

# **WONDER FOOLS**

**North Carrick Community Benefit Company**

**Final Report**

**July 2022**

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## Introduction

Wonder Fools has been commissioned by North Carrick Community Benefit Company (NCCBC) to produce this report as part of a wider consultancy package conducted by Hall Aitken. These reports have the collective aim of developing tourism in North Carrick and in turn generating new income streams for the area.

We have considered three technologies: augmented reality, projection mapping and virtual reality. For each we have proposed different potential ideas based on our research. The following is our findings.

## Aims

Our specific aim is to explore how emerging and existing technologies can offer the highest quality audience/ tourist experience and what the different costs associated with each technology are.

As a theatre company, we are interested in stories and a key question was exploring stories the people of North Carrick might want to share with Scotland and the wider world. This proposal has sought to find the best technology with which to tell the stories of the area and how they could be used to make the most engaging experience for visitors.

A third and final focus was identifying where the most appropriate sites in and around North Carrick are for implementation.

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# Augmented Reality

## Case Studies

### 549: Scots of the Spanish Civil War

An installation by Wonder Fools using augmented reality to tell the stories of people from across the UK that fought as part of the International Brigade in the Spanish Civil War. The installation was created to tour alongside theatre production 549: Scots of the Spanish Civil War and was funded by the Heritage Lottery Fund.



### ISO Design - V&A Shekou

ISO is a digital media and software studio and they design, direct and build large-scale interactive and immersive media projects. ISO specialise in design-led cultural projects for Museums, Galleries and Brand Experience Centres; they also create motion graphics and animated content for television and create ambitious online digital projects that are experienced across web, social and mobile.

Based in a major new cultural hub in the modern city of Shenzhen, V&A Shekou exhibits a history of design to a new Chinese audience and features 250 objects from the V&A's own collection. Values of Design is an interactive digital experience and the culmination of the visitor's journey through the Museum, giving them the chance to reflect on their own design values and influences.



## Marvel Studios / Disney — Eternals AR

Nexus Studios created Marvel Studios' first of its kind augmented reality story experience, in anticipation for their epic new film release, Eternals.

The immersive experience by the same name allows users to explore the world of the Eternals, meet the characters, and become a part of the action. Users travel 7,000 years back in time to learn how the Eternals helped shape today's civilisation.

Nexus Studios used volumetric capture to record actress Lia McHugh's performance from over 100 camera angles, and created a 3D representation of her character Sprite that appears in our environment. Brand new pipeline processes were also developed to display film-caliber VFX on mobile devices, in real time.

The launch of Eternals AR marks an exciting time in creativity and innovation, demonstrating the potential of storytelling and high fidelity visuals in new mediums.



## Auckland Virtual Tours

Auckland Virtual Tours partnered with Ngāti Whātua Ōrākei to launch a ground-breaking high-tech venture in the form of an augmented reality walking tour that takes the visitor on an immersive and enriching journey around Bastion Point.

They created an app that combines augmented reality, geo-tracking, 360 video, narrative audio (strewn with little-known gems), historical photos, and information on native birds and plants in the area, giving visitors a unique glimpse into the history of the land, its people, and their culture.



## 1.1 Augmented reality exhibition

### Description

The deliverable for this project would be an augmented reality exhibition.

Inspiration: '549 installation'

The outcome for this project would be to create AR content based on stories from the community and historical information about Maybole Castle and the surrounding area.

The visitors would arrive at the exhibition and be given a tablet by the exhibit assistant. The visitor would walk

around the gallery where they would see objects related to the historical information with an image target next to them. Using the tablet, they would scan a bespoke image target which would trigger an Augmented Reality experience showcasing parts of a story.

### Benefits:

- The deliverable is cost effective.
- The technology is flexible to allow for different kinds of content. It could also link with relevant local themes like agriwculture, the environment or other stories from the community.
- Potential for community involvement both as an asset in the research and content creation process, as well as future audience members.
- Easily compatible with an existing tourist site e.g. Maybole Castle.

### Equipment and software:

- Vuforia
- AR Core
- Unity 3D
- Unreal Game Engine
- Adobe Creative Cloud
- Recording equipment
- Android table
- Printed QR codes
- Objects related to the historical information

### Notes:

- The exhibition could run for a short period of time during a local summer festival.
- The technology means that this exhibition could be fixed within a venue or building or toured to schools and community groups.
- Once created, the exhibition can be used repeatedly during events and festivals for a minimal additional cost.





1.1 Augmented reality exhibition

Cost Finder

Items	Description	Quality	Cost per quantity	Total cost
Project coordinator	Person overseeing the project and facilitating the various parties.	20 days	£125	£2500
Historian content collection	Historian gathering information about Maybole Castle and the surrounding area.  We need to understand the history and if there are any links to the community.	15 days	£125	£1875
Community input (optional)	Local community members and/or young people gathering stories about the local area.	20 days	£100	£2000
Storyteller	Storyteller liaises with the historian, community people and AR app developer. They need to understand the history / stories to best convey them.	10 days	£125	£1250
Artists	Paying for marketing for the exhibition - coordinator's time to run campaign, social media ads, posters, newspaper, radio, etc			£2000
AR app developer	The AR app developer needs to liaise with storytellers and gather any of the relevant information.  They then build the application using AR Core / Vuforia.	37.5 hrs	£30	£1125
Computer scientist	Help AR developer with coding and adding the geolocation	37.5 hrs	£30	£1125
Equipment	Tablets to showcase the AR in for the exhibition	5	£150	£750
Materials	Any costs for associated materials such as QR code tags etc			£1000

Total cost for augmented reality exhibition without community input: **£15000**

Total cost for augmented reality exhibition with community input: **£17000**

## 1.2 Augmented reality walking tour

### Description

The deliverable for this project would be to create a downloadable augmented reality app for mobile devices.

