



Alma Mater Studiorum

Master's degree in Digital Humanities and Digital Knowledge

Course *Digital Heritage and Multimedia* 2024/2025

Prof. S. Pescarin & C. Tartatini

Isis initiation **A-Ritual**:
An AR experience for Pompeii's
Temple of Isis and Naples Museum
Design Brief - Group Seven

Abderrahmane Afrit
Chiara Picardi
Farideh Sousani
Cecilia Vesci

1. Introduction

The museum and its content/collections

Pompeii is one of the world's most famous archaeological sites, offering a rare glimpse into daily life in ancient Rome. Among its notable landmarks is the Temple of Isis, a unique fusion of Roman and Egyptian religious culture. This temple stands out not only for its architectural significance but also for the important cultural and artistic heritage it represents. While the temple structure remains in Pompeii, many of its original artworks and frescos are preserved in the National Archaeological Museum of Naples. These decorative and ritual elements, once an integral part of the temple, are now essential resources for understanding the full historical and cultural context of the site.

The location and its map/plan

The archaeological site of Pompeii is located in the Campania region of southern Italy, near the city of Naples. Situated at the foot of Mount Vesuvius, the ancient Roman city was buried under volcanic ash during the eruption in 79 C.E. This natural disaster remarkably preserved its buildings, streets, and artifacts, allowing later generations a rare opportunity to explore a Roman city frozen in time. Approximately 25 kilometers northwest lies the National Archaeological Museum of Naples. The museum houses a significant collection of objects excavated from Pompeii and surrounding sites, including original frescos, sculptures, and ritual artifacts. These objects offer an invaluable extension to the site itself, providing deeper insight into its art, religion, and society.

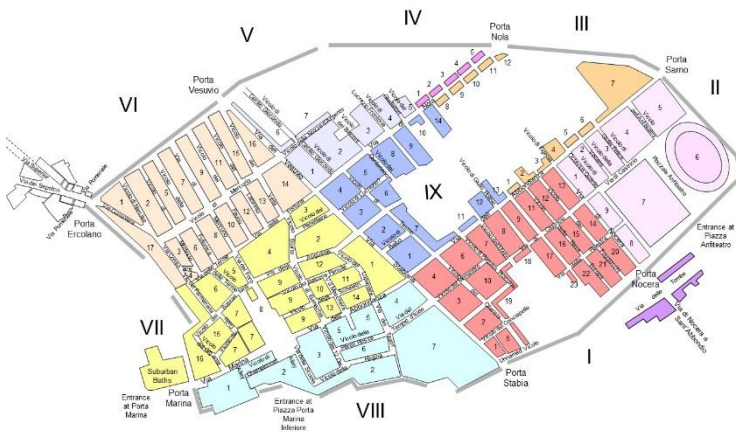


Figure 1: Pompeii Street view plan © di Jackie e Bob Dunn. Source: https://pompeiiinpictures.com/pompeiiinpictures/Plans/plan_streets_3.html

Institutional Goal

The goal is to **improve the visitor experience** at Pompeii by **enhancing understanding** and engagement with the Temple of Isis. This involves reconnecting the site with its artifacts in the Naples museum and using digital tools to improve clarity, accessibility, and overall satisfaction. Through this approach, visitors are encouraged to explore the temple not just as a ruin, but as a once richly adorned sacred space with a living cultural and spiritual identity. Digital integration, along with careful interpretation, helps to bridge the physical separation between the temple and its original decorative elements, forming a more coherent and immersive experience.

Cognitive Goal

The aim is to help visitors **understand the Temple of Isis in its historical and cultural context** by using interpretive tools that link the temple structure with its original frescos and rituals, giving them a clearer picture of its role in Pompeian society. These tools highlight how the cult of Isis offered a spiritual refuge and social space for individuals often marginalized in Roman society, including women, freed people, and foreigners. By shedding light on these dynamics, the project contributes to a broader understanding of religion and identity in the ancient world.

Star Assets

One of the most significant must-see elements of Pompeii is the Temple of Isis, due to both its historical value and the artistic artifacts connected to it. While the temple itself remains at the archaeological site in Pompeii, many of its original decorative elements—such as the mythological frescos, ritual instruments, and statues—are now housed in the National Archaeological Museum of Naples. These items offer essential insight into the cultural fusion of Roman and Egyptian religious practices, as well as the unique appeal of the Isis cult to marginalized groups in Roman society. Their display in the museum preserves the artistic integrity of the temple's design and allows for a more complete interpretation of its original appearance and function.



