



*Citation for published version:*

Hayhoe, S 2020, 'Participatory Co-Design, Grounded Methodology and the Development of Post-Inclusion', Paper presented at Inclusive Design 24, 17/09/20 - 17/09/20.  
<[https://www.youtube.com/playlist?list=PLn7dsvRdQEfGkK9xxk54XdKTLk7zf\\_Qwp](https://www.youtube.com/playlist?list=PLn7dsvRdQEfGkK9xxk54XdKTLk7zf_Qwp)>

*Publication date:*  
2020

*Document Version*  
Publisher's PDF, also known as Version of record

[Link to publication](#)

*Publisher Rights*  
Unspecified

## University of Bath

### **General rights**

Copyright and moral rights for the publications made accessible in the public portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognise and abide by the legal requirements associated with these rights.

### **Take down policy**

If you believe that this document breaches copyright please contact us providing details, and we will remove access to the work immediately and investigate your claim.



**PARTICIPATORY CO-  
DESIGN, GROUNDED  
METHODOLOGY  
AND THE  
DEVELOPMENT OF  
POST-INCLUSION**

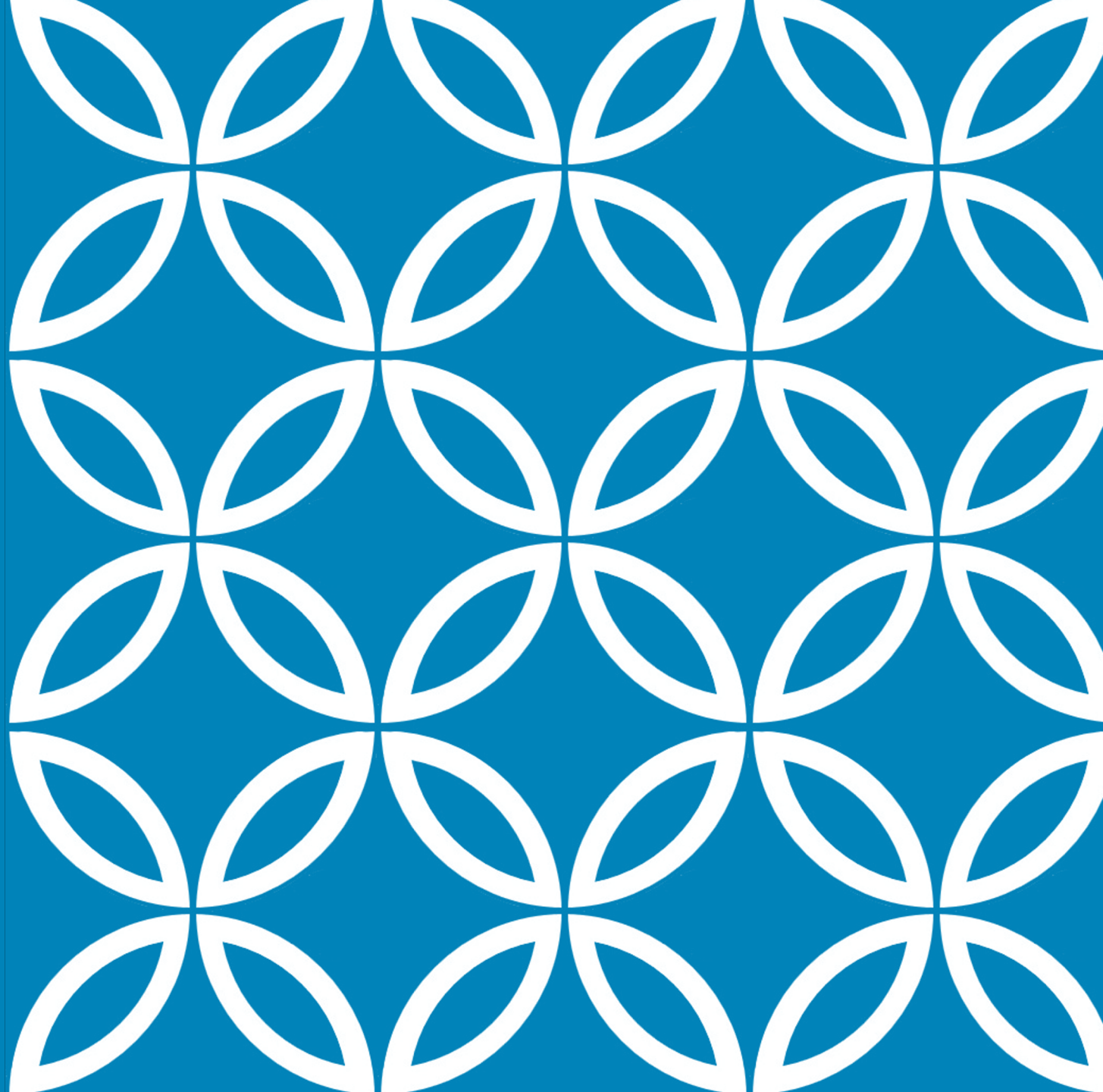
---

**Simon Hayhoe  
University of Bath, UK**

# INCLUSIVE DESIGN 24 17<sup>TH</sup> SEPTEMBER 2020

---

The presentation discusses two post-inclusive arts projects. These projects use participatory co-design to create artworks and technology, and grounded methodology as a means of developing learning and evaluation. The first project is a community education project on flooding in Bath, UK, and features co-created interactive installations, music and sculptures. The second project is a community design project, which features the development of co-designed breakdance choreography, performance and a multi-sensory dance beat technology in Yorkshire, UK.



# PRESENTATION OUTLINE

I am going to:

- Present a brief history of disability and exclusion
- Present a new model of participation used for engaging people with disabilities
- Present two case studies:
  - A break dancing and visual impairment project
  - A community art education project on flooding in Bath



# APPROACH TAKEN TO INCLUSION IN THE ARTS, TECHNOLOGY AND EDUCATION

In this presentation, I am taking a process/performance and product approach to inclusion

Appropriated from art

- Artists refer to process versus product
- Traditionally, seen as conflicting
- The approach taken in the following projects don't see them in opposition – two sides of the same coin

Process – the way we approach the production or use of learning, art or technology

Product – the outcome or object that is produced as a result of learning, art or technology production



# FIRST GENERATION

Medicalization of Disability

# DISABILITY AS A MEDICAL ISSUE

Mostly involved separation in homes, asylums or institutes

Defined according to impairment

Highlighted issues of infirmity, incapacity, injury or impairment

Aim to look after ill people:

- To relieve physical deficit
- Hence the term Handicap

Physical disabilities targeted

No thought given to intangible impairments or difficulties

Hayhoe, S., 2015. Philosophy as Disability & Exclusion. Charlotte, NC: IAP.