Inspiration: 'Auckland Virtual Tours' and 1.1 Augmented reality exhibition

The concept for this project would be an Augmented Reality walking tour around Maybole and the surrounding towns of Dunure, Minishant, Kirikmichael, Crosshill, Straiton, Kirkoswald and Turnberry & Maidens.

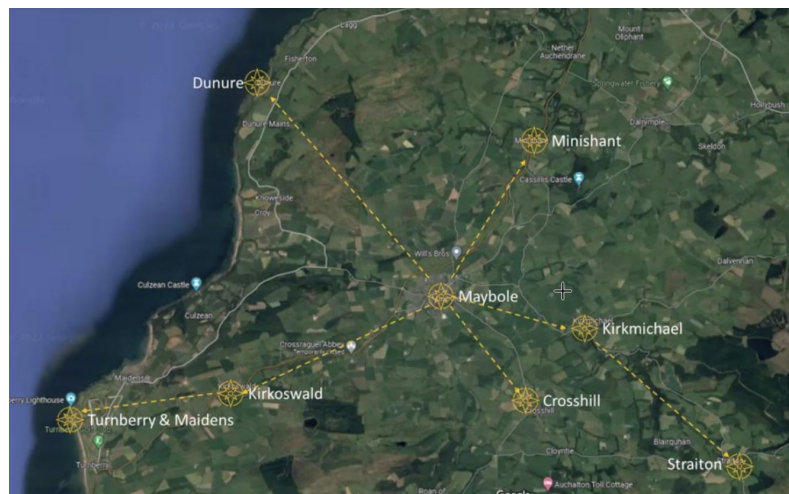
The information that can be discovered inside the augmented reality experience could range from history, mythical tales and nature.

Along the walking trail there would be branded sign posts telling you to scan the target which would trigger an augmented reality experience.

The physical targets to trigger the augmented reality could be:

- 2D Photographs - Triggering a video giving the user more information
- 2D Unique branded tags - Triggering information along the route
- 3D Sculpture - Triggering an animation which brings the sculpture to life to tell a story

The user would download the Maybole AR app from the AppStore. The app would list the walking location routes in the area. Once at the designated location, the user would see the branded sign posts which would lead them to the physical targets. Using the AR app, the user would scan the target which would trigger AR content based on the desired subject matter from the community and the surrounding area.



### Benefits:

- The technology is flexible to allow for different kinds of content. It could also link with relevant local themes like agriculture, the environment or other stories from the community.
- Potential for community involvement both as an asset in the research and content creation process, as well as future audience members.
- Can cover a wide geographical area therefore increasing footprint across more locations and generating income for a wider range of local businesses.
- The app would be able to run as needed.
- Could combine well with existing tourist walks and paths, boosting potential reach and providing a ready-made audience pool.

### Equipment and software:

- Vuforia
- AR Core
- Unity 3D
- Unreal Game Engine
- Adobe Creative Cloud
- Recording equipment
- Augmented reality targets

### Notes:

- In order to increase engagement and artistic quality of the work, there is the potential to use prominent actors, musicians and visual artists in the content creation process of the work.
- There may also be a means of collaborating with Dumfries and Galloway on this work in order to create an offering that works across both regions.
- Not inclusive for people with disabilities.
- The QR codes could get vandalised.

1.2 Augmented reality walking tour

Cost Finder

Items	Description	Quality	Cost per quantity	Total cost
Project coordinator	Person overseeing the project and facilitating the various parties.	15 wks	£625	£9375
Historian content collection	Historian gather information about the surrounding area. We need to understand the history and if there are any links to the community.	30 days	£125	£3750
Community input (optional)	Local community members and/or young people gathering stories about the local area.	40 days	£100	£4000
Storyteller	Storyteller liaises with the historian, community people and AR app developer. They need to understand the history / stories to best convey them	25 days	£125	£3125
Artists	Create and produce work in response to the storyteller / historian content. Could include visual artists, performers, musicians	60 days	£125	£7500
Marketing	Paying for marketing for the exhibition – coordinator’s time to run campaign, social media ads, posters, newspaper, radio, etc			£4000
Graphic Designer	Graphic design helps with colour scheme, fonts, UI design. Liaises with storyteller and AR app developer.	112.5 hrs	£30	£3375
AR app developer	The AR app developer needs to liaise with storytellers and gather any of the relevant information. They then build the application using AR Core / Vuforia.	150 hrs	£30	£4500
Computer scientist	Help AR developer with coding and adding the geolocation	112.5 hrs	£30	£3375
Web developer	Assists with uploading the AR app to the app store and helps with any coding. Create website for marketing	37.5 hrs	£30	£1125
User Testing	Group of people from various backgrounds / age groups undergo user testing of the application. They report any issues to discover interaction issues / bugs. 20 people for 2hr sessions	40 hrs	£15	£600
Materials	Any costs for materials associated with the project such as QR tags, sculptures etc. This would depend on how you make the physical targets.			£1000-£5000

Total cost for walking tour with community input and large materials budget **£49725**

Total cost for walking tour without community input and large materials budget **£45725**

Total cost for walking tour with community input and small materials budget **£45725**

Total cost for walking tour without community input and small materials budget **£41725**

## 1.3 Augmented reality geolocation mobile app

### Description

The deliverable for this project would be to create a downloadable app for mobile devices which guides people and unlocks content information via geolocation.