Figure 2: VIII.7.28 Pompeii. December 2023. Looking south-west across temple court from entrance doorway. Photo courtesy of Miriam Colomer. Source: <https://pompeiiinpictures.com/pompeiiinpictures/R8/8%2007%2028%20p2.htm>

Figure 3: (starting from the left): Io (on the left, with horns) is welcomed in Egypt by Isis (sitting, holding a snake and with a crocodile at her feet). Io is carried by a river god, setting her down at Kanopus near Alexandria. Roman fresco from the temple of Isis in Pompeii. Source: Museo Archeologico Nazionale (Naples) (inv. Nr. 9558)

Figure 4: Marble statue of Isis holding a sistrum in her right hand (now missing) and key of the Ankh (the key of life or the Nile) in her left. Source: Museo Archeologico Nazionale (Naples) (inv. Nr. 9976.)

Figure 5: VIII.7.28 Pompeii. The instrument was found on January 4th, 1766 in the Ekklesiasterion. The sistrum is adorned on the top with a crouched cat and on the sides with lotus flowers. It was found together with some marble fragments of limbs, among which some of the hand that originally held it and of a marble head of Isis. . Source: Museo Archeologico Nazionale (Naples) (inv. Nr. 2397.)

2. The audience

«Family groups comprise more than half of all visitors to museums» (Hatala, M. *et al.* 2009), this is the reason we wanted to focus on this precise target for our project: both citizen and foreign families contribute to a huge portion of the museum audience. And, in its composition, it is the one that represents the biggest struggle, being a diverse group with a big age divide. As Sterry (2004) claims, the most important challenge for the cultural attractions is to offer a quality and satisfactory experience to family groups that contain mixed ages and generations.

To understand how to project a visit that allows us to satisfy both age groups we must first focus on the children, as their experience will inevitably influence the parents judgement of the visit. A study conducted on their perception of the museum experience (Jensen 1994) notes that there are two main family types, according to their way of approaching the visit: the «collaborative learning» families and «independent learning» families, where the first one walks through together, usually guided by the parent, and the second prefers to roam around separately and then exchange information. In both cases, what emerges is the social component: «collectively, all of the studies affirm the importance of the social dimension of museum visits.» So, it's equally important to keep in mind the individual necessities but also to not forget that the visit should also account for collaboration and exploration: it must be both flexible and welcoming to both the parents and their children.

«Ideally, family programs will provide guidelines and models for intergenerational museum visits in which adults respect children's desire for autonomy and self-pacing and encourage rather than inhibit children's intrinsically motivated behavior.»

Finally, we must note that we are focusing on a precise age range, that for the parents goes from 40 to 55 and for children is between the age of 9 to 15. This is mainly due to how much physically demanding is a place like Pompeii, which generally excludes younger people and older ones.

2.1. Motivations: what would push your visitor to join this new experience?

The main motivation for the visit and in general for Pompeii's fascination, since its first discovery, is for sure the **time travel** element. The visitor has the unique possibility to walk through an ancient roman city, with what remains of the old streets and buildings. In particular, Isis Temple is a place filled with mystery and fascination, other then representing an incredible melting pot of cultures from different times and spaces.

What we aim to do is to enhance, as much as possible, this atmosphere, implementing with the digital new ways to engage and immerse in the ancient times. This specific location gives us the possibility to teach and give information in way that does not have to feel forced or unnatural: the goal is to make the visitor feel immersed and to let him discover and find information, if they feel like they want to.



This is the base motivation level, the second one must acknowledge the differences between the two groups that compose the family.

The desire of having fun and maximizing the enjoyment of children. In general, having fun (the entertainment aspect) is the dominant desire of family outings. This is particular true for the children. The parents supported the idea that museums, as a leisure product category itself, could bring educational benefits to their children. (Kai-Lin Wu 2007)

So, we must keep in mind the parents seek educational values, not only for themselves, but also for their children, while they tend to like more fun and entertaining activities.

Taking into account all this elements means creating mainly an immersive and entertaining experience that allows different family members to both explore independently and together the visit space which, in this case, Isis Temple.

2.2. Barriers: Is there any potential limitation to the participation of your audience?

The main barrier for Isis Temple is **accessibility**, and it is problematic on several levels.

The first one is strictly related to **poor signage**: the frescos are detached from the original temple and brought to the Archeological museum of Naples, which means they are not that near. So, people either don't go visit both or they visit each place but don't know they are connected. What the client wants is for the visitors to understand fully the story and the context, maybe also furthering the knowledge at home. Currently, the link between the two complementary exhibitions is unclear to most. Also, little to no explanations are present on the site, so if the visitor does not have a guide they are unlikely to fully understand or appreciate the site, which can lead to them perceiving it as boring or not worthy of their attention.

