each other and it was very natural and reasonable within the process and maybe this is part of the learning, for people to be creative together they need to overcome issues of social capital and recognition of professional expertise. That was very fluid for us, there were

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INTERVIEWER:

Did you learn something new (knowledge or skills) and if so, was it something you can/will apply to your own work?

COSTIS

I think it gave me the opportunity to think again on how to integrate some ideas about users' interests, using the personas methodology, within scenarios for user interaction. We used these notions in our group, I was reflecting we can better develop a proper interaction model with different personas and I think to our extent our paper prototype

storyboarding helped a little and I would like to more of that in the media course if I will teach next year.

INTERVIEWER:

If, how and to what extent you personally benefited from your participation and how important personal benefits were to?

COSTIS

I liked the people and the process and for me it was good because it gave me the opportunity to talk to practitioners in cultural heritage about something that is central in a way "how does this play on the construction of knowledge". For me it was interesting as an exercise of how people dealt with these concepts, so this open for me the perspective of how I should been working more on this kind of knowledge because of my interest of digital curations in the wild and what happens after the scholarly stage in which knowledge is constructed, when we put it out there, So, for me it was a big take on the value of such thing and such interaction that might bring subject specialists with people how might see the whole thing from a different perspectives. This kind of workshop could be different if it involves local knowledge and people that are like regular users, we might learn different things from them, and the process might open in different directions. I am interested to find out about the process itself and what kind of staff this yields because you allowed different dynamics to evolve in different groups.

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I think everything for us was fine and I was really happy to be in that group. I don't know you selected the participants, but I felt I was in the best group, because it was interesting to me as I have experienced how games are made. As for resources, amazingly so even if we were designing a digital game, I didn't open my computer. So, we used a lot of paper and colouring pens and it was very material and we talked a lot about how it would have looked like in the digital, but we were creating this (referring to the prototype) we didn't go as far as that. It was all very hands-on. I enjoyed the process very much, because the facilitator was really nice, knowledgeable and open minded. He was brainstorming the ideas and we were really happy to provide those ideas. It was a little bit like a creative brainstorming session, and we did really well as a team, because we were very different, but we found a common ground while working

on the task. We were having fun during the process, maybe it was the idea that if you create a game you play also. For me everything was really fine.

INTERVIEWER:

Did you learn something new (knowledge or skills) and if so, was it something you can/will apply to your own work?

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Yes, I definitely learned something. Firstly, about games and I was really interested as I have never thought about how they are created. I remember asking the facilitator a lot of questions about how they are created, and he was really kind to show us about that. I really don't know if and how I will apply that to my work, but now I feel I am more knowledgeable on the subject and technicalities of it, so if I am going to a conference or a workshop whose topic is fictional games, I would definitely have something to say. I probably might follow the way you structured the event if I have to organise one.

INTERVIEWER:

If, how and to what extent you personally benefited from your participation and how important personal benefits were to?

INGRIDA

Yes, I guess every workshop or event you participate actively makes you smarter and more an expert. I don't know how you have done that, but congratulations. It really worked, as the skills in our group were so complementary, we were all contributing in our own way. I only knew two members in my group, but the funny thing is that I tend to talk more to the people I don't know. It worked really well for our group, it was well balanced. I think he (the facilitator) was really great at what he had done and having in mind the time pressure we would have never been able to create a digital game from scratch, but he knew that, and I think we did the best we could and he also benefited from our brainstorming session. So, I think he also got some good ideas for his work and he was kind to show us how the product could have looked like. I haven't thought about the workshop as an experiment, I didn't feel like it was, everything was so natural and genuine. I was just enjoying the process.

INTERVIEWER:

What is your opinion on design method and tools adopted during the workshop?

IAN

I think that even if we didn't use the cards it was good to have them as a backup if we were to find ourselves not to know what to do it. It depended a lot on the facilitators, how the task was introduced and on what would be the purpose of the workshop as a whole. So, of course it could have been done in many different ways, but I get that that was some kind of an experiment to introduce these processes in archaeology. Maybe it was a bit unclear, in a sense that we were kind of left out and it was up to the facilitators to decide where to go and what to do and we just had to accept that. I think our group worked really well and were surprisingly good at working together, with complementary expertise and competences. But then again, I think that what was really good is it that we achieved the game prototype at the end, but I was also kind of disturbed when Juan showed us the game he has done as a part of his PhD and it was fairly closed to what we were working on, so I suspected he was facilitating us quite a lot, in a sense that the process wasn't quite opened as it might have been. It might have been just my problem as I didn't get at the beginning a clear enough picture of what he wanted us to do, but I was under the impression that it was going to be a more open ended thing, whereas it turned out to be developing ideas he had about the game he design and I think he told us he got useful feedback to continue developing the game.

INTERVIEWER:

Did you learn something new (knowledge or skills) and if so, was it something you can/will apply to your own work?

