Saving Tintagel Castle

(Tintagel Castle /tɪnˈtædʒəl/ (Cornish: Dintagel))

Interactive Exhibit

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Contents

Executive Summary (250 Words)

- **Introduction**
Owing to erosion, rising sea levels and frequent storms, different chunks of Tintagel have fallen into the sea. Seeing the current state of global warming and ongoing weather changes, it will be very hard to preserve this heritage site.

- **Need**
To make sure it's accessible to visitors in the future and remains a heritage site that could be closed to the public in the future due to natural causes but provide the same experience.

- **Solution**
Using emerging technologies like AR and VR to build a fully explorable virtual attraction that looks like the original place. Having this in a museum with other pieces of art and related structures to the castle will be explorable through VR.

- **Resources**
Starting by making a VR tour of the area and renting VR headsets for use at the museum, which will have places of interest and other local hotspots. It can be expanded on by adding AR displaying information about existing places of interest on the island, and the bridge to monitor the acceptance of newer technologies, which would be using the AR app.

- **Confidence**
Since Tintagel Castle has around 2,50,000 visitors a year on average with up to 3000 people a day during the summer months, if compared to other museums like the Louvre, V&A and more, which already have started using VR for showcasing artworks and other spaces have received a very positive response from the visitors.

- **Conclusion**
The Castle and the bridge close due to bad weather and in the future, due to natural causes such as erosion. Maintenance costs are high, and they will only keep increasing due to the rising sea levels. This proposal could be the future of Tintagel Castle and one of the better ways to protect it.

Background (500 words)

Immersive technologies like AR and VR are being regarded as the next big step in technological innovation and a lot of research is being put into their use cases and where they could be helpful. One such use case being researched is to bring exhibits and landmarks to life. The main issues faced with GLAMS using immersive technology have to do with authenticity and adding educational and immersive content for the audience. From being just places of interest to view and gather some information to using that information to bring the exhibit to life for a better experience and more accessibility to people who might not be able to visit the exhibit.[1]

A lot of research and technical skills are required to recreate the same things in a virtual environment while keeping it as authentic as possible. Also, VR headsets are usually quite expensive and huge deals must be made between both companies for them to be available to a wide number of people and on the online store.

Due to VR being a new trendy thing, many galleries are also jumping on to it after seeing the success of other existing VR experiences. This trend is causing an effect where even though the experience isn't thorough or educational, it is being used as a marketing strategy to get more visitors to view their VR experience without using the full potential of VR. Another effect is that Galleries want to preserve their authenticity and could be threatened because they run on the ownership of art and other artefacts. If all their experiences are available on VR, that would mean people could simply have the same experience from anywhere else for a smaller fee. Currently, galleries and museums can only make VR-related content of the pieces they own only as the experiences need a lot of research which can be carried out only by owning the piece. There must be a standard as to who can make experiences from the existing information and other content which is for the public but owned by the GLAMS.

Whereas, other places haven't come up with an alternative for their existing GLAMS. For example, English Heritage is a charity responsible for the conservation of more than 400 historic buildings, monuments and sites. Numerous sites are under the threat of erosion and are on the verge of not existing and is trying to rebuild some of its sites by trying to fix the damages caused by storms last winter, strengthening walls and building sea defences to prevent further damage due to coastal erosion in the future.[2]

We should also look at alternatives to preserve the stories and experiences of these places without changing the existing structures. These issues can be addressed by using a mix of emerging technologies such as AR and VR, leveraging their capabilities to provide visitors with authentic and immersive experiences.

Proposal (2250 words)

High-level Concept (750 words)

- **Description:**
Seeing the current condition of global warming, rising sea levels, risks of other erosion and adverse weather conditions, VR could give visitors an immersive experience of Tintagel Castle without having to repair damages caused and set up at the visitor's museum. It would provide a more authentic experience of the caste from way back by creating a VR tour of how the place was before, backed with the research and documentation of English Heritage. The visitor's museum would have a VR tour of the castle which would allow the player to explore the castle grounds for around 15 minutes in another time period with them being able to interact at different points of interest. They will be able to go across the bridge to the island on which the castle is situated and learn more about the castle's history. There will even be AR scannable pieces related to the castle on display which would allow visitors to view more information about the history of different places on this heritage site.