The second one is an inevitable component of Pompeii's conformation. Being an ancient Roman city, it was not designed keeping in mind how disabled people could have interacted with that place, so, even though they tried implementing a tour of the outside perimeter¹, to fully access the Temple one must climb some stairs. This means the full visit is possible for a restricted number of people and that it is our job to try and implement alternative ways, through the digital, to allow more users to access to Isis history.

The third and last one is more a consequence of the target we choose to build our project on. As already previously stated the two age groups have different necessities, but we also must take into consideration the usual typical divide between their digital skills. The parents are less likely to engage in mobile games, maybe because they don't know how to or just because they are not used to and prefer to immerse themselves in the visit without "distractions". So, in our design, we have to consider different levels of skills and engagement and all of them should have the possibility to enjoy the visit equally.



¹ <https://www.pompeionline.net/?view=article&id=231:pompei-e-accessibile-ai-disabili&catid=49>

2.3. Capabilities: which skills are necessary to take the most out of this experience?

The target we want to appeal to is most likely to be divided in two sections: parents, with minimal digital skills and children, with high digital fluency. In general, the project aims to be as accessible as possible, requiring only basic digital skills to fully access the experience, which is thought to be as easy and clear as possible for everyone who has even just a bit of familiarity with mobile devices.

The user is required to scan a QR code, that will open a web-based app that will guide them with simple visual instructions. The experience will be gamified but the game mechanics are as minimal as possible. Interactions are intuitive and limited to **tapping, dragging, or moving the device**, avoiding complex gameplay.

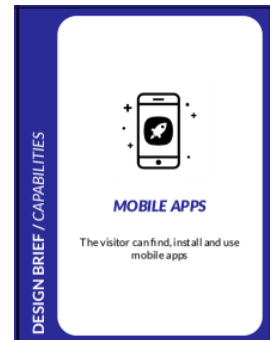
Also, it's important to note that this precise type of group is inclined to collaborate, so that one skill can be complementary to the others: it is usual that children are more used to play mobile games and they can help their parents that can, in exchange, guide them in the narration and in the visit. The digital and knowledge divide, if inserted into the social dimension of the visit can become an opportunity to learn and grow together.

2.4. Devices: which devices your target audience is able to use?

If the common ground for our audience is the **mobile apps**, it is inevitable that the device we want to implement, also because it is the one with which the majority of people has the most familiarity, are smartphones. Everyone can access the experience through their phone, that they probably know how to use.

However, always keeping in mind the accessibility, upon request tablets will be loaned to the ones who do not have a smartphone, which could be the children or middle-aged people with not compatible devices.

The experience will require to frame a QR code that will grant them access to a web-app, so this means a working camera and a Wi-Fi connection are required to properly engage with the AR technology and interact with the virtual space. But this also means, that there is so there is no need to download an app which might discourage the ones who are less tech savvy and the ones who will disengage because of the multiple steps required.



3. Concept

3.1. Problems you are facing with your project

Some of the problems related to our project are tied with the barriers that audience encounters. One of the focal points is, in fact, the accessibility element. One of the main challenges is designing a visit that is equally interesting and engaging for two different ages: it runs the risk to be either too complicated or too simple, discouraging or boring for one of the two groups. This is a consequence of both the digital aspect and the informational one: even a small barrier can discourage people and dissuade them from actively participating in the experience.

Another one, noted also by the institution itself, is related to the complementary exhibition: the visitor does not know they are seeing half of the collection, it is not clearly stated and this created a gap in their understanding of the full historical narrative. Also, it worth noting that some people cannot even

physically visit the location in Pompeii, leaving a part of the experience open to only the ones who are able to move through the old roman ruins.

All of this is related to the conceptualization but it's equally important to think about maintenance and sustainability of the project from the economical and technical perspective. While the application is relatively easy to implement, one struggle could be where to find and how to deal with the loans of the tablets, which would require more workers and more money. Another one is, for sure, the Wi-Fi connection, because without it the visitors cannot access the experience we thought our.

3.2. How the project will face the problems

Clarity and accessibility² are the two goals that guided our project ideation. We came to the conclusion that to solve most of the problems we needed to create an experience that could take into consideration different levels of participation.

The first one is the easiest to implement: more signs, explicit instructions written in multiple languages, that guide the visitors in the archeological site, that explain where they are and that informs them the visit can be continued in Naples. This would enhance the overall comprehensibility of the experience and would be a first step to engage more with the people: in particular, we want to implement two kinds of signs, one strictly informational and one that starts to introduce the users to their digital journey, hopefully inducing curiosity and preparing them to immerse themselves into the mysterious ritual of Isis. This is the foundation of the project: even without engaging with the experience or if something doesn't work, everything is still comprehensible and the visitor is informed.

