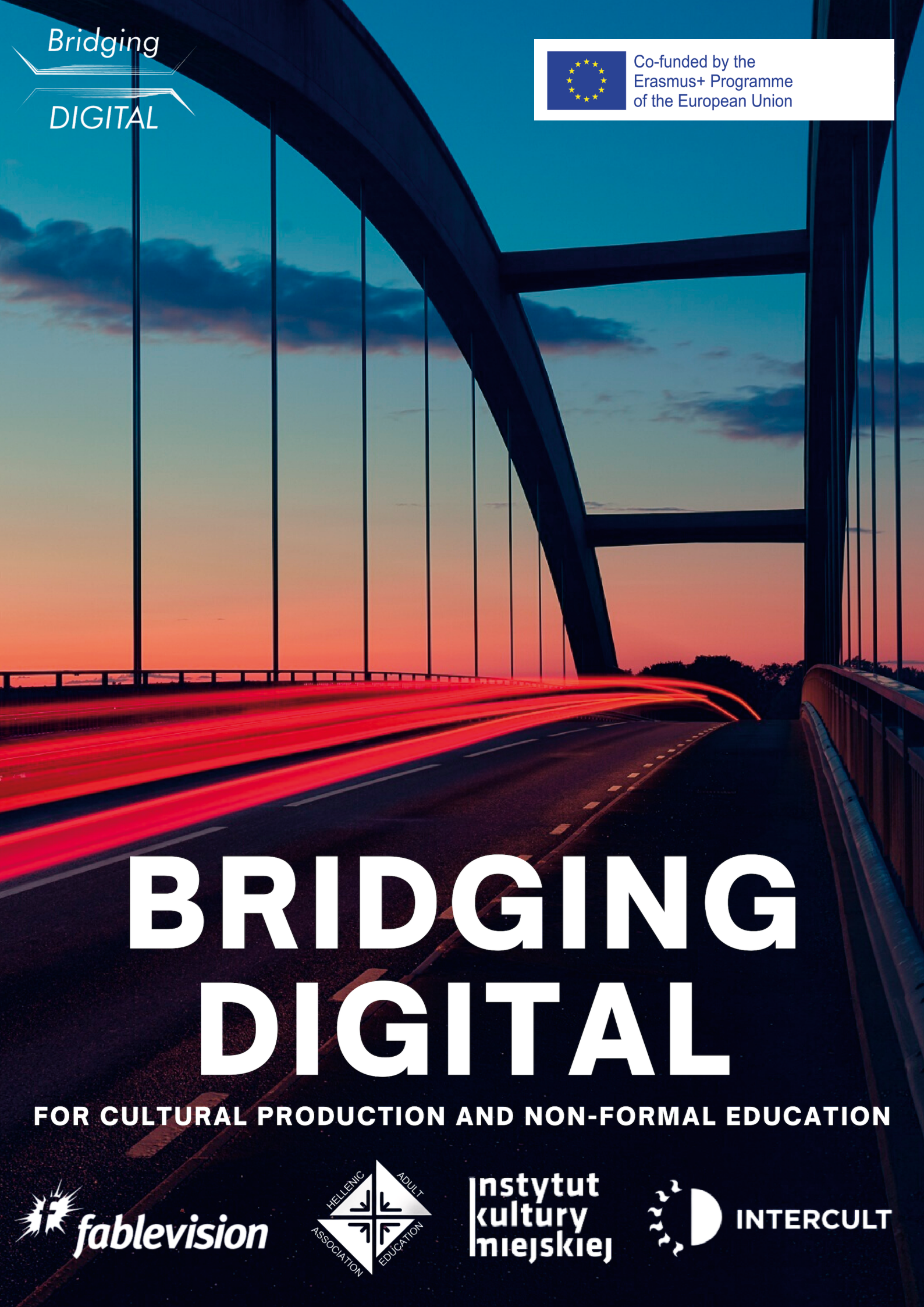
Bridging
DIGITAL
Co-funded by the
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BRIDGING
DIGITAL
FOR CULTURAL PRODUCTION AND NON-FORMAL EDUCATION
fablevision
HELLENIC ADULT EDUCATION ASSOCIATION
instytut kultury miejskiej
INTERCULT

Bridging Digital - Cultural Education for Digital Skills

Project number: 2020-1-SE01-KA227-ADU-092583

IO3 Ingredients book of digital tools for cultural workers

Co-funded by the
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Bridging Digital Ingredients Book

A handbook of basic skills in digital tools for cultural production and non-formal education

Introduction

Bridging Digital was an Erasmus+ funded partnership project of four organisations from Greece, Poland, Scotland and Sweden: **Hellenic Adult Education Association** (Greece); **Instytut Kultury Miejskiej (IKM)**, a municipal cultural institution (Poland); **Fablevision**, a cultural development NGO (Scotland) and project coordinator **Intercult**, an independent production and European resource centre for culture (Sweden). The main aim of the project was to explore digital technologies and how they can enhance existing creative arts and educational practices in community learning. The method was a cross-fertilisation of learning between the creative, educational and digital worlds.

Cultural practice has a key role in delivering non-formal learning and new media can support that work, particularly in the post-COVID-19 pandemic context when artists as well as cultural and community education workers are adjusting to producing work in different/novel formats. Meanwhile, mainstream art schools and universities across Europe are adapting their methods to embrace new teaching practices. The COVID-19 pandemic affected almost every aspect of daily life, including the direct communication between artists, local citizens and live performance - inducing a major crisis in the cultural sector. This has had a major impact on those who make their living in the arts and culture sector. At the same time, the community and creative sectors often lack the knowledge of how to use digital tools in more creative ways.

In Bridging Digital, organisations from the cultural, media and community sectors co-operated with artists, multimedia experts, adult educators and academics to create new methodologies for technologically enhanced formats and to improve the digital competence in the cultural and community sectors.

Across the four partners, individual projects were developed as case studies exploring six digital environments within the context of adult learning. These were (and please see the glossary for defi-

nitions of terms) Projection Mapping (PM), Augmented Reality (AR), Virtual Reality (VR), Podcast, Digital Film (DF) and Animation. These case studies of innovative digital practices in non-formal education identified 'critical ingredients' for the use of digital technology in community focused arts and learning. From podcast and projection mapping to live cinema, AR and VR performance, the project explored diverse contexts of community cultural practices, evaluated their findings and shared them in a publication of case studies. As the three-year non-formal adult education project reached its conclusions, we compiled this **Bridging Digital Ingredients Book**, based on further analysis of the partnership explorations; identification of other good practices in the field and a compilation of their 'critical ingredients'.

Section 1:

How to use Digital Technology in the Cultural and Community Sectors

This section is designed for adult educators aiming to support artists in developing their digital skills and use digital technology to enhance their artistic creation, reach out to larger and varied audiences and boost their creativity. It contains the basic guidelines and key elements to follow as distinguished from the case studies developed in the four partner countries.

For a better understanding of how and where these findings were identified, visit the **case studies** portfolio at **www.canva.com/design/DAFGJEzhlIw/jap_Pkq_lmMnBCmmU2UiJw/view.**

Projection Mapping and Augmented Reality (AR) in local heritage contexts

Fablevision (in collaboration with Trent Kim)

In Scotland, digital tools were trialled with two different types of communities:

1 - Dunure: a geographical community (an ex fishing village developing new future purpose through an emerging community development trust called Dynamic Dunure).

2 - Renfrewshire Witch Hunt 1697 (RWH1697)**:** a community of interest group focused on regenerating their town through the re-telling of the story of 17th Century 'witch' hunting.