- **Relevance:**
Having a VR experience not only makes the experience realistic, but also makes it more accessible to people who would want to visit the place but cannot do so. Some of the best examples of VR used in museums are the Louvre in 2019 and the V&A in 2021. The Louvre launched 'Mona Lisa: Beyond the Glass', which takes the Mona Lisa and brings it to life by using technologies to convert a 2D image into a life-sized experience. It also has a recreated version of the main gallery at the louvre along with a few other paintings. It uses interactive design, sound, and animated images to let users discover details about the painting. All this was made possible by the partnership between 'HTC VIVE Arts' and 'The Louvre' to give the visitors a seven-minute-long experience. V&A on the other hand opened 'Curious Alice', which was an exhibition where visitors could immerse themselves in a playful VR experience in an interactive "wonderland" filled with puzzles. It also features the front garden of the V&A.[3] Researching how these places have implemented VR and expanded their audiences with the help of collaborators and artists, the challenges faced and what could be learnt from these exhibitions would help to shape a way to make the VR experience at Tintagel Castle.

- **Visuals:**

TINTAGEL CASTLE
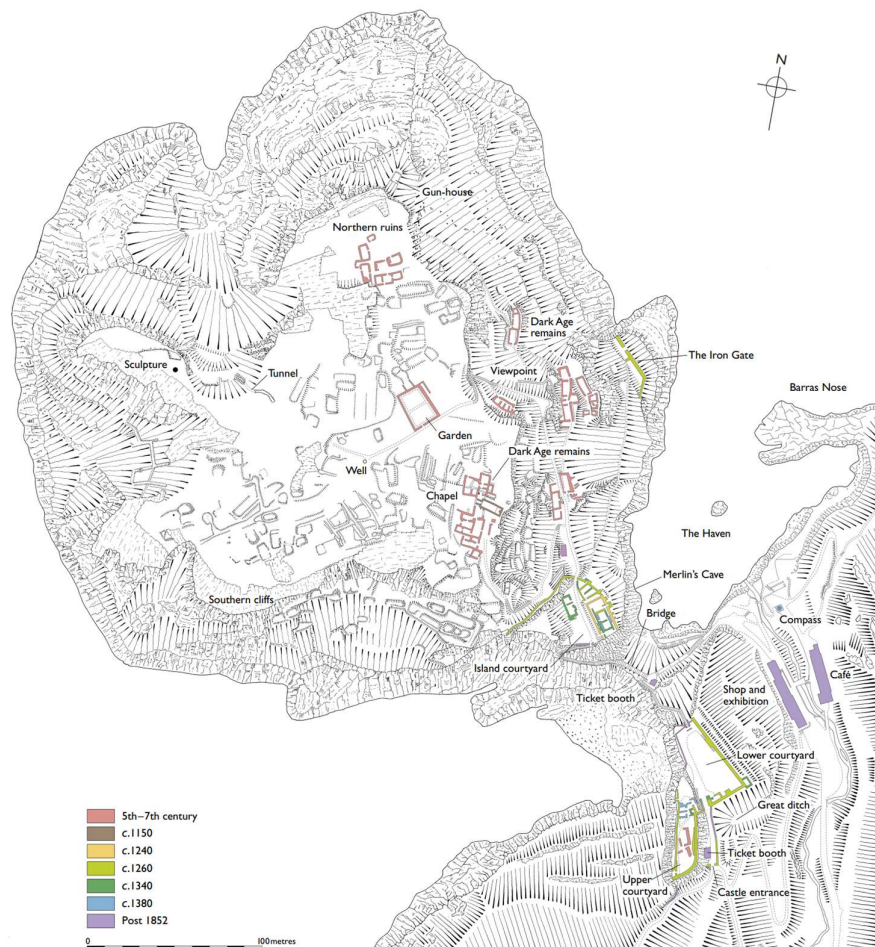
This is the map of Tintagel Castle and places which existed in different timelines. It is copyrighted under English Heritage to use for research purposes only which can be used once there's a deal with English Heritage and could be used to build out the experience with more details from different timelines.
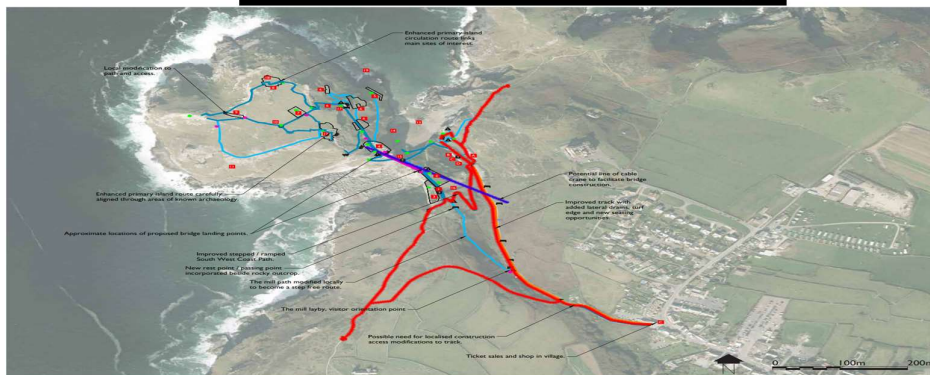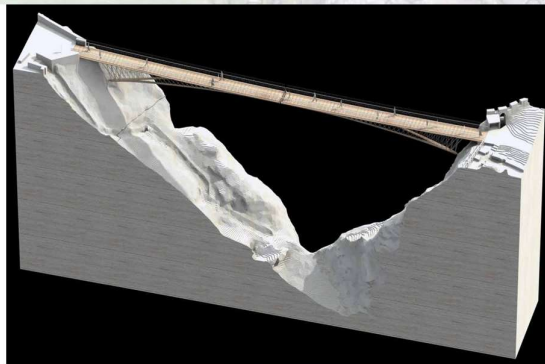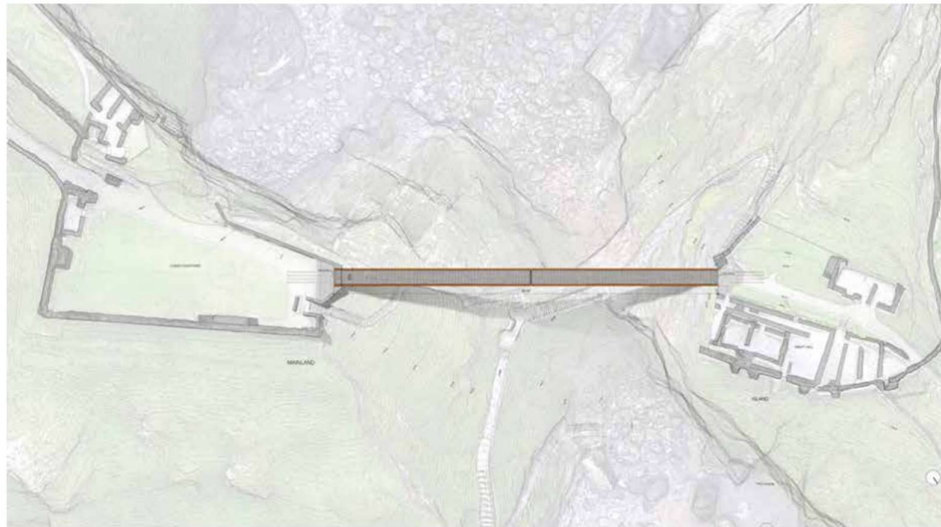
Plans of the bridge and other places close by which could be used to make the experience as the new bridge is well documented and is an attraction of the place. It could be also used to tailor a VR experience much like "Richie's Plank Experience", 2017 to simulate winds and the motion of the bridge. It would one of the attractions of the experience.