Once this base level is guaranteed we can work on the digital ritual with the idea that we must create a game that is understandable on more levels: the game dynamics will be easy, and they can be played without any prior knowledge. All of them are narrative based and try to show as simply as possible what could have been the experience of an ancient roman that wanted to be initialized to Isis cult. The children can play and be engaged with the gameplay, familiarizing with the iconographies and having a grasp at the activities that were conducted in that place. The parents can either play with them or alone and, if interested, more informational content will appear on the screen: it's not going to be necessary to play the games but it gives the opportunity to learn more to the ones who want to. The resolution to the knowledge and interest gap is given by the social element, central in the experience we ideated: parents and children can guide each other and choose together how to experience the visit, which is thought to be as flexible as possible.

Moreover, the physical accessibility problem will be solved with digital alternative, following the lead of other MANN games, in particular the *Father and Son game*, implementing a minigame available on the Temple's, on the Naples Museum's website and on the app stores. This, of course, is not the same as visiting physically the location but communicates the message that an alternative is possible and that even if one cannot learn about the goddess in real life the digital is a place where new ways of engaging with art can be explored.

In the end, the budget problem can be solved through sponsorship, maybe the devices can be donated by tech companies and some of the money can be required to the municipality, the Ministry of tourism or culture that can invest in one of the most important archeological sites in the world. While this is not under our control what we can focus on is to try and project an idea that works as best as possible

² «A museum is a not-for-profit, permanent institution in the service of society that researches, collects, conserves, interprets and exhibits tangible and intangible heritage. *Open to the public, accessible and inclusive*, museums foster diversity and sustainability. They operate and communicate ethically, professionally and with the participation of communities, offering varied experiences for education, enjoyment, reflection and knowledge sharing.» (ICOM 2022)

and that considers the possibility of malfunctioning or low budget. An experience where the digital is at the center but it is not the sole focus.

3.3. Museological approach

We thought of a hybrid museum experience, combining the physical location with a digital one. This approach allows us to reconstruct the original appearance Temple of Isis – merging the two exhibitions together – while, at the same time, using augmented reality to enable new forms of engagement with the archaeological site.

Our goal is to trigger a sense of care with a **storytelling-based** game and symbol metaphors. By using **embodied interaction**, the visitor does not just observe but takes on the point of view of a character going through a initiation ritual. They interact with the digital game and the physical space, transforming what could feel like a group of old colorless ruins to the uninformed visitor, in a meaningful, lived place.

In particular, we designed through the lens of **historical empathy**, which, according to Endacott and Brooks (2013) can be defined as:

The process of students' cognitive and affective engagement with historical figures to better understand and contextualize their lived experiences, decisions, or actions. Historical empathy involves understanding how people from the past thought, felt, made decisions, acted, and faced consequences within a specific historical and social context.

This theoretical model is the key to our work: by combining historical contextualization, perspective taking and affective connection we want to fill the informational gap and the emotional distance between visitors and the ancient world. However, it is important to note that we must do it on a simple and effective level, given the struggles to build a project like this one, which could lead to a less effective emotive connection, and more of a curiosity-driven engagement.

Finally, the project is grounded in human-centered design principles. We kept asked ourselves: Who is our audience? What they want? What they need? In this step the PACT – the people, activities, contexts, technologies framework – was an extremely useful tool in allowing us to create an experience that is equally accessible and pleasurable for a diverse, intergenerational public.

3.4. Specific themes and topics you have selected as case study for your PW

Our project focuses on two interconnected elements, one location and one collection: the Temple of Isis in Pompeii and the frescos collection in the National Archaeological Museum of Naples. Originally, this frescos were decorating the walls of the temple, serving both a didactic and immersive function. Today, the exhibition is divided in two different locations, and we used augmented reality to virtually recreate the Temple in its original state.

The central theme is the cult of Isis, a highly beloved goddess whose cult was so mysterious that we do not have much information on it. One of the few sources consulted was Apuleius because he talked about it in the *Metamorphosis*, but even there he refuses to give specific information on what the initiation ritual consisted in:

Ecce tibi rettuli, quae, quamvis audita, ignores tamen necesse est. ergo quod solum potest sine piaculo ad profanorum intelligentias enuntiari, referam. (Apuleio II AD) (trad: Behold, I have recounted to you things which, though heard, you must nevertheless remain ignorant of. Therefore, I shall relate only what can be declared to the understanding of the uninitiated without impiety.)

This is why we decided not to recreate the exact ritual, preferring instead to evoke the emotional atmosphere and the preparation ritual. We do this through a series of narrative-based minigames, that, through metaphors, allows the visitor to learn about purification, abstinence, offering and revelation.