Inspiration: 'Auckland Virtual Tours' and 'Pokemon Go'

The concept is to create an application which is powered by geolocation. When the user is in the North Carrick area they can walk around and discover hidden information using augmented reality. The AR content could be based

on stories from the community and historical information about Maybole Castle and the surrounding area. The information shown could range from animated characters, videos, locating viewpoints and adding a digital touch to the physical world.

### Benefits:

- The technology is flexible to allow for different kinds of content. It could also link with relevant local themes like agriculture, the environment or other stories from the community.
- Potential for community involvement both as an asset in the research and content creation process, as well as future audience members.
- Can cover a wide geographical area therefore increasing footprint across more locations and generating income for a wider range of local businesses.
- The app would be able to run as needed.
- The app could be used to lead tourists to parts of the area where they might not go otherwise.

### Equipment and software:

- Vuforia
- AR Core
- Unity 3D
- Unreal Game Engine
- Adobe Creative Cloud
- AWS Servers
- Recording equipment

### Notes:

- Not inclusive for people with disabilities

1.3 Augmented reality geolocation mobile app

Cost Finder

Items	Description	Quality	Cost per quantity	Total cost
Project coordinator	Person overseeing the project and facilitating the various parties.	15 wks	£625	£9375
Historian content collection	Historian gather information about North Carrick and the surrounding area.  We need to understand the history and if there are any links to the community.	30 days	£125	£3750
Community input (optional)	Local community members and/or young people gathering stories about the local area.	40 days	£100	£4000
Storyteller	Storyteller liaises with the historian, community people and AR app developer. They need to understand the history / stories to best convey them.	25 days	£125	£3125
Artists	Create and produce work in response to the storyteller / historian content. Could include visual artists, performers, musicians	45 days	£125	£5625
AR app developer	The AR app developer needs to liaise with storytellers and gather any of the relevant information.  They then build the application using AR Core / Vuforia.	150 hrs	£30	£4500
Computer scientist	Help AR developer with coding and adding the geolocation	150 hrs	£30	£4500
Web developer	Assists with uploading the AR app to the app store and helps with any coding.  Creates website for marketing	37.5 hrs	£30	£1125
UX Designer	Liaise with graphic design to create the overall application design. Develop how the user interacts with the application. Set up User Testing sessions	75 hrs	£30	£2250
Graphic Designer	Graphic design helps with colour scheme, fonts, UI design.  Liaises with storyteller and AR app developer.	75 hrs	£30	£2250
User Testing	Group of people from various backgrounds / age groups undergo user testing of the application.  They report any issues to discover interaction issues / bugs.  40 people for 2hr sessions	80 hrs	£15	£1500
Marketing	Paying for marketing for the exhibition - coordinator's time to run campaign, social media ads, posters, newspaper, radio, etc			£4000

Total cost with community input: **£46000**

Total cost without community input: **£42000**

# **Projection Mapping**

## Case Studies

### Wolf Walkers

Wolfwalkers is Cartoon Saloon's latest feature length animated movie and an ode to Kilkenny. For its release at Kilkenny Animated Algorithm would light up the local surroundings with projections from the film.

Algorithm were tasked with creating and documenting a series of projection mapped pieces that told the story of the film, showing animated scenes created specifically for the occasion by the Wolfwalkers team.

The piece at Kilkenny castle was accompanied by audio, which users could connect to via their phone, for a personal and intimate experience in the ancient surroundings. The behind-the-scenes documentary shows the context for the projections, on the ancient backdrop of Kilkenny Castle.

Algorithm were thrilled with the results of this collaboration, which gave us the opportunity to develop a system which streams audio for an installation in real time.



### Shine Your Light

For RTE and Creative Ireland's Shine your Light Solstice nationwide broadcast, Algorithm and Thinkhouse were commissioned to deliver a series of spectacular projection installations across Ireland.

The brief was to elevate a collection of Irish artists from the Illuminations series by projecting their work on a monumental scale, in conjunction with filming these spectacles for social and broadcast on RTÉ One, Ireland's primary national TV channel.

Projections would illuminate sites across 6 counties with work from Irish artists, a choreographed performance and accompanying light show would bring the passage of time to life. The oldest known sundial would be used as a projection surface to film as a backdrop for live poets and artists.

This project's immense scale manifested as a fitting celebration of the end of 2020 and the significance of the winter solstice in Irish culture. The 6 spectacles were filmed and reported on the RTE news - which had close to 1 million viewers. The TV special itself was a huge success and was seen nationwide live on TV.



#### Brightside Studios

"The room looked absolutely incredible as the projections brought the whole space to life in a way it never had before." Dr Bowers, operations manager Brodick Castle

Brodick Castle, a historic landmark on the Isle of Arran, reopened to visitors in May 2019 after extensive redevelopment. The National Trust transformed the castle with interactive and entertaining historical exhibits for everyone to enjoy. The grand reopening featured an immersive event called Tales from Brodick Castle, in which Brightside Studios were commissioned to create an immersive storytelling experience.