Digital Tool 1

Projection Mapping at Dunure Castle

Digital Tool

MadMapper - Projection mapping technology

Target Group

Local artists and community members

Step 1: Finding a site specific theme

Projection mapping is an emerging digital art practice that offers new opportunities for site specific arts and events. Particularly, it is important to recognise its unique attributes in visual and immersive storytelling by its ability to re-scale and map onto architectural surfaces. Hence, there is a direct connection between the visual representation and the architecture/site. As a first step, the community/community of interest should decide on a site-specific theme, or organise a workshop that brainstorms it.

Brainstorming meeting between students and community members - with cake!

Step 2: Training in projection mapping specialist software

The subject of projection mapping combines theatre lighting, film and live entertainment technology. In particular it leads the development of specialist software such as MadMapper, HeavyM, Resolume Arena. Those specialist applications are capable of handling the whole process of projection art from creating and animating visuals to mapping and operating scenes and cues. Instead of introducing conventional animation processes separately from mapping, it is beneficial for participants to learn to manage the whole process within a single specialist application so they can understand the full process more quickly and avoid any technical confusions that can be caused by using multiple platforms simultaneously. There is also a technical advantage to using the inbuilt animation features as they are coding-based graphics that are reconfigurable rather than stock image and movie replays so it runs more lightly and smoothly on the system.

The first site visit

In addition, it is also beneficial for the participants to undertake a series of simple projects to gain experience in repetition, and gradually advance their skills on animation, programming and operation rather than learning each part in-depth all at once.

Step 3: Conducting a site visit and survey

The site visit and survey is an important step for the participants to become more motivated and inspired by the project, but is also a necessary step to identify technical requirements for the public installation and performance.

During the site visit and survey, the participants must collect the following information:

- a collection of wide shots that cover the entire surfaces of potential projection areas.
- accurate dimensions of those projection areas in consideration.
- the available distance between the projection areas and the position of the projector.
- notes on any potential technical obstacles such as reflective surfaces, obstructions (signposts, benches, low-hanging cables etc.), the nearest available power outlet and a planning permission requirement.

Using the collected dimensions and distance, the participants can determine a suitable type of projector as well as the position of the projector for the installation. The **projection calculator - www.projectorcentral.com/projection-calculator-pro.cfm -** is a useful tool to help determine the required distance, type, dimension and intensity of the projection.

Programming and fine-tuning the work on site

Step 4: Curating individual works

Curating individual works is not only about deciding the order of playing individual projection artworks, but also about discovering hidden connections between individual works. This process can help establish a clearer overall narrative of the collective works and justify any necessary modifications to the individual works. It is important for this curatorial process to take place well in advance of the public installation and performance to allow time for any changes. It is very important for every participant (artist, local community member and planner) to contribute to this process and openly share their views.

Step 5: Hosting a public event

Projection art showcases as open air events are weather-dependent and seasonal, but also (even during a dark season) there is only a small time-frame window for the projection to be both visible and accessible to the audience. If allowed, planning a set-up and technical research process prior to the performance day would be ideal. In the case of the same day set-up and performance, more accurate and thorough pre-planning should be undertaken. Using a close reference image to help pre-programme the mapping so the participants can focus on fine-tuning within the limited amount of set-up time. The technical set-up can vary depending on each site, for instance, it might involve running a power generator, building a gazebo, installing outdoor speakers, safety lights and safety rails.

Setting up the projection mapping equipment

In addition, as a public event, it is mandatory to check event logistics; obtain any required licence/ permission with the relevant local authority; carry out a risk assessment and apply for a suitable public liability insurance. It is also important to invite members of the local community and beyond to share the creative outputs and narratives as well as to record the performance to share it online after the performance.

Challenges to consider

On one hand, like other public art installations and live performances, planning a projection art project can face various technical and logistical difficulties, therefore thoroughly researching the site and working closely with the local authority is key. On the other hand, bringing the different

groups of participants together and facilitating collaboration between different artistic groups can be difficult. However, with a shared rationale behind the theme, individual participants can recognise each other's perspectives and collaborate with respect.

Possibilities and advantages

Projection mapping is a useful tool for community-based art workshops - offering new creative possibilities for site-specific storytelling. Historical narratives can be performed at the site and future visions can be digitally projected.

Also, importantly, this particular tool has clear advantages such as being more sustainable and non-invasive in comparison to other forms of physical art display. Individual works are digitally achievable and can be reinstalled. Hence, it is possible to gradually form a historical bank of artworks over time which can inspire new artists to join this creative dialogue across generations.

Projection artwork at Dunure Castle in Ayrshire

For more information about Hi/Stories Dunure see the following link: **https://sites.google.com/sbe.uws.ac.uk/nma-dunure/2021-22/histories-of-dunure.**

Digital Tool 2

Community Heritage in Augmented Reality

Fablevision - Scotland

Digital Tool

Augmented Reality

Target Group

Community heritage practitioners

Every QR code *can* tell a story

Step 1: Introduction, theory and practice

Before starting your project it is important to note that Augmented Reality (AR) is only one tool in a toolbox of potential digital technologies that could be used to support 21st Century explorations of local history and heritage.

The cultural planning approach to history and heritage, i.e. the use of the assets of the past to build new narratives for the present and future, is not new. The past, as a route-map for creating distinctiveness in our communities/communities of interest, is as useful now as it has always been. AR merely gives us new abilities and proposes new prospects in terms of telling the stories. It brings our work into the present day - it achieves appeal to young people and allows technology to be harnessed in these traditional processes.

It is possible to use AR for digital mapping or QR coding as in our examples. It is equally possible to use it as part of a heritage interpretation offering.

Step 2: Planning and research

Our research phase on the Renfrewshire Witch Hunt 1697 (RWH1697) was intensive and longitudinal. The group has been in existence since 2012, exploring the history of 17th Century 'witch' trials and their implications for the present day. It was important to understand how dramatically the pandemic had impacted the group (all volunteers had left and the live activities had completely stopped) in order to create appropriate new activities and approaches. We worked with this community group and paired them with both StudioFV (long-term unemployed/people with long-term conditions who are media technicians with a desire to learn new skills) and students from the University of the West of Scotland (UWS) under the tuition of New Media Art lead, Trent Kim (experts in digital media).

Video and audio are used to complement more traditional storytelling techniques

If digital technology is to support community aspirations, it is vital that the topics to be represented are thoroughly researched and interventionist artists have a deep understanding of the needs of the group. It is also important to link into a much wider network than just the community group. All cultural planning works from the bottom-up supported by the top-down. The support of the local authority, the business community, the university community, the wider creative and heritage networks in the local area as well as (in the case of RWH1697) the national network at Scottish Government level who are researching the wider issues of 17th Century witch hunting, enabled RWH1697 to be key players in a much bigger jigsaw.

Step 3: Working process

Working with digital media professionals was essential to maximise the impact of the final result. Digital media skills were taught to members of StudioFV via a series of workshops and were used by the RWH1697 community group to develop new ways of telling the story. What is most exciting is when the community then takes the learning and practice to new areas and levels as happened with RWH1697. The key therefore is to find ways of cultivating the kind of creative, exploratory environment where community group members are empowered to grasp the technology and 'play' with it experimentally. Inspired by the possibilities of what digital technology can bring to enhance their practice and exploring/creating/learning by doing for themselves, new aspects emerged to support their needs/aspirations.

Step 4: Post-production, completing materials for the final presentation

In both of the Scottish case studies, the final presentation was an essential component of the process. In the case of RWH1697, the process of the group learning the potential of new digital technology was a personal and community group journey. However, what we learned was that when the audience joined the process and were able to access the story via the new digital QR code, the whole process began to make sense and the group were able to plan together with the local authority and partners what could possibly be the next steps.