The four worst cases in the Brompton Hospital.  
The sepoy on the extreme left, in the chair is the most severe case in the whole hospital, but is now well on the way to recovery. The sepoy smoking has a fractured arm and elbow, caused by an explosive German bullet., while the two Gurkhas on the right were both wounded by a German shell, one losing his leg and the other an arm and had his leg shattered



# SECOND GENERATION

Disability and Assistance



# DISABILITY AND TASK ASSISTANCE

Aim still to overcome deficit  
Integrated in environment but not in tasks

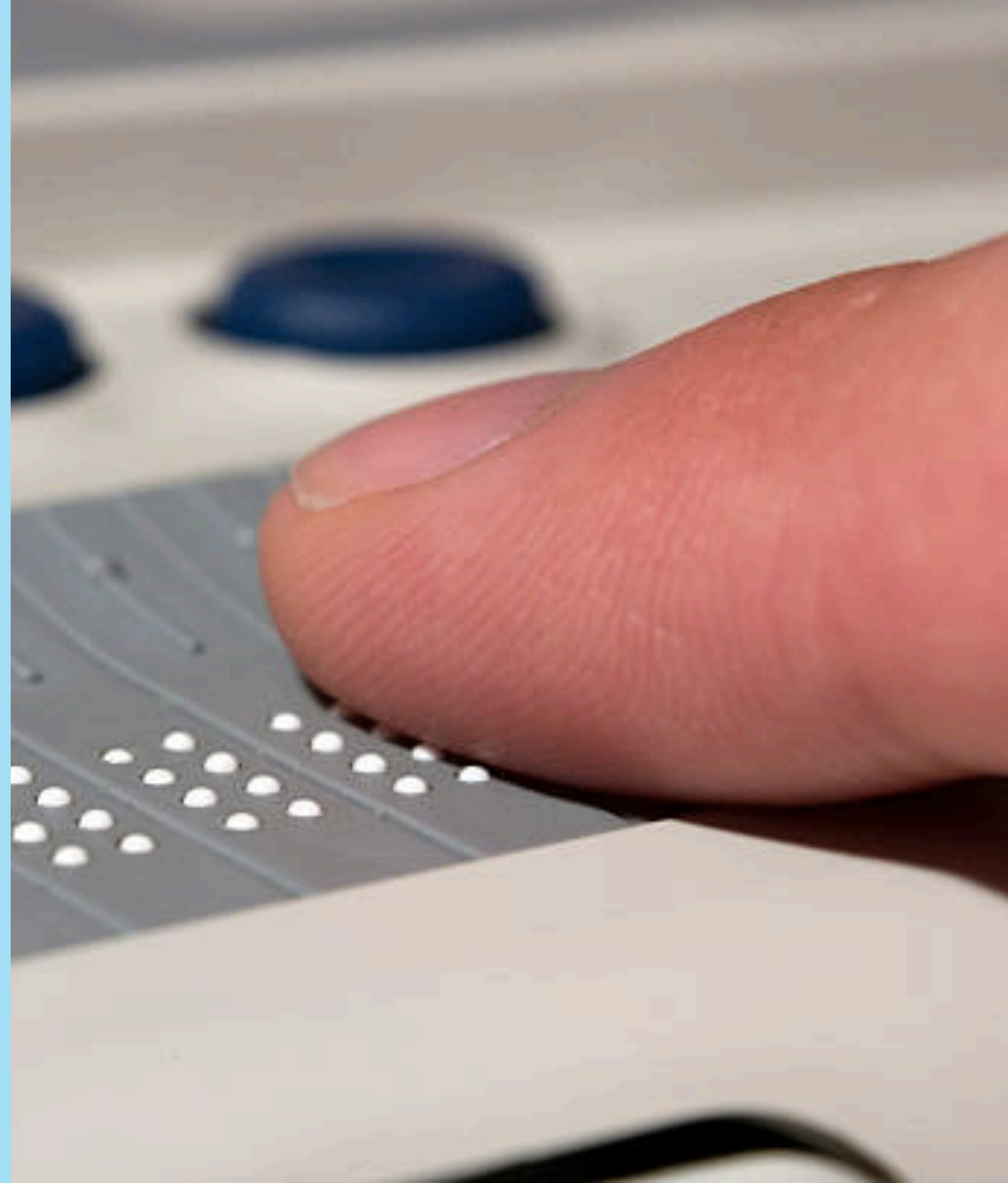
More technology focused:

- Emphasis moved from medical to social and cultural task assistance

Often associated with education or assisted living: mobility, reading, writing or hearing

Most famously, assistive technology

- A mixture of mechanical & electrical technologies





# THIRD GENERATION

Disability and Assistance

# INCLUSION IN TASKS AND ENVIRONMENT

Roughly, where we are now in the mainstream

Inclusion based on providing fuller equality with others – especially in tasks and practice

Thus, inclusion seen as practice focussed

Emphasis again on technology, but this time on inclusive technologies:

- *Mainstream technology that can be used with either no or minimal adaption by a person with a disability as an accessible technology. It is also seen as technology that provides social inclusion, such as communication and interaction, for people with disabilities*