Nonetheless, we ensured each element of the games was grounded on credible sources. In particular, we consulted a study *Birds of Isis: The evidence from Pompeii* (Corbino e Demarchi 2023) which described the presence of bird bones found under this specific temple: «This work confirms that bird sacrifices form a distinctive part of the Isis rituals³». For all the other symbols we used a various sources, ranging from Egyptian studies and on Roman times:

- Sistrum and the situla: «These hand-held attributes [sistrum and situla] are specific to the cult of Isis in the Mediterranean and were used during the Hellenistic and Roman periods» (Walters 1988, p. 20)
- Ship: Roman calendars listed the two most important festivals of Isis as early as the first century CE. The first festival was the *Navigium Isidis* in March, which celebrated Isis's influence over the sea and served as a prayer for the safety of seafarers and, eventually, of the Roman people and their leaders. (Salzman 1990, pp. 169 – 175)
- Cow: Isis continues to assist her son when he challenges Set to claim the kingship that Set has usurped, although mother and son are sometimes portrayed in conflict, as when Horus beheads Isis and she replaces her original head with that of a cow— an origin myth explaining the cow-horn headdress that Isis wears. (Griffiths 2001, p. 189)
- Tyet (also called *Isis knot*): The tyet, sometimes called the knot of Isis or girdle of Isis, is an ancient Egyptian symbol that came to be connected with the goddess Isis. (Allen 2014, p. 557)

Finally, we wished to highlight the how diffused was the cult of Isis, and how she connected all the Mediterranean societies – Greece, Egypt, Rome – through space but also through time, because we can see her influence even into Christianity imagery and in the representation of the Virgin Mary. The multicultural identity couples also with the social aspect, she was considered compassionate by all the marginalized groups (foreigners, women, slaves), which saw in her a protector. Inclusive values that are not only still relevant nowadays, but that maybe now are more than ever. This values inspired the game-application on the website. It would be too overwhelming to give all of this information on site, so we decide to extend the learning opportunity outside the physical site.

4. Requirement

To achieve the established goals, the experience has meet a series of requirements.

Must:

- Be accessible without needing to download a native application, to lower technological barriers and simplify access.
- Be based on historically accurate content and reliable sources for information on the cult of Isis and the reconstruction of the temple and its frescoes

³ «The presence of goose among the birds included in the ritual seems specifically related to the cult of Isis; indeed, Isis was known as ‘the Egg of the Goose [...] More specifically, geese could be considered as a possible marker for the Isis cult. Columbiformes [doves and pigeons] can be interpreted as symbols of a female goddess, whereas chicken was widely employed in several oriental mystery cults. Pliny the Elder affirms that ‘The cock knows how to distinguish the stars, and marks the different periods of the day, every three hours, by his note’ (X, 24); as such, chicken represented the rising sun, victory in battle, dawn, and rebirth and was considered the dominant animal among those on Earth (Plin. X, 24).» (Corbino e Demarchi 2023)

- Provide the interface in multiple language, at least Italian and English to ensure accessibility for foreign tourists, who are a significant part of the target audience.
- Optimize the use of the application on the smartphone being the device most commonly used by visitors
- Provide a Wi-Fi connection open to everyone

Should:

- Offer both game elements for children and in-depth text for adults, allowing for a flexible experience suitable for the whole family
- Be structured as guided narrative experience
- Encourage interaction and collaboration among family members, turning different skill levels into an opportunity for exchange.
- Provide tablets for loan for people who do not own a smartphone

Could:

- Offer a reduced version of the experience or a themed minigame accessible from home for those who cannot physically visit the site or wish to learn more from home
- Receive at the end of the experience a digital "souvenir," such as a personalized image or a certificate which they can share
- Include the ability of personalizing the experience through the ability to enter a name or choose an avatar to increase emotional engagement.

Won't:

- Include frustrating or difficult game mechanics that could discourage less experienced users.
- Require the museum staff supervision
- Require a registration to create an account or log in to access the experience, to maximize ease of use.