Step 5: Budget costs to consider working with AR

Digital tools are inevitably expensive therefore working in partnership with Bridging Digital, the Local Authorities, UWS and students was a vital aspect. We have not calculated fully the 'in-kind' support to the group from UWS, StudioFV, student new media artists, the graduate new media artist, Robert Mackie as well as support from the Council responsible for the land, permissions and licences. The bottom line is that this would have been a very expensive process and product without all the various partnerships and in-kind input. The group managed to raise some actual funding from local funding bodies because of this support and because they were able to demonstrate partnership funding via Fablevision's involvement in the Bridging Digital project.

Challenges to consider

Because AR can be expensive, the enrolment and inspiration of others in the community is the biggest challenge. Potential partners need to 'get it' and understand the potential before they will be

enrolled enough to take it forward: but with partnership - anything is possible. Had the group been without support, they would: a) never have envisaged AR storytelling as being something that could help them achieve their aims; and b) would never have been able to raise sufficient funds to commission an artist, technical support, UWS support, StudioFV support and all the digital technology (including sound studio for recording, film cameras, and computer software).

Multimedia techniques work with traditional educational processes

We are clear that the results would not have been anything near what they were had the group been trying to do this in a vacuum without partnership. This is what makes EU funding for projects such as Bridging Digital such an essential component.

Possibilities and advantages

Now that the AR production is realised, the story is accessible via a QR code embedded in a stainless steel plaque situated at the site of the execution of the 'witches' at Gallows Green. The story now has the potential to reach a much wider audience than it would have otherwise. The key lesson here relates to sustainability: these forgotten histories will now be told into the future.

Digital Tool 3

Virtual Reality & Theatre

Intercult - Sweden

In Sweden, the communities of interest included a local theatre group and a community of performance artists. The project was mainly done in adult education schools in Stockholm - but workshops were realised in Gothenburg and in the small village of Riddarhyttan in Bergslagen.

Digital Tool

Virtual Reality

Oculus (Meta) Quest 2 (Advanced All-in-One

Virtual Reality Headset)

Insta360 ONE x2 camera

Target Group

Freelance performing artists

Step 1: Introduction, theory and practice

Before starting your 360 film project it is a good idea to get acquainted with the 3D-camera and its possibilities. Have fun with the equipment. You can test filming from different angles and perspectives. Then try on the headset and practise using the hand-held controls when you are watching a film. Get into the immersive experience of being 'inside' the film. This will help you when you are planning your own film project. There are now very good tutorials on Insta360 both app-side and on YouTube etc.

Step 2: Planning and research

- Start from an idea, inspiration or subject and draw, write, discuss and explore it to find and settle on a project to realise. The script will help the learners to develop the artistic idea. The next step is to devise a storyboard.
- Include examples for the technical aspects: framing, 360 filming, camera movements, special effects and the artistic aspect; scenography both virtual and built sets.
- In the second phase it is time to test your ideas.

- The thinking, planning and storyboarding are a great start. However, you will encounter surprises during the test phase. Try to keep an open mind and do your best to accept both the positive and negative surprises along the way. When you have created a storyboard that you are happy with, completed several run-throughs and tested different scenarios, you can then brief everyone.

Step 3: Working process

- Come prepared! Participants' preparation is key to getting the most out of a session testing the equipment.


Practice, as always, makes perfect

- Take small steps and experiment.
- Do not give up if everything is not working perfectly at the first try.

Step 4: Post-production, completing materials for the final presentation

- For post-production, in addition to the Insta360 editing app, editing software such as Adobe Premiere Pro and/or Final Cut Pro can be used. Import the video files into the software to stitch the images together. Export when you are done with the last bits - titles, credits and so on.
- See YouTube for **Insta360 ONE x2 - https://www.youtube.com/watch?v=b-kjaKe0BWM** and **Final Cut Pro - https://www.youtube.com/watch?v=KvzOtu-pgf4** step-by-step tutorials.
- Don't underestimate the time post-production takes.

Step 5: Budget, costs to consider working with VR

- Digital tools for creating a VR-film can be costly and prices vary according to quality.

But as a beginner the learner can come far with digital tools that are affordable.

- A 3D camera costs from €500-15000.
- The Oculus (Meta) Quest 2 - Advanced All-in-One Virtual Reality Headset costs €500.
- An editing programme app for mobile phones is free but there are also editing programmes for computers, such as Final cut pro, that cost €300.
- Insta360 camera can also be used as a 3D scanner and there are now lots of VR-tour apps for free, basic level and up to PRO.

Challenges to consider

Strive to minimise barriers to entry to motivate participants. If you focus on the fundamentals only, the technology becomes accessible. A guiding principle useful to remember when hosting a work-shop on VR, is that the participants do not need to learn everything about the piece of equipment in order to use it.

Direction and scriptwriting are essential to the process

Possibilities and advantages

For inspiration from the Swedish team you can read these articles:

1. **Create Performing Arts with VR – Learning by doing!**
   www.intercult.se/en/create-performing-arts-with-vr-learning-by-doing/
2. **The possibilities and limitations with technology – with Ongoing Realities**
   www.intercult.se/en/the-possibilities-and-limitations-with-technology-with-ongoing-realities/
3. **Create an artistic environment in VR with Adam Wittsell!**
   www.intercult.se/en/create-an-artistic-environment-in-vr-with-adam-wittsell/
4. **Dance in virtual reality?**
   www.intercult.se/en/dance-in-virtual-reality/

Digital Tool 4

Podcast and history

Instytut Kultury Miejskiej (City Culture Institute) - Poland

Digital Tool

Podcast

Target group

Librarians, archivists, local guides

Step 1: Introduction, theory and practice

Explore the area. Ask at the source.

The 2020 pandemic has turned our world upside down. Many solutions and activities suddenly stopped working. We needed new ones. Now we know well that some of them will stay with us for good. This is the case with podcasts, for instance.

In 2020 every third Polish man and woman started an exploratory adventure with podcasting. We thought that it could also be a good solution for librarians, archivists, all local storytellers and collectors of history. **The opportunity is to reach your audience directly - enlarging the group and popularising your own activities, passions and history.**

We have been working with professional librarians, archivists and local guides for years. We consulted with them about our idea for workshops on preparing podcasts. We asked them for their opinion and the response was positive. In fact, many of them had already thought about this form of communication.

Step 2: Planning and research

Think about your group for which you are preparing workshops.

Find out what possibilities they have, e.g. in the use of paid-for software and skills, or in the use of new technologies. Adjust the workshop programme to the level of participants. You can also schedule basic and advanced versions of the workshop. Find a suitable place for the workshop. It would be

good if the participants had the opportunity to work with professional equipment - microphones and a sound-proofed studio. Hire an experienced person with practical knowledge of podcasting to conduct classes - participants will have a lot of questions.

Using the services of a podcast professional helps instil best practice

Step 3: Working process

The basic workshop plan should include:

1. Why do a podcast and how do I go about it?
2. What tools do I need to get started?
3. Where do I get sounds and music and how do I put them in the background?
4. How do I create the first episodes?
5. How do I share podcasts and get listeners?
6. What should I pay attention to when developing the workshop?

Above all, you will need support for an audio processing program, e.g. Reaper.

The workshop should also include editing your own clips and learning sound editing.

Step 4: Post production

Support and stay in touch.