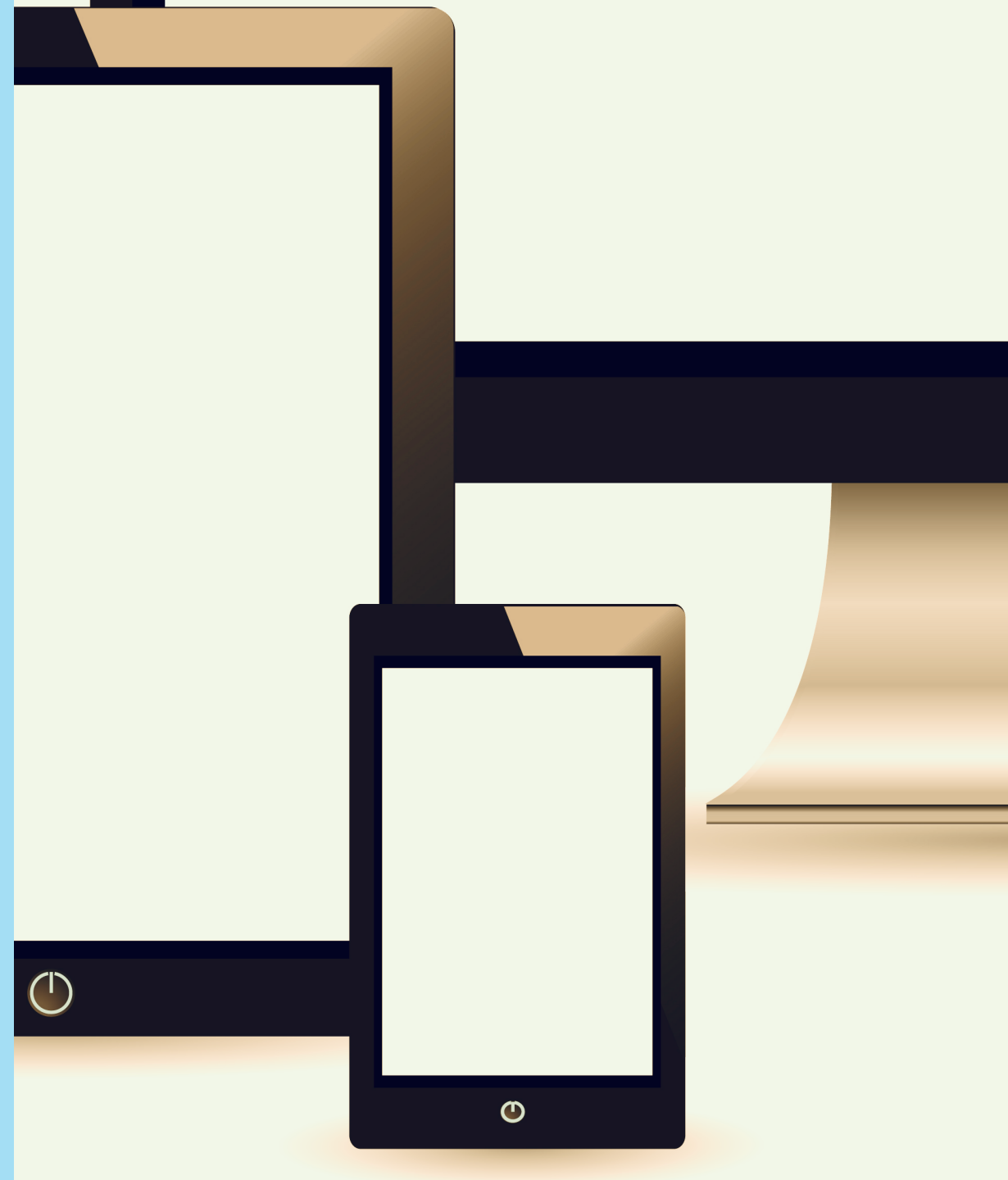
# ACCESS TO THE TECHNOLOGY

Inclusion is developed through physical aspects of design, e.g.

- The look of the interface
- The sounds created by the interface
- The tactile and physical nature
  - Its size and weight
  - tactile information

An evaluation of the needs, skills and mobility of technologies

Mainstream apps that can be used as inclusive technologies





# FOURTH GENERATION

Post-Inclusive Technology

# A MODEL OF POST-INCLUSIVE DEVELOPMENT — INCREASED PARTICIPATION IN DEVELOPMENT

All education, arts and technologies consider accessibility as standard

Usable and can be studied by as many people as possible

Person centered not group centered, and designed for all needs

- Considering people with all needs in the process of design

Not just universal design, a deep social and cultural understanding of people you are working with

## **Participatory Co-Design**

- Groups consist of users with a range of access needs
- Involved in the design of education, arts and technology from the ground up



# DEVELOPING PARTICIPATION IN THE ARTS, EDUCATION AND TECHNOLOGY

Post-Inclusive Working

# THREE ELEMENTS OF PARTICIPATORY ENGAGEMENT

## **Develop and Encourage Participatory Engagement**

- Mentor those who want to engage
- Develop a community of practice and good practice

## **Model and Trace Pathways to Impact and Legacy**

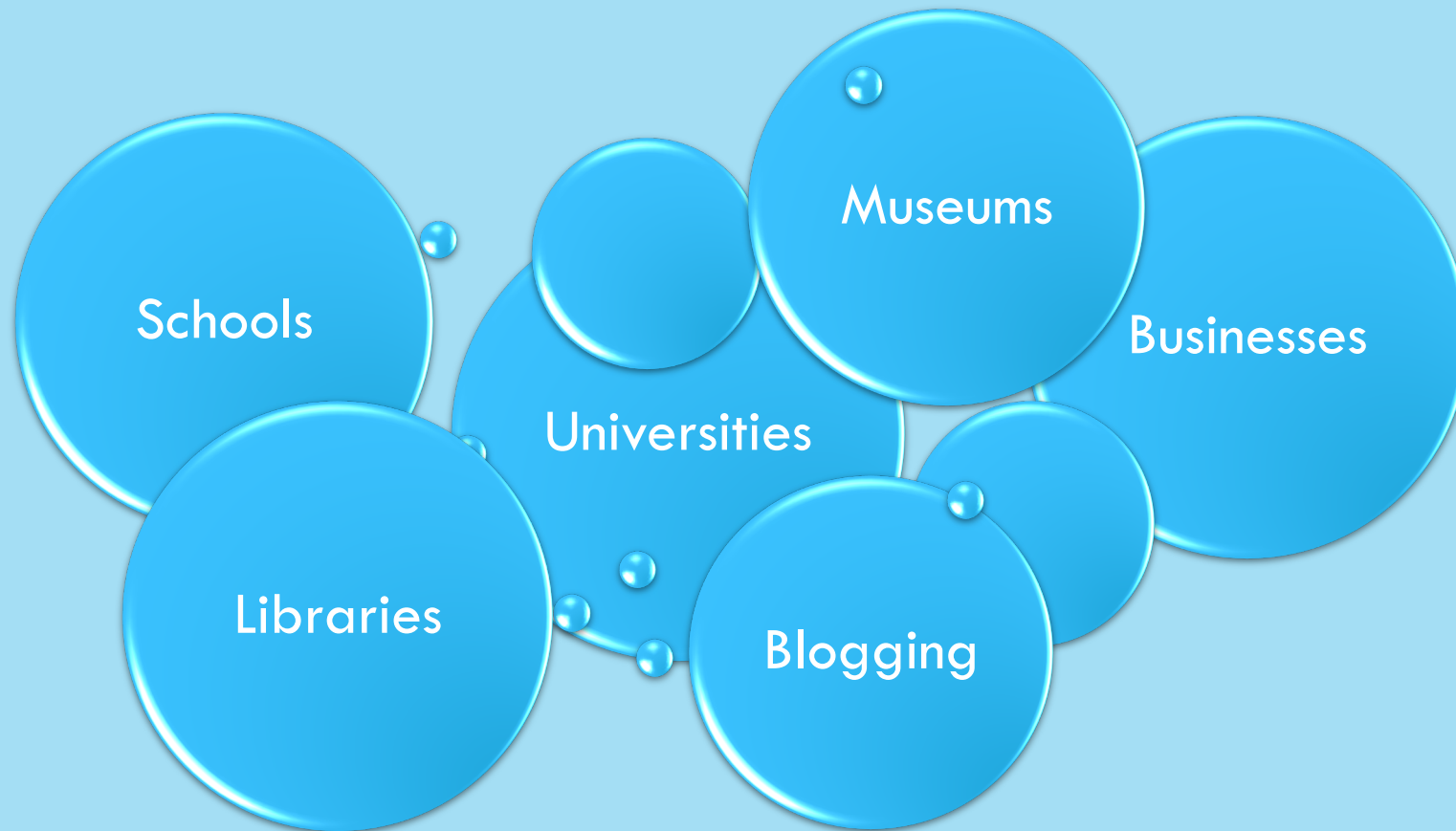
- Look at and guide participatory engagement strategy
- Record participatory engagement, impact and legacy