IAN

I was thinking quite a lot about that after the workshop, because I had the feeling that I learned quite a lot, but I can't point directly at what that could be. what I might have learned, even though it wasn't entirely new to me, it was not to expect much about the participants' expertise and keep it really open. Let people to take the roles that they are good at. I will be working in groups with multidisciplinary teams and so yes, I will do it definitely. We didn't kind of follow the approach we were supposed to be following, so I'm not quite sure, we didn't really work with the approach and tools you provided us as it was described. I didn't much learn about the participatory approach, so I am probably going for some of it but maybe with a higher level of abstraction.

INTERVIEWER:

If, how and to what extent you personally benefited from your participation and how important personal benefits were to?

IAN

It tends to be productive and useful, as we had the chance to focus on something different from what we usually do in our everyday life, working together with new people that's intellectually rewarding and it's beneficial for thinking. I've been thinking about design based approaches and how to relate it to the research I'm doing, so in that sense I think I got something it helped thinking forward on how to integrate design-based approaches in my own work.

IAN

Maybe a more steered approach could be considered, just to see what happens. Also, to certain extent I was disappointed with some of the ideas, both from our group and the others, they weren't as wild as they could have been, not that much out of the box. In our group there were moments when we were wilder and moments when we were focused on deliver something and making things work and you need this kind of escalation between being realistic and being visionary, but I guess somebody should have encouraged us to be more creative. Both from the facilitators and the organisers.

INTERVIEWER:

What is your opinion on design method and tools adopted during the workshop?

JUAN

It was a good experience actually. I am familiar with participatory design and the only thing is that the set of materials you developed was quite standard, in the sense that it's difficult to have something that works for every different project. I think we (facilitators) needed some sort of meeting before to coordinate things. My group was fantastic, we have a very good mix of different skills. I think that our conversation was more interesting than the prototype itself. All the discussions that you have while moving along are quite interesting. It was challenging for me to work with people from different disciplines as I am used to work with designers and developers so you kind of know what to expect from them. What we were trying to do there was to make definitions as we were moving along with things, by making we got actually some definitions. I find it quite interesting to work with archaeologists and historians and it is something I am interested in continuing doing, as I think there is a natural link between designer who make things and archaeologists. I find easier for me to work with archaeologists, as there are similarities in the way we work.

INTERVIEWER:

Did you learn something new (knowledge or skills) and if so, was it something you can/will apply to your own work?

JUAN

I think there is an overlapping, both tend to do design and understand methodologies. It was interesting for me to see professionals from creative background working with archaeologists in the same room, I found that illuminating. I find it easier to work with archaeologists, so the workshop led me toward the conclusion that there is something between interdisciplinarity and those fields that makes things easier. The workshop gave me the opportunity to test a framework for game developments that was part of my PhD research, so it was quite interesting and I think it worked quite well.

INTERVIEWER:

If, how and to what extent you personally benefited from your participation and how important personal benefits were to?

JUAN

In terms of networking yes, I have been in touch with people in my group and we are planning collaborations for the future. I think we missed the opportunity to engage with other groups and to have meaningful discussions with them. In the last bit there was a "show and tell", but that instance was really short, and I wanted the opportunity to talk more with other participants about their projects. A good thing about these events is that triggers conversation that you normally wouldn't have on a more theoretical level. If you get things right, you can get some interesting theories that you can apply to other contexts and that what it makes these processes so powerful. I think that was the weakest part of the workshop: we focused on our work, have little bit of show and tell and that was it. Also, during these workshops there is a tendency to find solutions immediately, so we should try to lead people to think more abstractly. Also, it would be great to have other people come in and test prototypes, but in that case, you need something workable.

INTERVIEWER:

What is your opinion on design method and tools adopted during the workshop?

JUDITH

We ended up not using the cards, even though they looked like they would have been more useful for me, personally, because especially given the context within which I work, I think having those as a sort of prompt on how to design things it would have

proven been more useful for me [...] I think it was helpful having Juan there to guide us, but maybe he guided us more than we initially thought he was going to, but I think overall at the end we were happy to use papers, pens and scissors and we were quite creative in what we were doing. I don't think that there was something we found not useful, the task was really clear. I got the feeling that for the other groups that was more nebulous. It might have been more useful to have more time to discuss each project/output at the end and even at the start it would have been nice to understand a little bit more what the other groups were doing, because I was aware they were being directed in a very different way from our group. I wanted to know more about what they were doing and some of the questions they were trying to answer. Just so were clear on what direction they were going and what they were trying to achieve. And I know someone felt they achieved more than other groups, but I think that was just the nature of their projects. I wonder afterwards if it would have benefited to have one person moved across each group so that to have a better flow and pushing and pulling from other groups throughout the day. I don't know how that would have worked in practice, but I think it would have meant more conversations about some of the ideas that other groups were working on. I might have been useful to have a brief, I'm thinking if I was in one of the other groups, more of a structure for the other groups on what we were supposed to achieve. Staff for the day itself, a little bit more structure at the beginning. It was really useful to have facilitators there. I can't think of anything that was missing or lacking. I think the main thing that could have been better was actually to have been give more structured time, so that each group could have presented properly as opposed to people just wandering around the table and having a look, but you don't know what you are looking at if you're seeing scribble and some notes and something made of paper. So, it would have been nice to have an actual pitch by the group, I know we had that, but it felt it wasn't wrapping up some of the ideas, or maybe have a discussion about why we did something the way we did and how we reached some decisions.