Make an appointment with the participants for an interview for a specified time e.g. two months. Then ask them how they are doing, if they need any support - maybe a second edition would be

needed, e.g. to clarify a certain topic or facilitate marketing. Offer participants promotional support for their organisation when starting their adventure with podcasts. Be open to their needs for improvement and keep your finger on the pulse. In the field of new technologies, everything is developing very quickly. New tools, programmes and solutions appear all the time.

Step 5: Budget costs to consider when working with podcasts

These are not ordinary workshops.

In addition to standard costs when organising workshops, in the case of podcast workshops, you should take into account the additional cost of renting a studio or a special space prepared for recording.

Check if there is an available makerspace in the local area. The workshop programme should include the option of working on free, open source software as a replacement for paid software where budgets are tight.

The heart of a good podcast is creating compelling content

Challenges to consider

Crossing another digital bridge is possible.

The challenge is to familiarise participants with this tool so that they want to improve themselves. It is obvious that no one will become a professional podcaster during one class, but we can make someone who feels that this is a medium for them confirm this belief and want to develop further in this direction. We can, perhaps, help him/her cross a digital bridge and overcome another digital barrier.

Possibilities and advantages

Wide range of topics: Podcasts are available on virtually any topic you might be interested in - from sports to business to history and culture. This allows you to find an example podcast that matches your interests.

Accessibility and convenience: Podcasts are available over the internet, which means you can listen to them whenever and wherever you want. Plus, you can listen to them while you do other things.

Accessible to everyone: Podcasts are often free and you don't need any special technical skills to listen to them. You can listen to them on your smartphone, tablet, computer or other device, which means that they are available to anyone with access to the Internet. **Listen to Jacek Tlaga**, who talks about his idea for a podcast in this video: **https://youtu.be/coy8LVF6CP4.**

Podcasts are a popular and effective tool for creating community-centred content

Digital Tool 5

Animation Creation Marathon for Designers, Artists, Creators

Instytut Kultury Miejskiej (City Culture Institute) - Poland

Digital Tool

Hackathon - animation creation marathon.

Target Goup

Designers, artists, creators

Step 1: Introduction, theory and practice

Only cooperation will save us!

A hackathon - in our case an animation creation marathon - is a kind of event that allows you to generate great ideas/projects based on cooperation in a friendly and creative atmosphere.

It consists of gathering interested people in one place for several hours. Participants are given a task to perform and the results of their work are assessed at the end; usually prizes are awarded for the best works. However, paradoxically - despite the element of competition - hackathons are characterised by cooperation and mutual assistance.

In a group that spends several hours together - the divisions between the leaders and the participants become blurred - it turns out that everyone can be an expert. Equally, everyone is a learner. Such interdisciplinary cooperation brings added value to the event and is as important as the actual results of the work - in our case - animations.

Step 2: Planning and research

A *hackathon* is not an ordinary event. It's not for everyone or everywhere. Participants must usually reserve a dozen or so (sometimes several dozen) hours, which they will devote to participation. Plan a suitable place with sanitary and kitchen facilities. If the event takes place at night you will also have to arrange suitable sleeping arrangements - there may be a floor to spread out a mattress and sleeping bag. A hackathon can be a bit of a camping trip. Make sure that participants are aware

of what they are signing up for. Describe the conditions in detail in the event information.

The task is very important during hackathons. Plan them in such a way that they can be realistically carried out in the allotted time. It should also be interesting and encourage innovative activities - for example, combining technologies, different skills and tools. In our case, it was the preparation of animations to music. We identified three pieces of music and invited the composers to personally encourage the participants to select *their* piece. Thus, the event also gained an element of collaboration between the client and the composers. Participants had to meet the expectations of musicians and cooperate with them in the production of the animations.

Step 3: Working process

Organising a hackathon in eight steps:

1. Think about who you want to work with. Invite a cultural centre or a local organisation to co-operate - one with which you can have a common goal.
2. Time and place - think about who will take part in your event and what will be the best for this group: a) time - weekend or weekdays? b) place - it must be properly equipped, large enough and with good WIFI.
3. Man does not live by work alone. A dozen or so hours is a lot - remember to plan food and drink but also allow for breaks - maybe a fireworks show? Be sure to plan a grand finale during which all the works will be presented and you can celebrate.
4. Budget - carefully count all expenses. Due to the length and often a large number of participants - hackathons are not the cheapest. Consider - is this really an option for you?
5. Come up with a great task that will be a real challenge for your participants.
6. Formalities/contracts/regulations/licences - prepare them in advance. Take care of technical support and catering.
7. Ensure the promotion is appropriate.

   Establish cooperation with the media and experts who can become ambassadors of your event. Invest in a good visual identity. Announce the event and start registration well in advance - at least a month. Remember that participants need to book a dozen or so hours - probably more. They need time to plan this.
8. Zero hour. Start!

   Keep your participants engaged. Provide them with substantive technical support, but give them creative freedom. Report live on social media to build the excitement.

Step 4: Post production

It's a good idea to prepare photo and video coverage of the event. Participants like to find and tag themselves in nice photos and professional videos that they can share on their social media. Remember to collect the outputs and impacts from the event, i.e. projects that were generated during this event and what spin-offs unfolded. Collect the evidence in one place and be proud of it.

Step 5: Budget costs to consider working with Hackathons

These are not ordinary workshops.

Carefully count all expenses. Due to the length and potential number of participants - hackathons are not the cheapest.

Challenges to consider

Hackathons are very engaging - not only for the participants but also, and perhaps above all, for the organisers. There is a lot of work there that you can't see. It's a bit like organising a weekend for sometimes dozens of people - during which they must eat, have somewhere to sleep, somewhere to charge their computers and leave no time for boredom. On the other hand, satisfaction after a successful event is directly proportional to the work you put in. It is worth it.

Possibilities and advantages

1. Development of programming/design skills: participants of hackathons have the opportunity to work in groups and develop their programming, design and collaborative management skills.
2. Creating innovative solutions: hackathons enable the creation of innovative solutions and proto types.
3. Integration: During hackathons, participants have a chance to integrate, meet new people and establish valuable professional contacts.
4. Satisfaction from teamwork: working in a group, developing ideas and creating something new can provide hackathon participants with the satisfaction and joy of teamwork.

Watch the report from our Animaton - **https://youtu.be/5wm4NGlC3i4** - which took place in April 2022 and view the animations submitted to the **Animaton finals - https://youtube.com/playlist?list=PLcN3PJTQj8Pv8d3sKu_WmF6Q1IvVZACMD.**

Digital Tool 6

Film and theatre

Hellenic Adult Education Association (Επιστημονική Ένωση Εκπαίδευσης Ενηλίκων) - Greece

In Greece, digital tools were used with a community of interest named "Angels of Joy", a not-for-profit association of artists offering psychosocial support to children, elderly people and people with disabilities. For the Bridging Digital project, we worked with elderly people living in care centres. For the creation of the artistic product we also worked with adult educators to explore its use for further educational purposes.

Digital Tool

Equipment for recording, playback, editing video and audio

Target group

Adult educators, performing artists, adult learners

Step 1: Preparation and planning

- Form a creative team consisting of theatrical performers, educators, film/video artists & technicians.
- Define your project's main concept, its target audience and its potential educational applications.
- Determine and schedule the working steps from the initial research to the project's completion.
- Hold educational workshops, combining theory and practice, on the aesthetic and practical issues involved in adapting the theatrical act to the digital medium.

Step 2: Research, selection, and processing of reference materials

- Collect all reference materials (text, video, audio) to be used in authoring the theatrical text - for example, the text of *The Song of My Life* was based on personal stories of elderly women and men who live in nursing homes, collected in the form of digital voice recordings.
- Select and organise the materials to form a cohesive narrative.