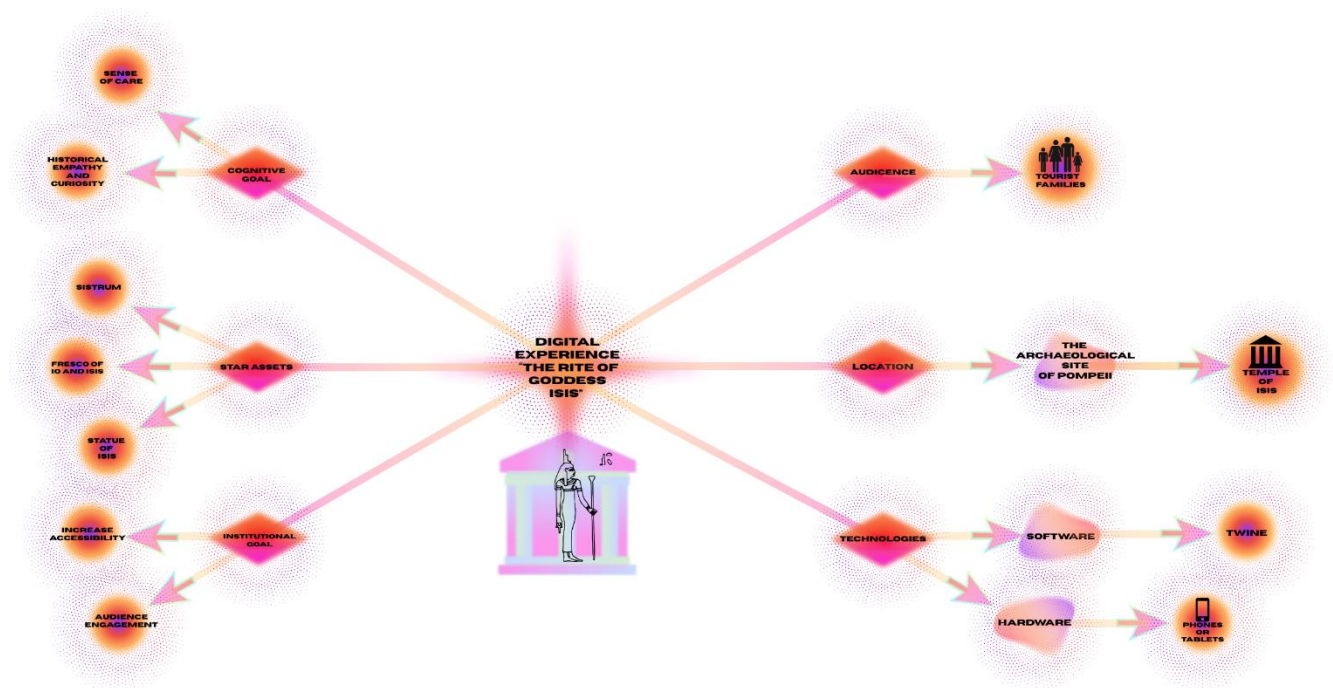
5. Ideation

Experience

The digital experience consists of a web-app presented through clear, visible, multilingual signage that introduces and invites visitors who have arrived at the Temple of Isis in Pompeii to scan a QR code and begin a “ritual” to discover the secrets of the goddess Isis.