## **Coordinate participatory Engagement**

- Develop an *Engagement Toolkit*
- Source volunteer stakeholder
- Record and bank skills and venues



# CURRENT ISSUE - THERE APPEARS TO BE DISPARATE PARTICIPATORY ENGAGEMENT

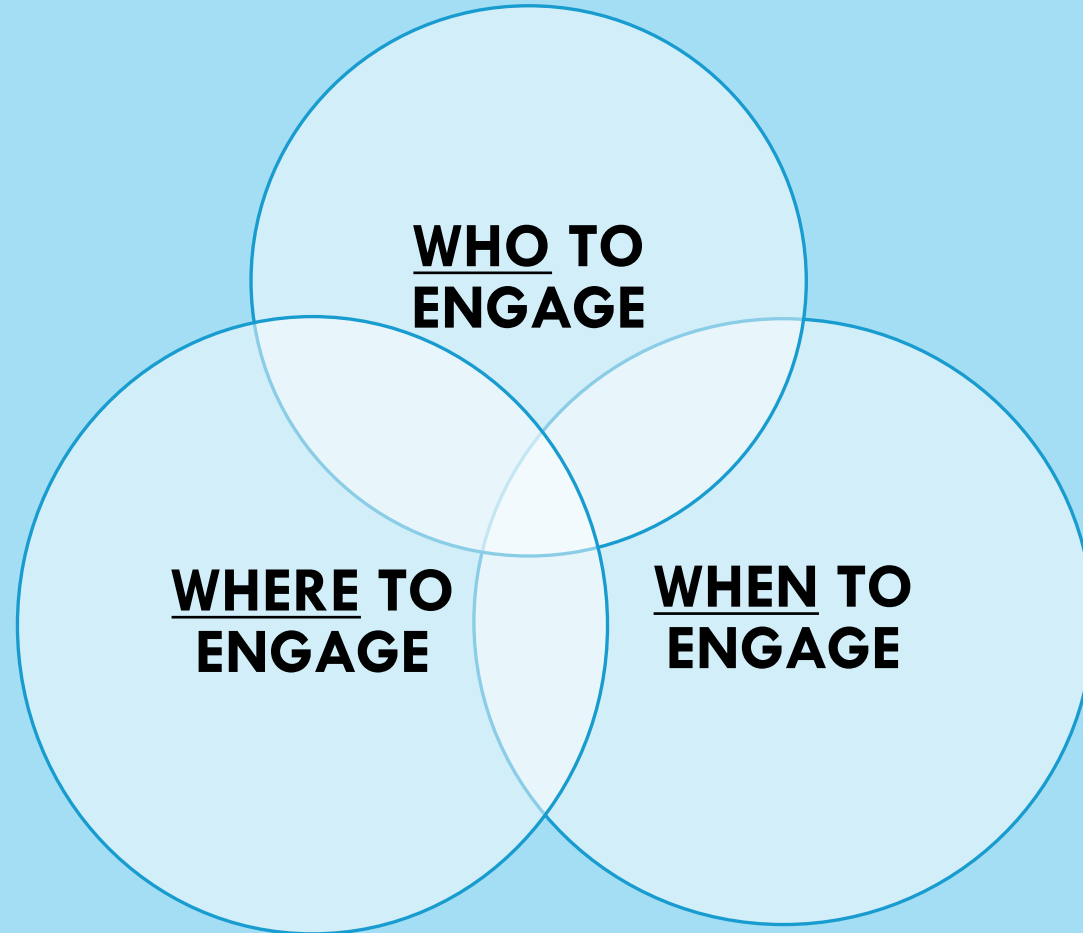




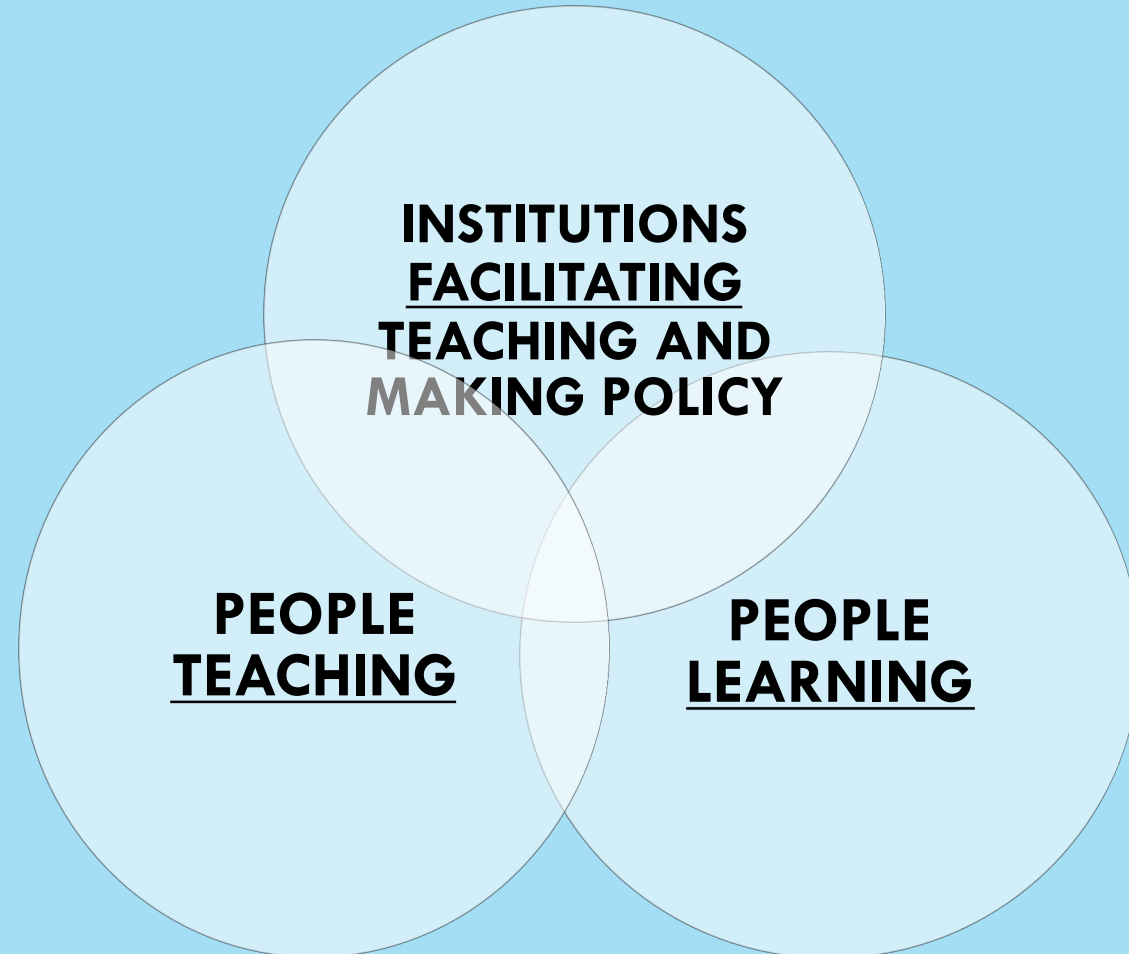