Step 3: Pre-production and production

- Write the complete script, including all necessary staging and set directions.
- Adapt the theatrical text to a detailed film screenplay, considering and utilising the differences between the two media.
- Break down the screenplay into individual scenes and determine the number and type of shots needed to fully cover each scene. At this stage it is useful to take into account the unique ability of the film medium to combine different framing sizes, shooting angles and camera movements, as opposed to the fixed viewpoint of theatre.
- Create a complete coverage chart (lined script) for each scene, taking care to leave enough flex ibility at the editing stage.
- Design and execute the sets and costumes to be used for each scene. You can opt for the reduc tive, symbolic quality of the theatrical sets over a more realistic look that would require actual locations, if it suits your visual style and budget.

Applying dramatic themes and means in the digital domain

- Make a list of all props needed and secure them.
- Finalise the shooting crew (a basic team would include a director, a cinematographer, a sound recordist, an art director, a gaffer and a script person).
- Design the lighting for each scene/shot.
- Make a list of all production equipment needed (camera, sound, lighting, grip) and secure it.
- Finalise the casting and do some rehearsals if needed.
- Prepare an exact shooting schedule, taking into account the availability of people and locations as well as budget considerations.

- Organise every practical detail of the production.
- Shoot the scripted scenes according to the screenplay and the coverage plan you have created.
- Keep a detailed continuity report to be used by the editor.

Step 4: Post production

- View all rushes (recorded materials) and select the most successful take(s) of each shot.
- Work together with the editor, from the initial assembly-edit to the rough-cut.
- At this stage it might be useful to show the rough-cut to basic artistic collaborators for their feedback.
- Create the final cut and go through the final technical processing stages (colour correc tion, sound mixing, titles/graphics etc.)

Nothing beats a good beginning, middle and end

Step 5: Meeting the audience

- Show the completed film to a target group and discuss it with them. This can help reveal possible strengths or shortcomings of the choices you have made, but will also give you a concrete idea of the impact of your work on your audience.
- Make any final changes you deem necessary, based on the experience of the pilot screening.
- Organise larger scale screenings of your film to specific audiences, including educational environments. Collect and evaluate their responses.

Budget costs to consider

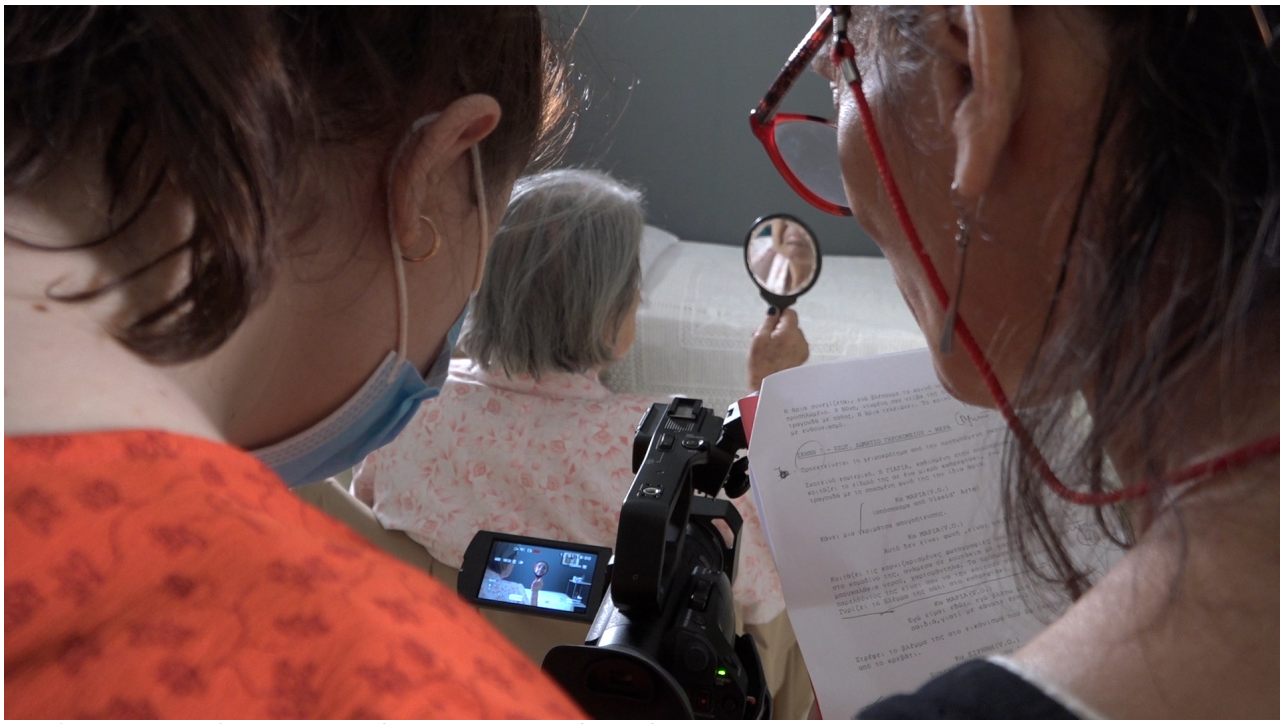
This approach can be adapted to several budgets, from very basic, bare-bones applications to high-end productions. Remember that limitations often enhance creativity.

Challenges to consider

Challenges vary according to the project. The basic challenge in our particular endeavour was to motivate the audience to connect the personal to the social, to create bridges of communication which can break the isolation and marginalisation of the elderly. This is clearly visible in the documentary *At the Site of the Angels*, which documents not only the construction process of *The Song of My Life,* but also its impact on its first, very sensitive viewers.

Possibilities and advantages

The digital medium, if properly used, can facilitate the distribution of theatrical works to a wider audience, but also to special and/or restricted environments, where a live performance is unfeasible. The severe restrictions imposed globally due to the COVID-19 pandemic have been a good opportunity to explore such alternatives. Furthermore, the proposed method offers artistic groups working in theatre a purely cinematic toolkit, which can enhance their creativity. Finally, it can be used as a valuable tool in adult education or other learning environments, inspiring dialogue on a wide range of issues.



The 'digital bridge' is a means of bringing to the fore often neglected groups and themes

At the Site of the Angels and **The Song of My Life** (English subtitles) can be viewed via the following links: **https://youtu.be/y8qVBmiJuqc** and **https://youtu.be/8VJA2NsZkr8**.

Section 2

Ingredients of multidisciplinary (technological, pedagogical and artistic) community learning actions

In this section, we will discuss the paradigm and methodology. We will unpack what we are calling 'base ingredients' (ingredients we discovered were common across all of our case study explorations) and 'seasoning ingredients' (ingredients that were particular to specific projects). We will also discuss our findings and conclusions from our work on this project.

The term ingredients seems most appropriate because we discovered them in multiple projects and mixed them to create a unique blend for each. **In other words, we learned that there is no 'recipe'. There is no singular formula for a technological, pedagogical, and artistic project in a community learning setting. Rather, success relies on being aware of the multiple facets of such interdisciplinary inquiries and facilitates the sort of creative explorations that result in each creating their own, unique 'recipes'.** The main goal of this report is to encourage readers to become familiar with our chosen ingredients and observe how they were combined to create unique, bespoke 'recipes', with a view to encouraging others to discover their own ingredients and how they might use them in their own recipes.