- **Unique Selling Points:**
In recent events of the Russia-Ukraine war, Wars cause a lot of damage not only to the people but the existing cultures. A lot of cultural heritage sites are being bombed and destroyed. Such events are common during wars and have happened in world wars to take over a country and impose other cultures. To preserve the country's heritage, a project named "Backup Ukraine" allows citizens to take scans of statues and other places of cultural significance and upload them to the cloud, which takes it and creates a 3D model on the cloud. This would be later used to revive and reconstruct a society, which was attempted to be erased and taken over.[4]

The historic site of Tintagel Castle has a long history of erosion with parts of the castle falling into the sea since the 14th century. The castle is also subject to wind erosion causing major gaps in some walls while a part of it also is situated on a fault.[5] Furthermore, Tintagel's visitor centre has been lost to erosion affecting the viewing area and coastal path. The VR tour to showcase the castle, the bridge and the stories of the legend of King Arthur would also make the tour scenic, very informative and best of all more accessible to everyone around the world. The experience would be available on the VR online stores for people unable to visit but are interested in the history and the place itself. This also has the potential to bring more visitors to the castle each year, which can also be used as a marketing strategy. Furthermore, the incentive to visit the place would be the life-sized figures and the remains of the castle which have a lot of history connected with them and see it in person along with AR making it more informative and interactive.

Audience and Market Research (600 words)

- **Customer:**
  This proposal will primarily target English Heritage to work alongside it, followed by the consumers being the people using VR at the Tintagel Castle. English Heritage is a charity which cares for over 400 historic buildings, monuments and sites and aims to teach people about the history of these places by giving them memorable experiences by being authentic, qualitative and responsible for preserving some of England's finest historic sites and artefacts. They are facing one of their greatest challenges ever and many castles could be lost indefinitely if funding isn't found to protect them. Sea levels are rising at their fastest rate for more than 2,700 years and are predicted to surge by up to a metre before the end of the 21st century. To put this in context, last century, the sea levels rose by only 14cm along the southern coast of England. They've also found Tintagel Castle among the six most vulnerable castles at a threat to coastal erosion with it being at the very top.[6]
  English Heritage is also a founding partner of the UK Heritage Adaptation Partnership, which aims to share expertise in tackling the impact of climate change on our historical sites and cultural heritage and is also working with the World Monument Fund Britain on its Coastal Connections programme that brings specialists from across the globe together to share experience and support others facing similar risk.
  Ministers have also allocated £36m over 6 years to develop a 'Coastal Transition Accelerator Programme' to try out ways to adapt to a changing climate, as part of the £200m Flood and Coastal Resilience Innovation Programme.

- **Key Partners:**
  Along with English Heritage, we will need to work with companies in the VR and AR industry to provide us with the tools needed to build an exhibit. HTC Vive and Microsoft Holo-Lens have already partnered with other galleries to provide seamless VR experiences. We would have deals for VR headsets and support in place with HTC Vive as they have more experience with such a showcase. Furthermore, we would need to work alongside a team studying the castle, its story, and its remains to make it in a 3D software and to put in a lot of information after performing extensive research on the history and the contents to be displayed. The two teams would be for research and development and one for planning the tour. English heritage will fund and partner with the HTC Vive and would expect to earn a percentage of revenue from consumers using the product. On the other side, this would solve many issues of English Heritage at a much lesser cost than repairing all damages and would benefit them in the future.