# MODEL OF PARTICIPATORY ENGAGEMENT

Post-Inclusive Development

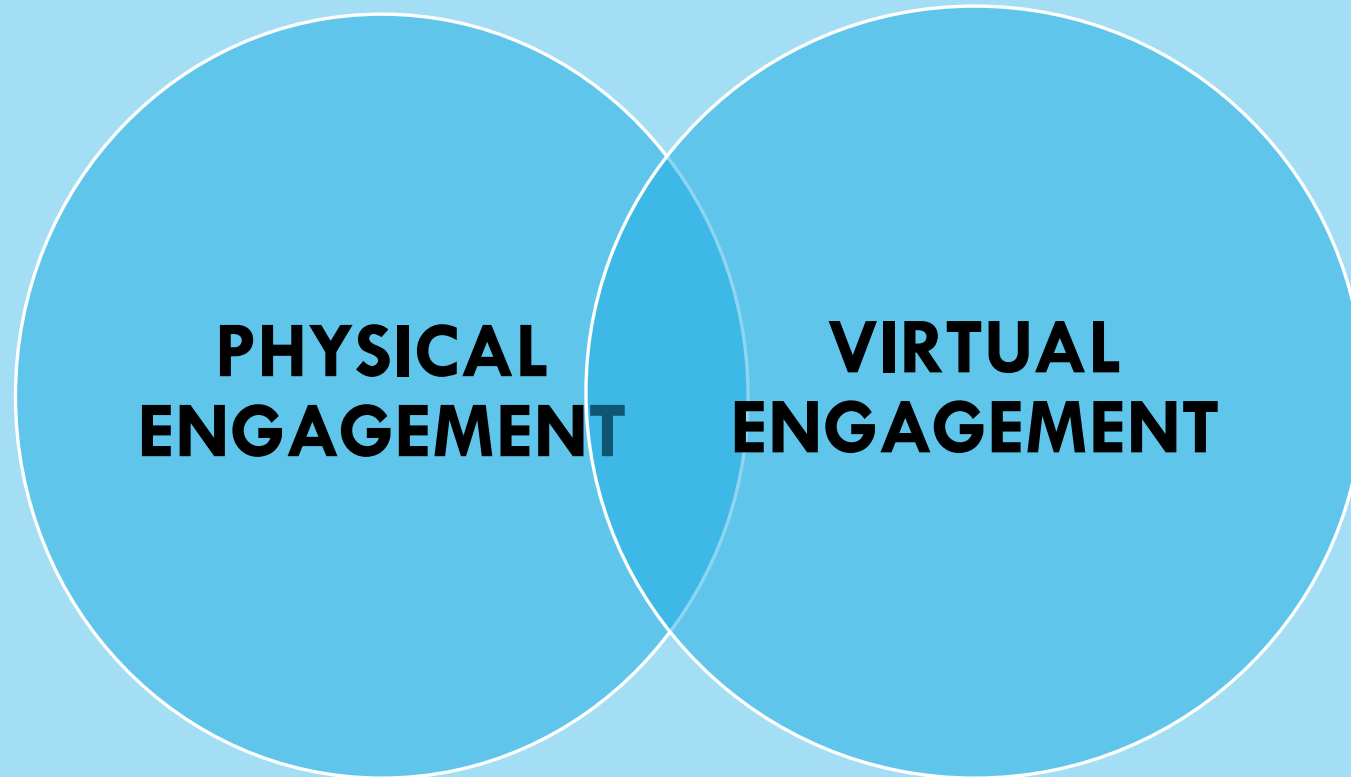
# DEVELOPING PARTICIPATORY ENGAGEMENT - CONSIDERATIONS



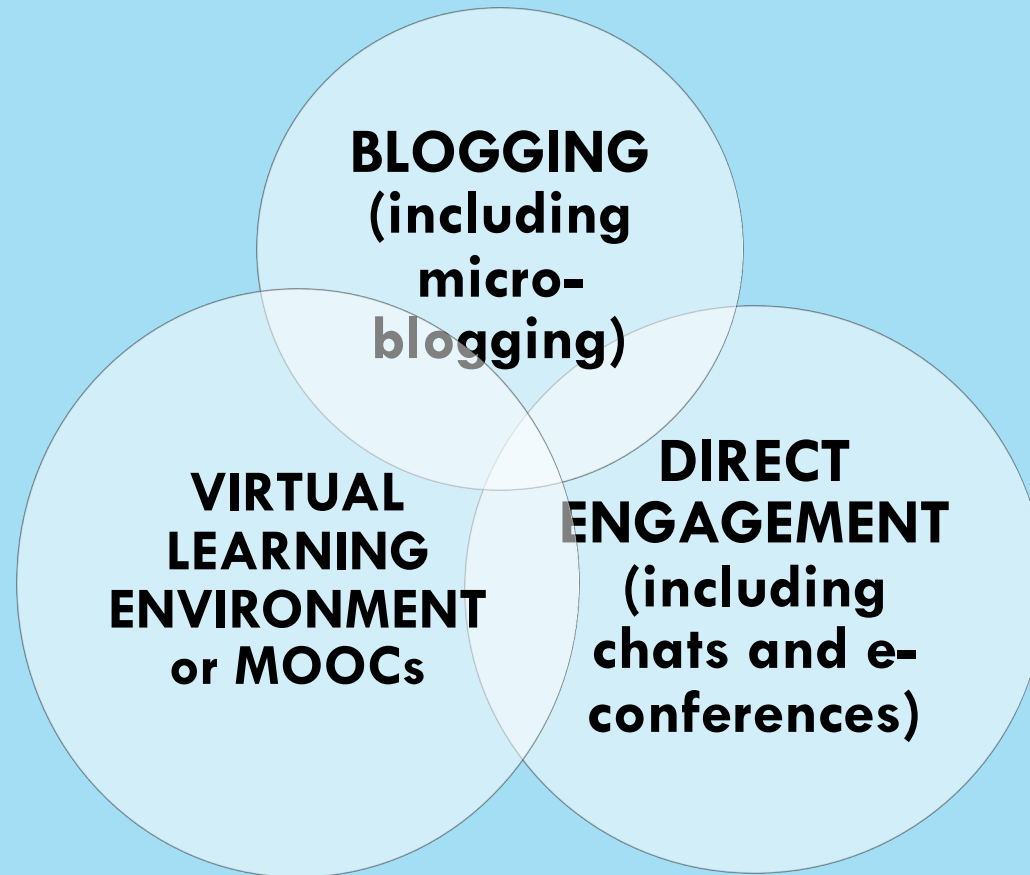
# WHO TO ENGAGE THROUGH PARTICIPATION



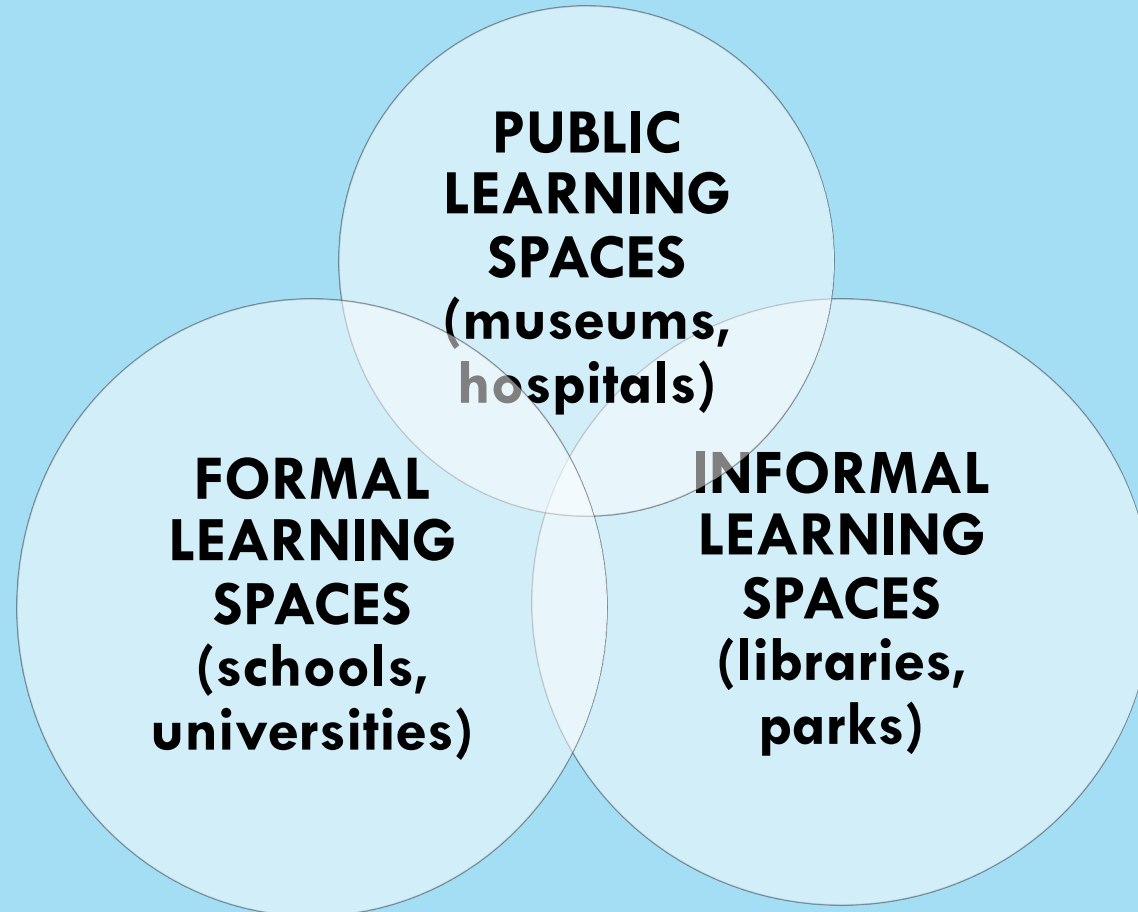