1. Paradigm and Methodology

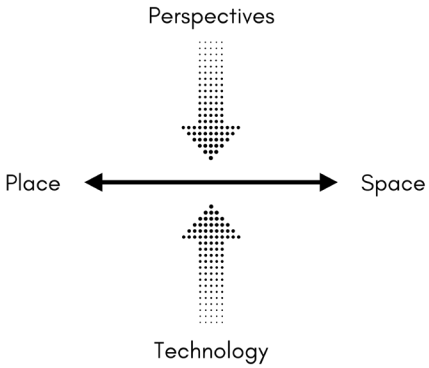
The main goal of Bridging Digital was to challenge and transform preconceptions of how people learn in different community settings by using digital technology. This transformative paradigm led to our individual case studies, where the context of each different community was considered and respected.

...space is like the word when it is spoken, that is, when it is caught in the ambiguity of an actualization, transformed into a term dependent upon many different conventions, situated as the act of a present (or of a time), and modified by the transformations caused by successive contexts.

(Certeau, 2002, p. 117)

According to Certeau, *space* is fundamentally distinct from *place*. *Space* is where transformation is expected, unlike *place*, which implies stability. Certeau's definition of space makes intuitive sense from a pedagogical standpoint, as learning ultimately seeks transformation, and it also makes intuitive sense from a technological standpoint of Bridging Digital, where digital technologies seek transformational effects. Each of our case studies endeavoured to provide safe, collegiate space for sharing, learning and creative experimentation.

Introducing digital technology alone cannot achieve transformational effects, but recognising and incorporating new, forgotten or hidden perspectives revealed by introducing digital technology, helps in pursuing transformation. In fact, those individual perspectives are the base and seasoning ingredients in this section.



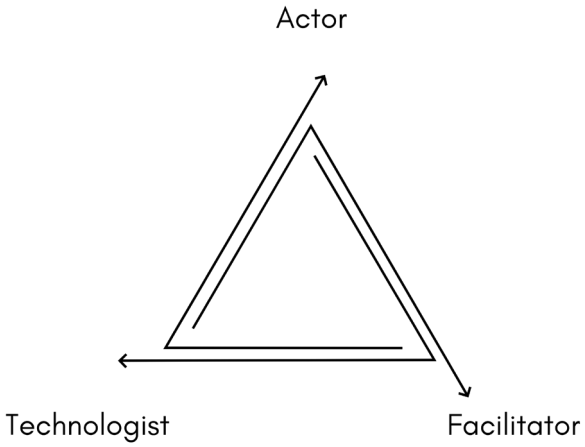
Bridging Digital utilised participatory action research as its methodological framework - exploring innovation in delivering adult learning. Much like the framework of 'thinking outside the box' (Chevalier and Buckles, 2019) each partner focused on discovering ways of improving our adult education practices to become 'action-oriented, socially-engaged, user-centred, interactive, inclusive and sustainable' (p. 307). Our methodological framework was fully aligned with the paradigm of transforming *place* into *space*. It recognises the uniqueness of each and pursues creative interventions to transform one into the other. We refer to this here as the community of learning (Pearce, Maple, Shakeshaft, Wayland and McKay, 2020).

Our concept of *community of learning* further breaks down the traditional binary positionality between teacher and student into an equitable collection of roles such as facilitators, technologists, and actors (leaders in action research). In this actor-facilitator-technologist triad, learning and

teaching represents an exchange between three roles, and the traditional roles as teachers and students are no longer applicable. In other words, learning and teaching can take place anywhere within the triad.

Fig. 1 The Community of Learning Triad

By using the triad, actors, technologists and facilitators have been established across all of our individual projects as follows:



Virtual Reality as an ingredient to develop artistic work in the stage sector

Actor: Freelance artists in the Performing arts

Technologist: Jonas Myrstrand

Facilitator: Intercult

At the Site of the Angels

Actor: Participants from Angels of Joy

Technologist: Vangelis Kalambakas

Facilitator: Hellenic Adult Education Association, Angels of Joy

Reuse of digital heritage: podcasts

Actor: Librarians from the Pomeranian region

Technologist: Maker Space "Cumy" area in the Gdańsk shipyard

Facilitator: City Culture Institute in Gdańsk (Medialab Gdańsk)

Animation Creation Hackathon

Actor: Young (under 30) designers and creators as well as creative industry employees in, e.g.

advertising agencies.

Technologist: Karina Rojek

Facilitator: City Culture Institute in Gdańsk (Medialab Gdańsk)

Hi/Stories of Dunure

Actor: New Media Art Students

Technologist: Trent Kim

Facilitator: Trent Kim, South Ayrshire Council, Dunure Community Council

Renfrewshire Witch Hunt 1697 (RWH1697) in AR

Actor: RWH1697

Technologist: Robert Mackie and StudioFV

Facilitator: Elizabeth Gardiner

What is important to note is that different projects engaged participants with varying degrees of technical competency at the outset, allowing for different degrees/angles of competency to be achieved. This is because although technology was a keyword in Bridging Digital, its primary goal was to transform the community of learning through technology, therefore it required an optimal balance between "technophilia" and "technophobia" (Certeau, 2002, p. 307). At times, the objective was to learn about how to work with technology/technologists (for instance, StudioFV working with RWH1697 in AR) rather than how to operate technology (for instance, Animation Creation Hackathon). The sliding scale of abilities and competencies between *operating* technology and *working with* technology also helped us to understand the intended learning outcomes of our projects. Often, community-based educational projects are not aimed at obtaining technical skills. Rather, they are more about inspiring participants to share their knowledge in the process of learning about the possibilities of technology.

According to McLuhan, technology extends our bodies. Our project participants experienced, first hand, the advantages of technology and have identified different 'ingredients' that contributed to transforming a classroom into a space of practising and sharing. The ingredients that are presented therefore, do not propose any form of technological formula. Rather, they represent the fundamental underpinnings that helped our individual projects to transform the community of learning

through experimentation with technology. We hope our findings will be useful to others interested in adopting similar educational approaches.

2. Base Ingredients

The ingredients we identified are categorised as 'base ingredients' and 'seasoning ingredients'. The base ingredients represent the approaches that were commonly found across all of our project experiences and the seasoning ingredients, represent the more specific approaches that were suited to individual projects.

2.1. Bartering knowledge

Effective learning should lead to a dynamic dialogue where people are willing to share their skills and knowledge and should be taken into consideration when undertaking digital work with communities/communities of interest. The first ingredient that all of our projects discovered from the process is how technology enhanced the ability to 'barter knowledge' rather than linear teaching and learning. Across all of our individual projects, we witnessed and experienced learning exchanges rather than unidirectional technical training. Peer learning is a common form of bartering knowledge that takes place between students while learning and practising new technology, but it also emerges when an engaging dialogue is organically formed and inspires a creative output.

Bartering knowledge in this context is based on gifting/exchanging/giving (Hyde, 2006) rather than transactional transference of knowledge and skills. This co-learning and co-creation model eschews the "banking model of education" (Freire, 1970) where the student is an 'empty vessel' to be filled with knowledge or training in favour of a team process: a journey of equals contributing, sharing and taking/learning in equal measure. **Our practices focused on the co-creation of knowledge (Pearce et al, 2020) and the potential to speed up the discovery and application of that new knowledge into practice.**

The collaboration between Intercult, Jonas Myrstrand and Free Theatre is a clear example of this and in this case, bartering also took place between different disciplines: screen and stage. It did not take long for the place of learning to become an experimental space where virtual reality as a cinematic medium was reimagined and explored as stagecraft and visual theatre. The shift

of the 360 film from a cinematic composition of a duologue to a documentation of the duologue's tension, was not an accidental discovery but rather, revealed what was hidden in the performance on stage. The insightful knowledge of theatre by Free Theatre, adapted and applied new technology and demonstrated the application of virtual reality beyond the screen to Intercult and Jonas Myrstrand. The interdisciplinarity naturally appeared in their creative dialogue and inspired their specific knowledge sharing.