Brightside Studios said: "It was a privilege to tell the story of Brodick Castle in its beautiful and atmospheric drawing-room. We used historical images, crafted bespoke animation and film, and used projection mapping techniques to weave the story into the beautiful historical paneling around the room, creating a unique, immersive storytelling experience. In addition, actors brought famous people in the Castle's history to life, adding theatre and a wonderful interactive element to the event."



#### Illuminate Derry

'Illuminate' shines a light on the events that have shaped the unique story of Derry, a city that has been forged through a millennium of adventure, endurance, imagination and endeavour.

The 1.5km route can be enjoyed at a leisurely pace as you make your way through the 400-year-old Walled City. Experience a trail of 6 iconic locations which will become spectacular pieces of art, using a mix of audio-visual, digital media and outdoor projection to create a memorable experience for all the family.



There are similar Scotland events in Pitlochry, Glasgow and Kilmarnock.





## Narrative Systems, The Glasgow School of Art

This intense and public-facing project explored these questions and others through collaboration with the Glasgow Vintage Vehicle Trust, an organisation specialising in the preservation and display of classic buses. The students worked as a team towards a two-evening public event, producing an array of diverse responses to the space. Large-scale multi-screen projections, mapping, sound works and VR were among the approaches taken.

The students were asked to think about the following questions: What considerations should we have as designers of interactive information systems? How can we deliver contextual content in a staged and understandable way? What are the design affordances and special cases in creating media for public consumption?



## 2.1 Mobile App AR and Digital Interactions tour

### Description

The deliverable for this project would be to create a downloadable app for mobile devices designed to take the user on a walking tour and trigger augmented reality and physical digital interactions.

Inspiration: 1.2 Augmented reality walking tour, Narrative Systems, The Glasgow School of Art and 'Lo-Mid-Hi'.

The concept is to create the augmented reality app described above as well as incorporating physical digital interaction. An example of a digital interaction could be scanning the target in front of a window which triggers a lighting display / projection mapping / a tv which showcases something from an archive / an ultrasonic

sensor (tracking movement). This would allow the virtual and physical worlds to merge together and let this content come to life.

In collaboration with a university (eg. The Glasgow School of Art or UWS), the students would work together in groups to create the digital interactions. We would also hire a Creative Technologies practitioner to work alongside the students / tutors to make sure the work is produced at a high standard.

### University module

In collaboration with a 4 year honours bachelor degree, the module would be given to year 1, 2 and 3. The module would run for a total of 6 weeks throughout semester one and two - allowing time for concepts to grow.

#### Semester 1:

##### Week 1:

- Attend 3 days of workshops:
  - Day 1: Historian and storyteller
  - Day 2: Lighting designer
  - Day 3: Creative Technologies.
- Research what they had learned

##### Week 2:

- Brainstorm ideas
- Undertake research - reading / taking inspiration from previous work
- Project leads would provide tutorials for students to develop their ideas
- Individually create a project proposal
- Individuals would pitch their idea to the year group, project leads and North Carrick Community Benefit Company (optional) for feedback

##### Week 3:

- Students working within similar mediums would work together
- Form groups of 2 - 4 people (preferably mixed year groups)
- Project leads would schedule tutorials to see how the groups are doing and help push ideas along
- Curate the exhibition
- Groups present final ideas to project leads
  - 10 min presentation & 5 min Q&A

#### Semester 2:

##### Week 1:

- Groups meet up again - finalise their ideas

- Create their work
- Project leads would provide tutorials for students to develop their ideas

##### Week 2:

- Continue developing their work
- Project leads would schedule drop in sessions to see how the groups are doing - help push ideas along
- Prototype and user testing

##### Week 3:

- Project leads would schedule tutorials to see how the groups are doing and help push ideas along
- Finalise work
- Exhibit work in university on the Friday before the main event

#### Main Event:

##### Day 1:

- Move project work from university to site location
- Begin installation
- Technicians on site to help students set up

##### Day 2:

- Finalise installation
- Technicians on site to help students set up

##### Day 3:

- Opening night of event

#### Benefits:

- The technology is flexible to allow for different kinds of content. It could also link with relevant local themes like agriculture, the environment or other stories from the community.
- Potential for community involvement both as an asset in the research and content creation process, as well as future audience members.
- Can cover a wide geographical area therefore increasing footprint across more locations and generating income for a wider range of local businesses.
- Could combine well with existing tourist walks and paths, boosting potential reach and providing a ready-made audience pool.
- This idea has a sliding cost dependent on different factors.
- The partnership with UWS or similar institution could give the option of kind support, reducing costs.

#### Equipment and software:

- Vuforia
- AR Core
- Unity 3D
- Unreal Game Engine
- Adobe Creative Cloud
- Recording equipment
- Augmented reality targets
- Projector
- Arduino
- Raspberry Pie
- TouchDesigner

#### Notes:

- The app would be able to run as needed but digital interaction is event based.
- The QR codes could get vandalised.
- The deliverable could be high cost depending on what version of the idea is chosen.