# WHERE TO ENGAGE



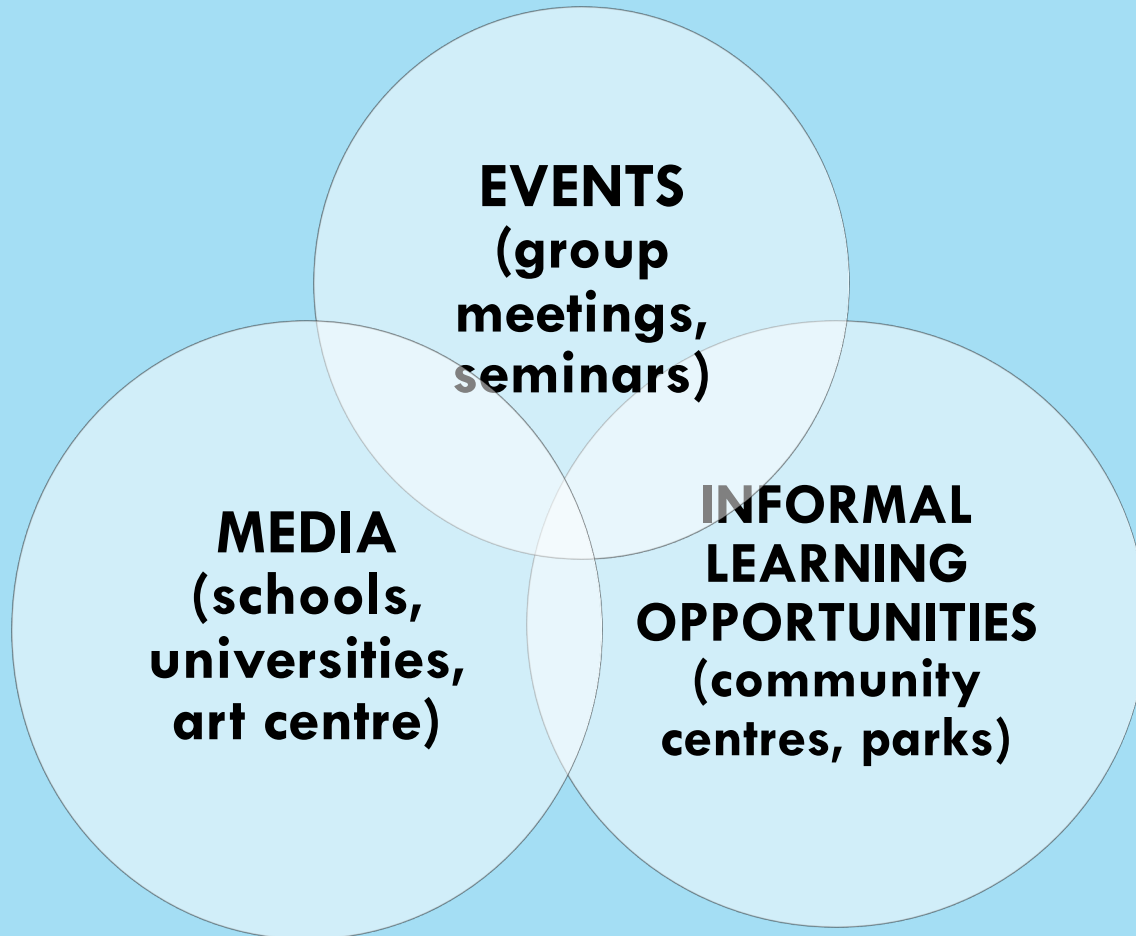
# VIRTUAL ENGAGEMENT



# PHYSICAL ENGAGEMENT



# WHEN TO ENGAGE







# METHOD OF IMPLEMENTATION AND EVALUATION

Post-Inclusive Projects

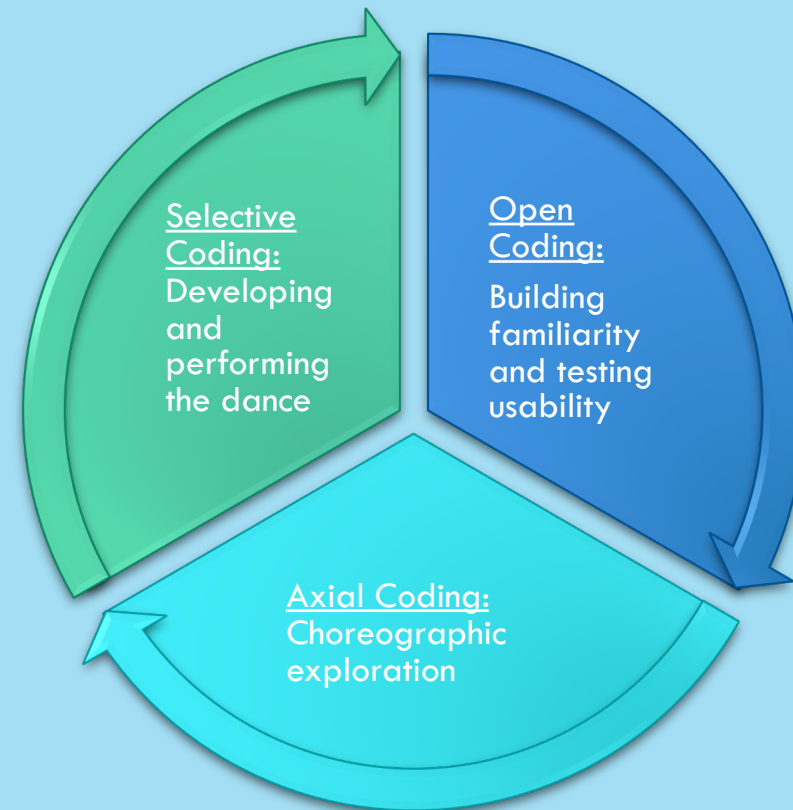
# METHOD OF RESEARCH AND DESIGN: PARTICIPATORY METHOD / GROUNDED METHODOLOGY

A form of emancipatory research  
(Barnes & Mercers, 2003)

- Accountable, open and run by those designed to emancipate

Original method with participants with learning disability established three principles (Walmsley and Johnson, 2003)