The key to understanding this ingredient is identifying positive differences between people in each role group, but also between participants: actors, technologists, and facilitators. **It was important to actively encourage participants to create a more diverse and dynamic environment.**

The Hi/Stories of Dunure was an interesting case as the specific project explored was part of a typical university module assignment where the lecturer acts as both a facilitator and technologist. **However, inviting members of South Ayrshire Council and Dunure Community Council into the project transformed the classroom into a space of practice where the students of the module shifted focus from perfecting their operational skills of projection mapping to listening to those members and contributing to the telling of their stories through visual storytelling.** This type of assignment can be compared to what is called a 'live brief' in which one can learn and apply new skills into a real context/cause. From the perspective of *bartering knowledge*, the new technical skills provided a stepping stone to equal exchanges: community members shared their stories; students contributed their new media art skills and what emerged was an exciting new blended recipe that inspired all parties and is encouraging new journeys of exploration hitherto unimagined or unimaginable.

The important note here is that technology exists across disciplines and provides new opportunities in new territories and contexts. For an adult educational setting where participants bring their lived experiences and perspectives, one of the key objectives of technological interventions is to motivate bartering knowledge.

2.1.2 Connecting individual voices

Accepting that effective learning should lead to a dynamic dialogue where people are willing to share their skills and knowledge (see 2.1.1 Bartering Knowledge), a dynamic dialogue also leads to a discovery of individual connections. Discovering individual connections often occurs organ-

ically and so is ephemeral. **What we witnessed through our projects was first, how implementation of technology requires a continuous documentation of our creative process and second, how it allows us to see our collective stories in the form of a creative technological collage.** The requirement of documentation accumulates individual contributions and makes them available for meaningful connections. In *At the Site of the Angels*, both the performance of the actors' personal stories and their responses as audience to those stories, were documented. Meaningful connections were drawn between these two perspectives. In contrast, in the *animation creation hackathon*, the connection between individual artworks was demonstrated in the live performance, with that connection establishing a curatorial discourse.

This highlights the key characteristic of technological intervention in an educational setting, which offers opportunities to discover hidden connections beyond accidental encounters, through technologically enabled documentation and collage composition.

Hi/Stories of Dunure sought collecting and connecting stories in response to the site of Dunure castle at the outset, but through the aid of projection mapping technology, the artists were able to work together through sharing the same canvas (the surfaces of the castle), discussing their individual creative responses in the process and programming & performing their collective performance in a curated order. What is also important to note is that two different year groups studying projection mapping responded to Dunure castle and through the digital archive, it is possible to curate all of their works in a different form of technological collage.

2.1.3 Documenting the obsolete

Documentation is a result of digital traces that technological platforms leave in a creative process, but also the inevitable steps that we use to monitor our progress. There is a more intentional way of incorporating technology to document the obsolete, as we witnessed in our practices. The introduction of AR to RWH1697, for example, provides a new, sustainable way of sharing the little-known history with new generations and is already being recognised nationally. The introduction of podcast technology in Gdansk library was intended to create audiobook versions of the ancient texts, allowing them to be accessible to future generations even after the paper versions are inaccessible. Likewise, the verbatim aspect of filming in *At the site of Angels* documented the individual oral histories that otherwise would have been lost.

Our original creative processes also restored the hidden obsolescence of our subject matters. These restorations emerged in diverse forms including the public assembly at the castle (*Hi/Stories of Dunure* in Scotland); the revival of the oral tradition in film (*At the Site of Angels*) in Greece; the reuse of digital heritage podcasts in Poland; and the psycho-geographical significance of the Witches' Well relating to historical atrocities of 17th Century witch hunts (RWH1697) in AR.

Here, technology plays a critical role in re-enacting historical customs and further illuminating their contemporary significance. In other words, by restoring the ancient subject matter through alternative technology, the creative process revealed the essential histories of which we might not have been fully aware (Meller, 1994). It has been important for us to recognise the two sides of technological documentation in terms of the obsolete and take advantage of them in our practices.

2.1.4 Taking ownership

Through bartering knowledge, connecting individual stories and documenting the obsolete, the real value lies when the community of learning takes ownership (McNulty and Tan, 2005). Taking ownership from Certeau's perspective, would be establishing and sustaining the practice from within. In our discoveries, technology not only offers a tool to reinstate the presence of the absent or obsolete, but also establishes a new sustainable practice.

The idea of presence has changed in recent years and particularly throughout the pandemic. Our online presence is as important as our physical presence. RWH1697 seized this opportunity by incorporating AR technology to connect the physical and online presence of their storytelling. For instance, with the AR enabled QR code, a walking tour can be transformed into a hybrid experience, but also, the fact that the QR code has its permanent location means that the content can be accessed at any time regardless of the weather, the time of day, the physical ability of participants to walk the route and the availability of the tour guide. The QR code can also be updated remotely at any time and so the storytelling has become a new, always accessible, sustainable practice.

Ownership takes different forms, and is not limited to one particular group within the community of learning, but belongs to all parts of the community. For instance, facilitators and technologists might end up becoming part of the actor group, and/or their discoveries and reflections from the projects might transform their future practices in designing and delivering educational programmes. In other

words, facilitators and technologists may swap or return to their previous places and discover new spaces. The facilitators and technologists in our projects reflected on the potential sustainability of delivering similar workshops and all of our projects evaluated that the initial investment in hardware and software would significantly reduce the budget for future delivery. Also, creating and making digital content available can provide greater access and more opportunity for engaging with new participants. It might be as directly as locating new participants in future programmes, or more indirectly to inform and influence other educational practitioners.

In all cases, there is acknowledgement that digital technology and new media art techniques are not the end in themselves: rather, they are the tools available for the community to harness, experiment with, adapt, develop and use for their own purposes (McNulty and Tan 2005).

In Dunure, the community have travelled on a journey of discovery. The starting point was bemusement as to how/why/what new media art could possibly have to offer in their little 'ex-fishing village'. By the end of the intervention, the Dunure Development Trust had a vision for an annual festival and a heritage centre where digital interpretation could be a key tool in unlocking the history of the place and sharing it with tourists to build a new industry for the future.

In Sweden, the workshops where learners created 360 films to use for stage performances resulted in learning materials and techniques that will be offered to adult education, cultural organisations, schools for cultural sector professionals as well as artists and others who work in a training capacity. The actors who had no experience before entering the workshops quickly became enthusiastic when they realised its potential application in their work. Therefore, we wanted to take their experience further by actually leading them into a step-by-step process of planning, filming and editing their own production. This is where sustainability (Wakeford and Singh, 2008) in new media art practice lives: when the members of the community of learning are claiming ownership of the technology with confidence and experimenting with new realms of possibility.

3. Seasoning Ingredients

The ingredients documented above we have classified as 'base ingredients' which we discovered were common across all our projects, communities and communities of interest regardless of the particular national characteristics or digital technology of choice. The following ingredients we

have classified as 'seasoning ingredients' which we identified in some cases and which we assessed have potential applicability in different settings.

2.3.1 Sensing stories

As Michel Serres (1985) suggested, senses are mingled, hence inseparable in our bodies. In our projects, we witnessed how technology introduced a new dimension of sensorial experience into our creative dialogue. These new dimensions have changed the way we practise.