#### Cost Finder

Items	Description	Quality	Cost per quantity	Total cost
Project manager	Person overseeing the project and facilitating the various parties.	15 wks	£625	£9375
Historian content collection	Historian gather information about North Carrick and the surrounding area.  We need to understand the history and if there are any links to the community.	30 days	£125	£3750
Community input (optional)	Local community members and/or young people gathering stories about the local area.	40 days	£100	£4000
Storyteller	Storyteller liaises with the historian, community people and AR app developer. They need to understand the history / stories to best convey them.	25 days	£125	£3125
Artists	Create and produce work in response to the storyteller / historian content. Could include visual artists, performers, musicians	45 days	£125	£5625
AR app developer	The AR app developer needs to liaise with storytellers and gather any of the relevant information.  They then build the application using AR Core / Vuforia.	75 hrs	£30	£2250
Creative Technologies	Produce the digital interactions - using arduino, raspberry pie, projection mapping, animations, 3D modelling	112.5 hrs	£30	£3375
Web developer	Assists with uploading the AR app to the app store and helps with any coding.  Creates website for marketing	22.5 hrs	£30	£675
Lighting designer	Liaise with creative technologies to produce a lighting display around Maybole Castle.	75 hrs	£30	£2250
Graphic Designer	Graphic design helps with colour scheme, fonts, UI design.  Liaises with storyteller and AR app developer.	37.5 hrs	£30	£1125
Materials/Equipment hire	Any costs for materials associated with the project such as projectors, lighting kit etc. This would depend on how you make the installations.			£5000-£20000
Marketing	Paying for marketing for the exhibition - coordinator's time to run campaign, social media ads, posters, newspaper, radio, etc			£4000

2.1 Mobile App AR and Digital Interactions tour

Items	Description	Quality	Cost per quantity	Total cost
University	Students undergo a 6 week module See details above 225 hrs per student Historian, Storyteller, Lighting Designer and Creative Technologies are given 15hrs (2 days) per week to teach, interact with the students and help their ideas. 15hrs x 6 weeks = 90 hours 90 hours x 4 project leads = 360	360 hrs	£30	£10800

Total cost with community input and large materials budget: **£70350**

Total cost without community input and small materials budget: **£51350**

If university paid fees in kind, total cost with community input and large materials budget: **£59550**

If university paid fees in kind, total cost with community input and small materials budget: **£44550**

If university paid fees in kind, total cost without community input and large materials budget: **£55550**

If university paid fees in kind, total cost without community input and small materials budget: **£40550**

## 2.2 Audio / Visual projection mapping exhibition in collaboration with university

### Description

In collaboration with a university (eg. The Glasgow School of Art or UWS), we would work together to create an interactive projection mapping exhibition. We would also hire a Creative Technologies practitioner to work alongside the students / tutors to make sure the work is produced at the correct standard.

Inspiration: Narrative Systems, The Glasgow School of Art, 'Lo-Mid-Hi'

Following a theme, the students would work as a team towards an evening public event, producing an array

of diverse responses to the space. Large-scale multi-screen projections, mapping, sound works and VR would be among the approaches taken.

The exhibition space that the students have to showcase their work would need to be a controlled environment. Ideally, you would want somewhere that is covered over (dry) and dimmed lighting. This environment would mean we could use lower spec projectors allowing for a cost effective solution.

### University module

In collaboration with a 4 year honours bachelor degree, the module would be given to year 1, 2 and 3. The module would run for a total of 6 weeks throughout semester one and two - allowing time for concepts to grow.

#### Semester 1:

##### Week 1:

- Attend 3 days of workshops by project leads:
  - Day 1: Historian and storyteller
  - Day 2: Lighting designer
  - Day 3: Creative Technologies.
- Undertake research - what they had learned from workshops

##### Week 2:

- Brainstorm ideas
- Undertake research - reading / taking inspiration from previous work
- Project leads would provide tutorials for students to develop their ideas
- Individually create a project proposal
- Individuals would pitch their idea to the year group, project leads and North Carrick Community Benefit Company (optional) for feedback

##### Week 3:

- Students working within similar mediums would work together
- Form groups of 2 - 4 people (preferably mixed year groups)
- Project leads would schedule tutorials to see how the groups are doing and help push ideas along
- Curate the exhibition
- Groups present final ideas to project leads
  - 10 min presentation & 5 min Q&A

#### Semester 2:

##### Week 1:

- Groups meet up again - finalise their ideas
- Create their work
- Project leads would schedule tutorials to see how the groups are doing and help push ideas along

##### Week 2:

- Create their work
- Project leads would schedule tutorials to see how the groups are doing and help push ideas along
- Prototype and user testing

##### Week 3:

- Create their work
- Project leads would schedule tutorials to see how the groups are doing and help push ideas along
- Finalise work
- Exhibit work in university on the Friday before the main event

#### Main Event:

##### Day 1:

- Move project work from university to site location
- Begin installation
- Technicians on site to help students set up

##### Day 2:

- Finalise installation
- Technicians on site to help students set up

##### Day 3:

- Opening night of event

## Projection Mapping

### 2.2 Audio / Visual projection mapping exhibition in collaboration with university

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#### Benefits:

- The idea allows for different types of stories, whether they be historical or modern or both.
- Potential for community involvement both as an asset in the research and content creation process, as well as future audience members.
- This idea has a sliding cost dependent on different factors.
- The partnership with UWS or similar institution could give the option of kind support, reducing costs.
- Event could run over a few evenings to allow for greater audience reach and community impact.
- Inclusive as anyone can drop into the exhibition space and experience the work.
- The deliverable would be relatively low cost and could require minimal hires/materials budget.
- The event could be part of a wider festival celebrating the area e.g. Bruce, boosting reach