- **Competitors:**

  Quite a few projects are trying to add VR to existing art galleries, but not many are trying to convert heritage sites to a VR experience. These projects have their main focus on art and other creative spaces. Some of the competitors in this space are "V21 Artspace" which uses a mixture of innovative technologies to capture real-time exhibitions to produce interactive 3D Virtual Tours for showcasing exhibitions online and providing a digital solution for accessibility, archiving, audience development and engagement since 2017. "VISUALISE" was founded in 2012 and is a London-based VR & AR agency that works with creative partners and clients all over the world. They have a lot of experience in live VR production and 360-degree videos and have already partnered with Sennheiser, Samsung, Google and other key players in past projects. While there are many more competitors in this space doing various things related to VR and AR. These are among the top few who have produced some notable work. We could also collaborate with some of these companies to create better experiences.

SWOT Analysis (400 words)

Strengths

The proposal addresses the issue of protecting Tintagel Castle through the use of emerging technologies and will be accessible for the foreseeable future.
Partnering with HTC Vive would open more opportunities to be able to save other sites under English Heritage.
They would be an "Early Adopter" of AR and VR in museums for heritage sites.
Tintagel will thrive by being widely accessible to those who wouldn't otherwise and thus booming business.
The global immersive market is expected to grow at a rate of over 6% and exceed USD 22.4 billion by 2028.[7]

Weaknesses

English Heritage may not be open to using these technologies to preserve Tintagel and might be more focused on repairing the damages that have been done rather than thinking for the long term.
English Heritage is a charity, so they don't have the required funds and will need to send out an appeal which would be dependent on how accepted this idea of using immersive technologies will perform in the community.
Furthermore, striking up deals with VR companies, and paying for the research and development of the project and maintenance would be expensive.

Opportunities

Preserving Tintagel Castle in the VR way would also mean making it more accessible to a wider audience. People who haven't even heard about the castle would want to visit the place as well as people who've wanted to but haven't visited yet can access it on the VR store.
After working with these companies, further proposals and partnerships can be made to improve the conditions of existing GLAMS under English Heritage.
The use of immersive technologies is on the rise, widely accepted and is now here to stay. It would be beneficial to jump in early, especially after seeing other successful experiences.

Threats

It might take a while to create such an experience and for it to gain some traction.
English Heritage may not have or have received adequate support and funding from the government or fundraisers.
The future may not find this a good use case for AR and VR technology as we are still experimenting with various applications of the technology.
Due to chip shortages around the world and inflation, the prices of VR headsets and other key equipment can have inflated prices.

Requirements (100 words)

Resources and Costs

Resource	Description	Cost (£)
VR Headsets	There needs to be a deal made with HTC Vive for around 20 VR headsets.	17000
R&D Team	A team of at least 5 people for research, development and 3d art for the showcase for 6 months	42000
	£175.01 to £481 a week* 0%/employer NI Tax(Band: H)	0
Office space	Office space to carry out research for 6 months	2550
Equipment	2 high-end PC's and 4 regular work PC's	3800
Softwares	3ds max, texturing software licences	1700
Staff	Office spaces and VR equipment needs regular maintenance	720
	Total Costs:	67,770

* Average salaries from Glassdoor.

Impact and KPIs (400 words)

Social

Tintagel Castle would be more accessible, more democratic and help educate visitors about its history and cultural significance.
People who work and live around the area will have access to new experiences and pieces of technology which could be used to explore other avenues.
People living closer to Tintagel would also be more interested to learn about the place's history and it would engage local communities and stakeholders in the preservation of heritage sites, potentially fostering a sense of pride and ownership in the local area.

Cultural

Better deals for other sites will be possible between English heritage and VR companies making more people aware of the stories and the culture of England.
The History and stories of Tintagel Castle will be preserved and live digitally with authentic and verified information for educators, researchers, and tourists from all over the world and would facilitate cultural exchange and understanding by allowing people from different cultures and backgrounds to virtually experience and learn about heritage sites from other parts of the world.
The experience could be updated with new time-based cultural events which would be well received by localites.

Economic

The installation will attract visitors and it being more accessible will increase footfall and boost revenue.
There will be more high skilled jobs generated for the maintenance and updating of VR content as well as the headsets.
Since all of these are also under the government, it could be taxed and used for other purposes which would also contribute to the GDP of the country.

References

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