For instance, in Poland, podcasts not only digitally documented the recital of ancient manuscripts, but through this, reinstated and recontextualised the oral tradition through the podcast programme. This hybrid of senses in sharing the knowledge of the manuscripts, has established a more sustainable practice for contemporary readers and researchers. In contrast, RWH1697, who had used traditional community theatre and re-enactment storytelling techniques to raise awareness of 17th Century witch hunting, incorporated AR technology to introduce a 'hybrid' form of storytelling.

2.3.2 Layering perspectives

In comparison to sensing stories, A*t the Site of the Angels* by the Hellenic Adult Education Association, could be considered as layering perspectives. This project took a unique approach to documenting the stages observed in the planning, development, rehearsal, performance and viewing of the performance from the auditorium, on stage and from behind the scenes. The outcome of the project can be better described as Cubist, where multiple perspectives inspired their creative output - and by doing so - connected all parts of the project as well as shaping the overall project dialogue over time.

> Angels of Joy is a rich example of a multi-layered multi-dimensional cultural planning approach to tackling 'problems' (Ghilardi 1995). As is so evident, complex and difficult to analyse when introducing culture and creativity into the arena of 'tackling problems', multi disciplinary issues are tackled through the single engagement. Angels tackle loneliness, isolation, memory and the prevention of dementia in elderly people through reminiscence and honouring the wisdom/experiences of the protagonists. This is a burgeoning area of research where digital technology (particularly AR) is proving to be so useful when working in communities with the elderly and disabled people (Russian, 2022).

2.3.3 Reclaiming public space

They walk - an elementary form of this experience of the city; they are walkers, Wandersmänner, whose bodies follow the thicks and thins of an urban 'text' they write without being able to read it.

(Certeau, 2002, p. 93)

Reclaiming public space is another seasoning ingredient that we propose. Our public spaces no longer grant public ownership as a result of modernisation, urbanisation, and gentrification, but rather demand our everyday practices 'without being able to read,' as Certeau (2002, p. 93) argued.

Through technological and creative interventions, this project's practice reviews and case studies highlighted the importance of challenging and reclaiming lost ownership of public space (McDonough, 2002). Our reliance on technology in everyday life is evident; how we are instructed by signs and choreographed by urban designs.

Hi/Stories of Dunure utilised projection mapping to stage a new dialogue between locals and young artists, thereby enhancing the site's everyday use. Participants reclaimed the site of Dunure castle by hosting a public event on 3rd December 2021, thereby bringing to life the stories of the locals and the history of the area.

Renfrewshire Witch Hunt 1697 (RWH 1697) reclaimed public space through the use of Augmented Reality technology by suggesting a new type of readership. In contrast to Hi/Stories of Dunure, RWH 1697's creative intervention has a permanent presence by digitally tagging their narratives on specific sites, making them accessible and available for updates at any time.

For instance, the video clip of 'Stop 5 - Legacy of Christian Shaw' used the image of the Witches' Well as a geographical tag as well as a visual representation of the narrative segment. This aspect of continuous connection between the physical site and site specific stories is enabled by Augmented Reality (AR) technology as a new way of reclaiming our public space.

Projection mapping and Augmented Reality represent dimensions of digital storytelling. These occur, not in isolation from the physical realm, but in the form of innovative hybrids. Consequently, it expands methods of dissemination that reclaim public space.

2.3.4 Accessibility

Whilst most of our case study projects explored how new media art can support cultural democracy, we also found impacts on aspirations towards the democratisation of culture. The question during the pandemic for theatres was how to make theatre and the arts accessible when it is not possible to enter theatre spaces physically. This question was highlighted by the pandemic but it was always a problem as access to theatres is often limited by rural geography. Also, for those who are disabled or socially excluded, there is an ongoing question around how to open up cultural experiences for those, who for whatever reason, find the buildings inaccessible or the environment excluding.

In the Swedish example, we discovered that the digitisation of traditional arts spaces through VR can empower the audience to enter a new space in-between the physical and the virtual.

Whilst all of our case study examples incorporated expansion of the audience and increased accessibility to heritage, untold stories and new spaces, there is an omnipresent question of digital exclusion. Digital tools remain expensive and we have identified partnership working as a way of overcoming barriers.

In the case of the cultural sector itself, the Swedish team discovered another aspect of accessibility regarding the performing arts. For cultural workers, accessibility is also about affordability for freelancers and other professionals outside of institutions to have digital tools for production. In the Swedish example, we explored affordable tools as a first step towards more people learning how to monetise digital tools in their own work - reaching paying audiences for their stage productions.

3. Conclusions

Our Bridging Digital learning process has demonstrated the potential of digital technologies in the development of community learning and cultural practice (Brown, J.S. and Duguid, P. 1991). Each partner took a unique and distinctive approach with discrete and diverse communities/communities-of-interest.

There were many more common ingredients:

- **Experimentation and discovery**

From an initial intervention by an artist, teacher or new media art technician, where the artists/teachers were facilitators (Bourriaud, 1998) all participating groups grasped the new technologies and took ownership of their properties. Play and experimentation was the context within which discovery and the revelation of the previously unseen occurred.

- **Co-creation**

Learners were present on multiple levels, with experts in different areas bringing their expertise to the table, contributing that expertise with respect for each other's skills. Communities brought knowledge of their history and mythology, language and culture (Geddes 1906). Artists brought their creative practice (Bourriaud,1998); digital technicians brought their technical expertise and together, in synthesis, something brand new and unique emerged through the practice of co-creation (Chang, Ngunjiri and Hernandez, 2012). At all times and in all cases, we were both teachers and learners.

- **Empowerment**

Ultimately, the key ingredient was empowerment. From traditional community arts and learning methodology (Kelly, 1983), we witnessed the process of experimentation with new technology. This led to the realisation of its potential use in emboldening transformation in a community/community of interest context (Kester, 2011). Naming and distinguishing the practice gave language and symbolic power to the community learners - enhancing practice and supporting their community aspirations (Bourdieu, 1982).

- **Ingredients not recipes**

As we have documented, this handbook deliberately describes findings from our explorations as po-

tential 'ingredients' for success rather than 'recipes' (implying a step-by-step process that if followed, guarantees a replicable result). We are suggesting that the critical ingredients we have identified on our journeys and which have informed this handbook, are merely a 'starter for 10'. You will make your own discoveries as you try new technologies to support your creative learning and practices. Perhaps most crucially of all, our final thought to share with you from our findings.

- **Be prepared to be surprised**

While working with communities in exploring new artistic forms with the help of digital technologies, be prepared for unexpected partnerships to form, unforeseen impacts to unfold and new ideas to happen. In our cases we have been surprised by the power of creative practice combined with digital tools in reminiscence work: reviving memories and increasing the participation of elderly people (Greece).

Research is already exploring the potential of VR with dementia sufferers and perhaps different forms of digital tools and art projects can have a similarly positive impact. We also witnessed non-formal learning experiences enhancing the employment potential of long-term unemployed/people with long-term conditions (Scotland). Similarly, experimenting with VR (Sweden) has created a new market for learning and teaching with several new organisations contacting us for workshops and the sharing of experiences.

Glossary

Augmented Reality - AR: an interactive experience that combines the real world with interactive computer-generated content.

Virtual Reality - VR: a simulated experience that employs pose tracking and 3D near-eye displays to give the user an immersive feel of a virtual world.

Podcast: an audio and/or video programme that can be accessed by the viewer online.

Participatory Action Research: a process of research by doing and being: exploration in practice.

Duologue: a dialogue between two actors in theatre, stage or screenplay.

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Greece

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Poland

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Scotland

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