#### Equipment and software:

- Vuforia
- AR Core
- Unity 3D
- Unreal Game Engine
- Adobe Creative Cloud
- Recording equipment
- Projector
- Screens
- Arduino
- Raspberry Pie
- TouchDesigner



#### Notes:

- Historian / Storyteller would need to run workshops in the university and feedback on project to maintain a high standard

### Cost Finder

Items	Description	Quality	Cost per quantity	Total cost
Project manager	Person overseeing the project and facilitating the various parties.	10 wks	£625	£6250
Historian content collection	Historian gather information about North Carrick and the surrounding area.  We need to understand the history and if there are any links to the community.	30 days	£125	£3750
Community input (optional)	Local community members and/or young people gathering stories about the local area.	20 days	£100	£2000
Storyteller	Storyteller liaises with the historian, community people and AR app developer. They need to understand the history / stories to best convey them.	25 days	£125	£3125
Marketing	Paying for marketing for the exhibition - coordinator's time to run campaign, social media ads, posters, newspaper, radio, etc			£2000
Graphic Designer	Graphic design helps with colour scheme, fonts, UI design.  Liaises with storyteller and AR app developer.	37.5 hrs	£30	£1125
Creative Technologies	Liaise with lature and students. Produce the digital interactions - using arduino, raspberrypie, projection mapping, animations, 3D modeling.  Present during workshops for students / lectures	75 hrs	£30	£2250
Web developer	Set up website for the event	22.5 hrs	£30	£675
Lighting designer	Liaise with lecturer and students. Present during workshops and on the night of the show.	75 hrs	£30	£2250
Materials/Equipment hire	Any costs for materials associated with the project such as projectors, lighting kit etc. This would depend on how you make the installations.			£1000-£5000
University	Students undergo a 6 week module  See details above 225 hrs per student  Historian, Storyteller, Lighting Designer and Creative Technologies are given 15hrs (2 days) per week to teach, interact with the students and help their ideas.  15hrs x 6 weeks = 90 hours  90 hours x 4 project leads = 360	360 hrs	£30	£10800



**Projection Mapping**  
**2.2 Audio / Visual projection mapping exhibition in collaboration with university**

**Twitter: @wonder\_fools**  
**Email: [contact@wonderfools.org](mailto:contact@wonderfools.org)**  
**Web: [www.wonderfools.org](http://www.wonderfools.org)**

Total cost with community input and large materials budget: **£39225**

Total cost without community input and small materials budget: **£35225**

If university paid fees in kind, total cost with community input and large materials budget: **£28425**

If university paid fees in kind, total cost with community input and small materials budget: **£24425**

If university paid fees in kind, total cost without community input and large materials budget: **£24425**

If university paid fees in kind, total cost without community input and small materials budget: **£20425**

## 2.3 Building facade projection mapping / lighting display

### Description

The deliverable for this project would be to create an event based experience telling the story of Maybole Castle through spectacular pieces of art, using a mix of audio-visual, digital media and outdoor projection.

Inspiration: 'Wolf Walkers' , 'Illuminate Derry' and 'Shine your light'.

The concept is to create an event based experience using a high end production company. The historians and storytellers would come together to brainstorm ideas on

local events within the area. We'd work with local artists to produce work which can be visualised through a mix of audio-visual, digital media and outdoor project mapping.

The event would run during a local festival or celebration. It would be a ticketed event and the idea would be to bring all the locals from the surrounding areas together.

### Benefits:

- The idea allows for different types of stories, whether they be historical or modern or both.
- Potential for community involvement both as an asset in the research and content creation process, as well as future audience members.
- Event could run over a few evenings to allow for greater audience reach and community impact.
- Inclusive as anyone can drop into the event and experience the work.
- The event could be part of a wider festival celebrating the area e.g. Bruce, boosting reach.

### Equipment and software:

- Unity 3D
- Unreal Game Engine
- Adobe Creative Cloud
- Recording equipment
- Projector
- Screens
- TouchDesigner
- VPT

### Notes:

- Invitations could be extended to community groups and local school students
- The deliverable would be a high cost

2.3 Building facade projection mapping / lighting display

Cost Finder

Items	Description	Quality	Cost per quantity	Total cost
Project manager	Person overseeing the project and facilitating the various parties.	15 wks	£625	£9375
Historian content collection	Historian gather information about North Carrick and the surrounding area.  We need to understand the history and if there are any links to the community.	30 days	£125	£3750
Community input (optional)	Local community members and/or young people gathering stories about the local area.	40 days	£100	£4000
Storyteller	Storyteller liaises with the historian, community people and AR app developer. They need to understand the history / stories to best convey them.	25 days	£125	£3125
Artist (content)	Create and produce work in response to the storyteller / historian content. Could include visual artists, performers, musicians	60 days	£125	£7500
Marketing	Paying for marketing for the exhibition - coordinator's time to run campaign, social media ads, posters, newspaper, radio, etc			£5000
Web developer	Set up website for the event	22.5 hrs	£30	£675
Lighting designer	Manage project mapping set up and produces work	300 hrs	£30	£9000
Lead artist	Liaises with storyteller and historian to produce work based on their information.	25 days	£175	£4375
Animator	Liaises with local artists and brings their ideas to life by producing animation which will be used within the digital media and outdoor projection	150 hrs	£30	£4500
Equipment Hire	Any costs for materials associated with the project such as projectors, lights, screens, sensors, cables etc.  <a href="https://www.emftechnology.co.uk/?gclid=CjwKCAjwk_WVBhBZEiwAUHQcmTJB4j_EPgOlqV_MQgpcev6UnVY8euYU7-SYFuXftMfRS-G0eNI5jRoCWz0QAvD_BwE">https://www.emftechnology.co.uk/?gclid=CjwKCAjwk_WVBhBZEiwAUHQcmTJB4j_EPgOlqV_MQgpcev6UnVY8euYU7-SYFuXftMfRS-G0eNI5jRoCWz0QAvD_BwE</a>			£10000