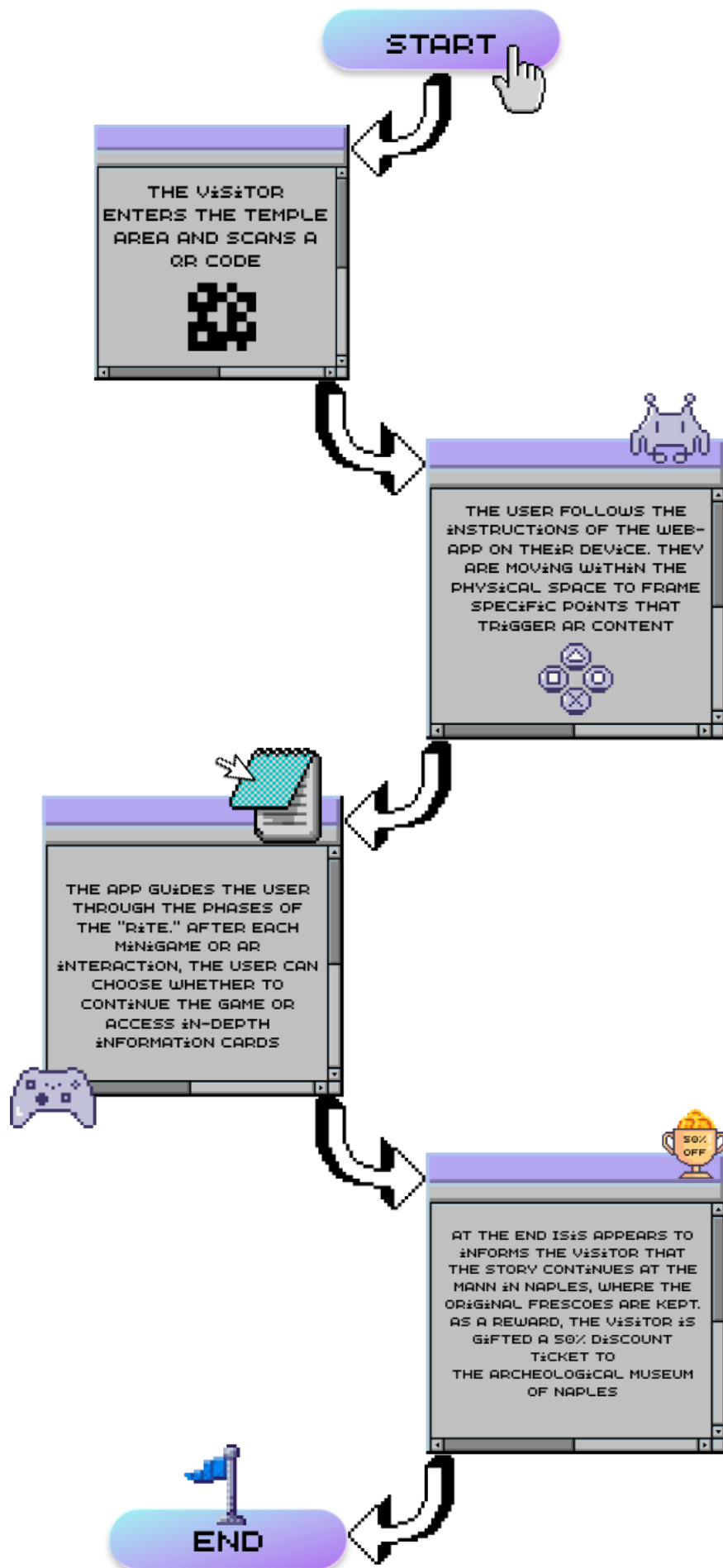
Visitors will start interacting with the application that will ask them to make small gestures and complete small tasks to move on to different stages of the Isis ritual. They will also see that by pointing the camera of their devices, or those provided by the museum in case, on the bare walls of the temple they will see the original frescoes appear in augmented reality, with vivid colors and detailed images. More adult visitors instead of completing small games will be able, if interested, to interact with different icons on the screen ready to provide in-depth information about the history of the frescoes and their significance. The shared experience between children – perhaps more focused on the more playful part of the app – and adults – more attentive to the historical level information – transforms the visit into a time of collaborative learning. The journey ends with the revelation of a fresco and a 50% museum discount, encouraging them to complete their pilgrimage in Naples.

Conceptual map



Description of the interaction between the application and the users

The user's interaction is a hybrid of the physical and digital, initiated by scanning a QR code at the Temple. Guided by a web-app, visitors explore the physical site, using their devices to frame specific points that trigger AR content via simple gestures like tapping or dragging. The app leads them through the narrative phases of a "rite," creating a flexible experience by allowing them to either continue the game or access informational cards after each stage. The on-site journey concludes by informing the visitor that the story continues at the MANN in Naples, home to the original frescoes.



Foreseen workflow

1. **Historical-Scientific Research:** Collection and structuring of content on the cult of Isis, the temple, and the frescoes in collaboration with archaeologists.
2. **Narrative Design:** Writing the script for the interactive story (dialogues, challenges, ending).
3. **User Experience (UX) Design:** Creation of wireframes and mockups for the web-app interface, focusing on simplicity and accessibility.
4. **Prototype Development:** Building the web-app, integrating AR models, and developing the minigames. Creating the narrative with Twine.
5. **Multimedia Content Creation:** Production of images, texts, and 3D models of the frescoes.
6. **Testing and Revision:** Testing the prototype on-site with users from the target audience (families) to gather feedback and fix any issues.
7. **Launch and Monitoring:** Launching the experience and analyzing its usage.

Set-up

1. **Hardware:** Visitors' smartphones (iOS/Android), a fleet of tablets available for loan, a stable Wi-Fi infrastructure covering the Temple area.
2. **Software:** A web-app development platform, a WebAR framework, Twine for the narrative prototype.
3. **Media (Digital Assets):** High-resolution images of the frescoes, 3D models of the frescoes and ritual objects, informational texts in multiple languages, icons and graphics for the interface.

Further development and maintenance issues

1. **Content Updates:** The content will need to be updated in case of new archaeological discoveries or changes in the exhibitions.
2. **Technical Maintenance:** It will be necessary to ensure the web-app's compatibility with new operating systems and browsers. The Wi-Fi network and rental tablets will require ongoing maintenance.
3. **Economic Sustainability:** Once the development phase is complete, a plan will be needed to cover maintenance costs, perhaps through sponsorships or funds dedicated to cultural heritage digitization.

6. Disruption

The threats and potential issues with our project and how we would face it.