INTERVIEWER:

Did you learn something new (knowledge or skills) and if so, was it something you can/will apply to your own work?

JUDITH

It's quite difficult to see how I could implement it in the journal, but I could definitely see that if I were to implement a project I would actually try and get more people at the early stage to collaborate and design. There is a little bit of collaboration that happened

between myself and the authors but it's always virtual. I think if there were new projects coming in, I would definitely advocate for more that kind of brainstorming because I can see it can lead to very interesting things and sometimes go to directions that you don't necessarily expect. Maybe people need to understand more about the role they like to play to get the best out of the project they are faced with. Because I was very happy to be the person that flip through the book to look for the individual archaeological evidence to back up the ideas that we had, whereas there were other people that were very much happy to help with the game structure. I suppose that would be a consideration for a project if you were starting anew, to understand the kind of roles you require people to play and therefore select or encourage people to play those roles because you know they can contribute the best if they play them. The facilitator it's a hard role to play especially if they don't know the people in advance and the role, they are most comfortable with. I need to set parameters and structures, but you can't force creativity. We had a real mix of people on our group, it was just a proper mix of people and we had fun. I think it really worked because we were different characters. Our dynamic worked quite well. maybe it would be interesting to go back as a group and tackle one of the other tasks (project). It felt that in our case a lot of conversation had gone before we started, whereas it was clear that some of the other groups were starting from scratch, whereas we were more focused.

INTERVIEWER:

If, how and to what extent you personally benefited from your participation and how important personal benefits were to?

JUDITH

I've made some friends and that was nice, I had a proper catch up with Gavin so wad a bit of a long talk about potential outputs for the journal. It has opened my eyes on other potential ways of working, even though given the nature of my job it is hard to see how I can implement those. It has opened my eyes to some of the tools that I could bring to projects in the future and I suppose the need to ultimately a lot of more planning even if you want the things to be spontaneous. It actually still needs someone with a vision to set those things in advance so people can take the most out of the opportunity. I definitely would encourage other people to do.

INTERVIEWER:

What is your opinion on design method and tools adopted during the workshop?

MELIHA

The process is perfect, I found those cards really helpful in the beginning, but my group didn't use them much in the prototyping phase as we relied more on our own experience. When I read the cards I realised we used all the suggestions, but we didn't read them. I have a suggestion: you always need a designer in each group.

INTERVIEWER:

Did you learn something new (knowledge or skills) and if so, was it something you can/will apply to your own work?

MELIHA

I liked the storyboarding part, I knew about it, but I have never used it, so I learned something new. It is a nice way of thinking when you want to tell a story, it is a good tool and it was new for me to use it. We were really lucky in our group, because we had different expertise, it was a good combination for the development of personas. It is absolutely necessary to have a facilitator for this kind of activity, otherwise you can lose yourself, as the facilitators reinforce the process and converge after diverging.

INTERVIEWER:

If, how and to what extent you personally benefited from your participation and how important personal benefits were to?

MELIHA

For me there was a great learning about archaeology and knowledge management. Some parts of our work were too detailed though, I would have liked more freedom, less constraints in the cards. More time for the exchange of ideas within the divergent phase.

Glossary

Augmented Reality (AR)	An enhanced version of reality created by the use of technology, where digital information is overlaid on something viewed through a device, such as a smartphone camera.
Computer Supported Cooperative Work (CSCW)	Community of system builders and behavioural researchers whose work focuses on how technologies facilitate or change collaborative activities.
Graphic User Interface (GUI)	A system of interactive visual components for computer software. A GUI allows users to interact with electronic devices by means of visual representation.
Human Computer Interaction (HCI)	Multidisciplinary field of study that focuses on the interaction between Humans and computers and the design of computer technology.
Information and Communication Technology (ICT)	Umbrella term including any communication device or application and all the services associated with them.
Participatory Design (PD)	An approach to design where all stakeholders are involved in the design process and given the role of co-creators.
User Centred Design (UCD)	An iterative design process that focuses on putting users and their needs at the center of a product design and development.
User Interface (UI)	A method or means by which users interact with a computer system

User Experience (UX)	The overall experience of a person using and/or interacting with a product, service or system.
User Experience Design (UXD)	The design process aimed at creating a product, service or system that provides a meaningful experience to users.
Virtual Reality (VR)	A computer-generated three-dimensional environment that can be explored and interacted with by a person through a special equipment, such as a VR headset.
Virtual Museum (VM)	A museum that houses collections and exhibits in a digital format and displays them online.

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