Total cost with community input: **£61300**

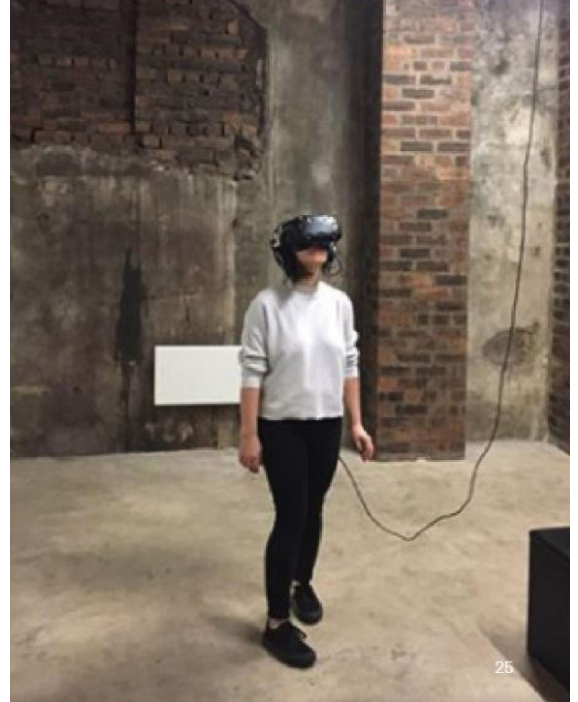
Total cost without community input: **£57300**

# **Virtual Reality Experience**

## Case Studies

### Siren Server

The Siren Servers event was a series of three VR experiences, all ranging from two to three minutes each. The work is created by The Butler Brothers, ISOdesign, Giles Lamb & Numbercult. The work is a mix of digital environments connected to the Greek mythology of the Siren; creatures who lured nearby sailors to their death through their enchanting voices. In this work, the Siren was adapted for the digital age and placed within a VR environment. VR technology provided a new virtual exhibition space within the real one that the viewer was already in, for interaction and movement.



### I'm Terribly Sorry

I'm Terribly Sorry is an interactive virtual-reality video, which the audience experiences through VR headsets. In working with virtual reality, Scottish artist Maclean was keen to explore the experiential nature of the medium and how the audience can participate in the artwork, and play a role in the narrative.

The video places the viewer into an apocalyptic world familiar from movies and video games, one drenched in Brexit-era social tension where mistrust and misunderstanding are rife. Within this dystopian British urban landscape, filled with oversized Union Jack-emblazoned tourist merchandise such as Big Ben keyrings and London bus teapots, several characters approach the user, each of whom has a large smartphone for a head.

These characters – stereotypes of privileged city dwellers – are played by the artist and voiced by actors. Initially benign and apologetic, they tell convoluted stories and attempt to elicit money, with their protestations soon becoming more sinister.



### 3.1 Virtual reality exhibition

#### Description

The deliverable for this project would be to create an exhibition which showcased artwork and artefacts within virtual reality.

Inspiration: Siren Servers and I'm Terribly Sorry

The concept is to create to create an art installation based on information provided by the historian and storyteller. The exhibit would be hosted in virtual reality which would allow a new world to be produced. The idea would be for the artist to portray their idea to a games design company who'd then produce the virtual reality experience

#### Benefits:

- The idea allows for different types of stories, whether they be historical or modern or both.
- Potential for community involvement both as an asset in the research and content creation process, as well as future audience members.
- Event could run over a few evenings to allow for greater audience reach and community impact.
- Inclusive as anyone can drop into the event and experience the work.
- The event could be part of a wider festival celebrating the area e.g. Bruce, boosting reach.
- Due to the VR element there is a good chance of PR interest.
- It would also be possible to tour the exhibition around North Carrick and beyond, into different community spaces.

#### Equipment and software:

- Unity 3D
- Unreal Game Engine
- Adobe Creative Cloud
- Recording equipment
- Virtual Reality Headsets

#### Notes:

- The deliverable would be a higher cost

#### Cost Finder

Items	Description	Quality	Cost per quantity	Total cost
Project manager	Person overseeing the project and facilitating the various parties.	10 wks	£625	£6250
Historian content collection	Historian gather information about North Carrick and the surrounding area.  We need to understand the history and if there are any links to the community.	30 days	£125	£3750
Community input (optional)	Local community members and/or young people gathering stories about the local area.	40 days	£100	£4000
Storyteller	Storyteller liaises with the historian, community people and VR developer. They need to understand the history / stories to best convey them.	25 days	£125	£3125