- **Digital divide**
The first problem we could encounter is related to the **digital divide**. Some adults might struggle with the app, or may not know how to engage with the AR technologies. **But**, we want to solve it through intuitive and guided navigation, simple game dynamics and encouraged collaboration between age groups. And, to mitigate this issue, we included alternative ways to engage with the visit, based more on complementary materials.
- **Low engagement of children**
The second one is related to the possible **low engagement of children**, which could be more prone to lose interest and disengage in the visiting experience. This should be solved through a collaboration with child storytelling experts in the conception of the story and of feedbacks after each episode.
- **Poor connectivity**
Another critical threat is **poor connectivity**, which would lower the quality of the visit. In this case more Wi-Fi hotspots must be added and, the site's devices should have already installed the application to allow people with weak digital infrastructure to engage equally with the experience.
- **App maintenance and sustainability**
The last one, is the constant need for **developing and maintaining the app**, and trying to update it according to the user's feedback. This could be solved through a collaboration with universities or foundations that could dedicate time and resources, receive visibility and focus on this innovative project.

7. Teams roles and work

In accordance with the professor's request, we initially divided roles and responsibilities within our group, especially for the basis of the project, which, for us, were the storytelling and user journey description with Twine. These two were respectively done by Chiara Picardi and Abderrahmane Afrit.

However, what we came to realize was that the ideation process required far more collaboration than we expected, so we worked together more closely and ultimately divided the work following the design brief's key point, as follows:

- Chiara Picardi: Content and Storytelling; Audience (2), Concept (3) and Disruption (6)
- Abderrahmane Afrit: UX scenario with Twine (8)
- Farideh Sousani: Context (1) and the final presentation
- Cecilia Vesci: Requirements (4), Ideation (5) and PACT framework

8. UX scenario

[https://github.com/pinkuchan/Seven-Digital-heritage-and-multimedia/blob/main/USER%20EXPERIENCE%20\(2\).html](https://github.com/pinkuchan/Seven-Digital-heritage-and-multimedia/blob/main/USER%20EXPERIENCE%20(2).html)
<https://github.com/pinkuchan/Seven-Digital-heritage-and-multimedia/blob/main/USER%20EXPERIENCE.twee>

Bibliography

- Allen, J. P. (2014). *Middle Egyptian: An introduction to the language and culture of hieroglyphs*. Cambridge University Press. <https://doi.org/10.1017/9781139170904>
- Apuleius. (2nd century CE). *The Metamorphoses (The Golden Ass)*. [Original Latin: *Metamorphoseon libri XI*].
- Corbino, C. A., & Demarchi, B. (2023). Birds for Isis: The evidence from Pompeii. *International Journal of Osteoarchaeology*, 33(4). <https://doi.org/10.1002/oa.3224>
- Endacott, J., & Brooks, S. (2013). An updated theoretical and practical model for promoting historical empathy. *Social Studies Research and Practice*, 8(1). <https://doi.org/10.1108/SSRP-01-2013-B0003>
- Griffiths, J. G. (2001). Isis. In D. B. Redford (Ed.), *The Oxford encyclopedia of ancient Egypt* (Vol. 2). Oxford University Press.
- Hatala, M., Wakkary, R., & Bagalkot, N. (2009). Experience structuring factors affecting learning in family visits to museums. In U. Cress, V. Dimitrova, & M. Specht (Eds.), *Learning in the synergy of multiple disciplines*. Springer. https://doi.org/10.1007/978-3-642-04636-0_6
- International Council of Museums (ICOM). (n.d.). *Museum definition*. <https://icom.museum/en/resources/standards-guidelines/museum-definition/>
- Jensen, N. (1994). Children's perceptions of their museum experiences: A contextual perspective. *Children's Environments*, 11(4). <http://www.jstor.org/stable/41514951>
- Kelly, J. R. (1978). Leisure behavior and the family. *Journal of Leisure Research*, 10(1).
- Kelly, J. R. (1983). *Leisure identities and interactions*. Allen & Unwin.
- Palagia, O., & Walters, E. J. (1988). *Attic grave reliefs that represent women in the dress of Isis* (Hesperia Suppl. 22). American School of Classical Studies at Athens.
- Salzman, M. R. (1990). *On Roman time: The Codex-Calendar of 354 and the rhythms of urban life in Late Antiquity* (pp. 169–175). University of California Press.
- Sterry, P. (2004). An insight into the dynamics of family group visitors to cultural tourism destinations: Initiating the research agenda. In K. A. Smith & C. Schott (Eds.), *Proceedings of the New Zealand Tourism and Hospitality Research Conference 2004*. Wellington, New Zealand.
- Wu, K.-L. (2007). What do families with children need from a museum? *Cultural Policy, Criticism and Management Research*, 2.