## Case Studies

Items	Description	Quality	Cost per quantity	Total cost
Marketing	Paying for marketing for the exhibition - coordinator's time to run campaign, social media ads, posters, newspaper, radio, etc			£4000
Lead artist	Liases with storyteller and historian to produce work based on their information.	25 days	£175	£4375
Performers	Performers for the VR content	75 hrs	£30	£2250
Musician / sound designer	Liase with historian / storyteller / artist / games developer to produce sound that is representative for the piece.	75 hrs	£30	£2250
UX designer	Liase with graphic design and games designers to create the overall application design.  Develop how the user interacts with the application. Set up User Testing sessions	112.5 hrs	£30	£3375
Graphic Designer	Graphic design helps with colour scheme, fonts, UI design.  Liases with storyteller and VR developer.	75 hrs	£30	£2250
3D modeler	Working closely with the games designer and artist.  The 3D modeller will create any of the virtual models that will need to be put into the virtual reality experience	225 hrs	£30	£6750
Real-time game engine developer	The game engine developer will produce the virtual reality experience. They will need to liaise with the artist, 3D modeller, computer scientist and sound designer and gather any of the relevant information.	225 hrs	£30	£6750
Computer scientist	Produce the coding for the games designer for interaction.	150 hrs	£30	£4500
User Testing	Group of people from various backgrounds / age groups undergo user testing of the application.  They report any issues to discover interaction issues / bugs.  40 people for 2hr sessions	80 hrs	£15	£1500
Equipment hire	Would need to hire 3 - 5 headsets  I'd recommend using the HTC Vive Pro and they have external base stations which are very stable when showcasing work in an exhibition environment	3 - 5	<a href="https://bryght.co.uk/product/htc-vive-pro-vr-headset-hire/">https://bryght.co.uk/product/htc-vive-pro-vr-headset-hire/</a>	£3000

Total cost with community input: **£58125**Total cost without community input: **£54125**

## Funding

The most natural funder for this type of work would be the National Lottery's Grants for Heritage. There are three different levels of funding applications from a low (under £10), mid (£10k-£250k) and high ask (£250k-£5m). We anticipate this work will fall into the mid category in isolation and possibly the high ask if combined with the other proposals from Hall Aitken.

As stories and storytelling is key to a lot of these ideas, Creative Scotland may also be an avenue to raise funds. Through the Open Project Fund you can apply for between £1k and £100k.



## National Lottery Grants for Heritage (£10k-£250k)

This programme seeks organisations looking to connect people and communities to heritage in the UK. With this range of ask, organisations can apply for projects lasting up to 5 years in length.

PostCovid19, the fund is prioritising heritage projects that: promote inclusion, boost the local economy, encourage job creation and skills development, support wellbeing, create better places to live, work and visit, and improve the resilience of heritage organisations. Applicants need to achieve **at least** the inclusion outcome.

There is no deadline for the fund and organisations can apply at any time. Applications are assessed within 8 weeks.

## Creative Scotland – Open Project Fund (£1k-£100k)

If the proposal was significantly weighted towards the more creative aspect of discovering, curating and telling stories in innovative ways then CS could be an option. Any organisations are able to apply for up to £100k if their project involves the arts, screen or creative industries, although a partnership with a local arts organisation (e.g. Ayr Gaiety Theatre) could be advisable. This would demonstrate to Creative Scotland an artistic expertise as well as demonstrating meaningful community connections between organisations.

There are no deadlines for this fund and it can be applied to throughout the year. Only one application can be assessed at one time, and you can only have two 'live' projects – live meaning any stage from assessment to final evaluation – which might impact a partnership with the Gaiety, for example. If requesting between £1,000 and £15,000 the outcome in 8 weeks. If the request is between £15,001 and £100,000 the turnaround time is 12 weeks.

From experience, we advise no more than a mid-level grant through the Open Project Fund (£25k-£75k) as it can be hyper competitive, particularly with maximum requests.

We have previously been successful at match funding a Creative Scotland bid for a theatre production with wraparound augmented reality work funded by National Lottery Grants for Heritage

## Arts and Business Scotland – Culture and Business Fund Scotland (£1,000 - £40,000)

The fund promotes collaboration between Scottish businesses and arts and heritage organisations to deliver new arts and heritage projects.

Arts or heritage organisations that attracts an eligible business to sponsor an aspect of their work the fund will match that sponsorship, pound for pound. In-kind and cash sponsorship are eligible, but must come from the sponsor's own funds, goods or services. It is funded by the Scottish Government via Creative Scotland and Historic Environment Scotland.

This would obviously depend on attracting a sponsor but could be a good avenue to boost funds. Worth exploring if an in kind partnership with university as in 2.1 and 2.2 could be eligible for match funding.

More information: [www.aandbscotland.org.uk](http://www.aandbscotland.org.uk)

## William Syson Foundation – (Large grants over £5001)

The organisation's objectives are: A) the advancement of the arts, heritage and culture, including (but not restricted to) promoting, developing and ensuring the practice and enjoyment of the arts, including music, the visual arts, theatre and literature as the directors in their absolute and uncontrolled discretion think fit; and B) without prejudice to the forgoing generality, the charity will have a particular (but not exclusive) focus on Scottish organisations and individuals resident in Scotland.

Activities which fall within their charitable purposes include the following:

- Visual arts, meaning works of art created to be appreciated by sight, such as painting, sculpture, and film-making;
- Performing arts, meaning creative activity performed in front of an audience, such as music, drama, theatre, and dance;
- Literature;
- Heritage, where there is a significant element of the Arts included.

More information: <https://www.williamsysonfoundation.org.uk/make-an-application>