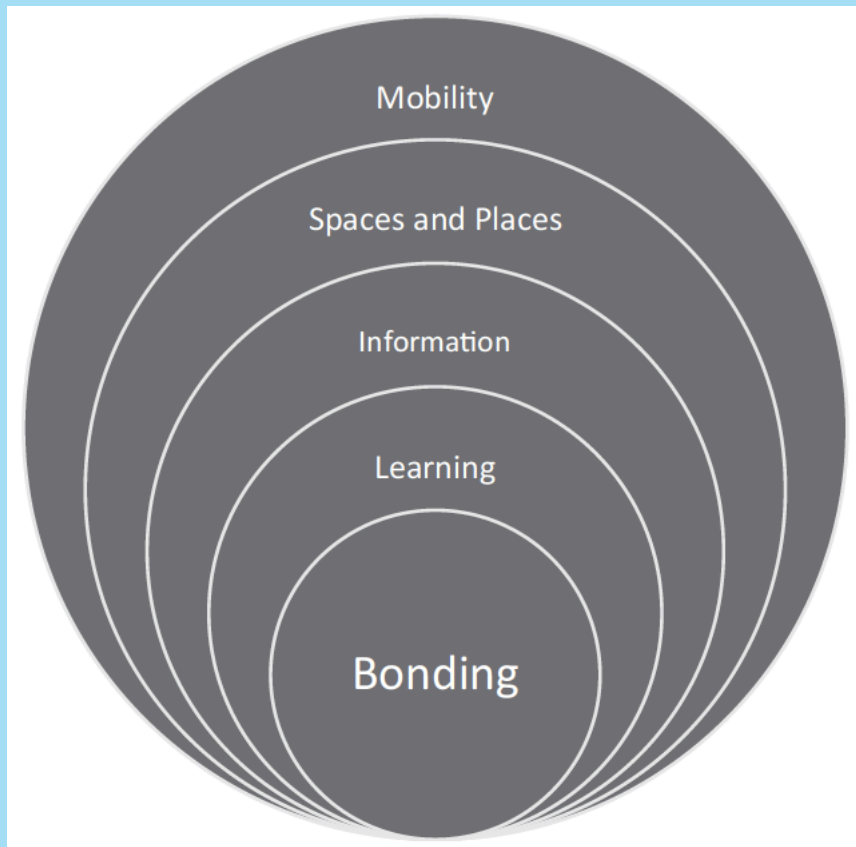
- Addresses issues and improves lives
- Accesses and represents views and experience
- Participants treated with respect



Barnes, C. & Mercer G. (2003). Disability. Cambridge, UK: Polity Press.

Walmsley, J. and Johnson, K. (2003). Inclusive research with people with learning difficulties. Past, present and future. London: Jessica Kingsley Publisher.

# METHOD OF OUTCOME/EVALUATION: INCLUSIVE CAPITAL



- Ability to get to and move around spaces – including virtual spaces
- Ability to access all public spaces and places in environment – including virtual spaces
- Accessible information – physical and virtual
- Ability to learn with group or individually through peers
- Learn and travel with peer group

Hayhoe, S. (2019). *Cultural Heritage, Ageing, Disability and Identity: Practice and the development of inclusive capital*. Abingdon, UK: Routledge.



# THE SOUND PAD PROJECT

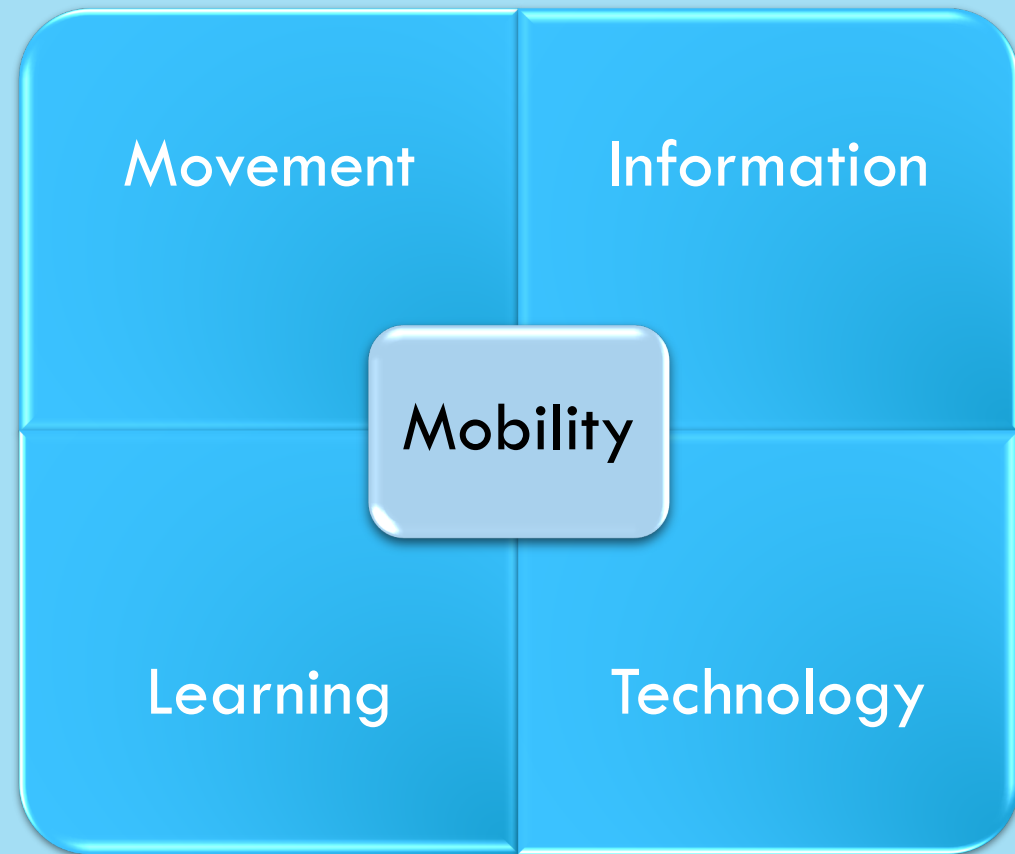
Working with People with Visual  
Impairment and Break Dancers

# SOUND PAD – INCLUSIVE TECHNOLOGY, VISUAL IMPAIRMENT AND BREAK DANCING



# MOBILITY ISSUES & VISUAL IMPAIRMENT

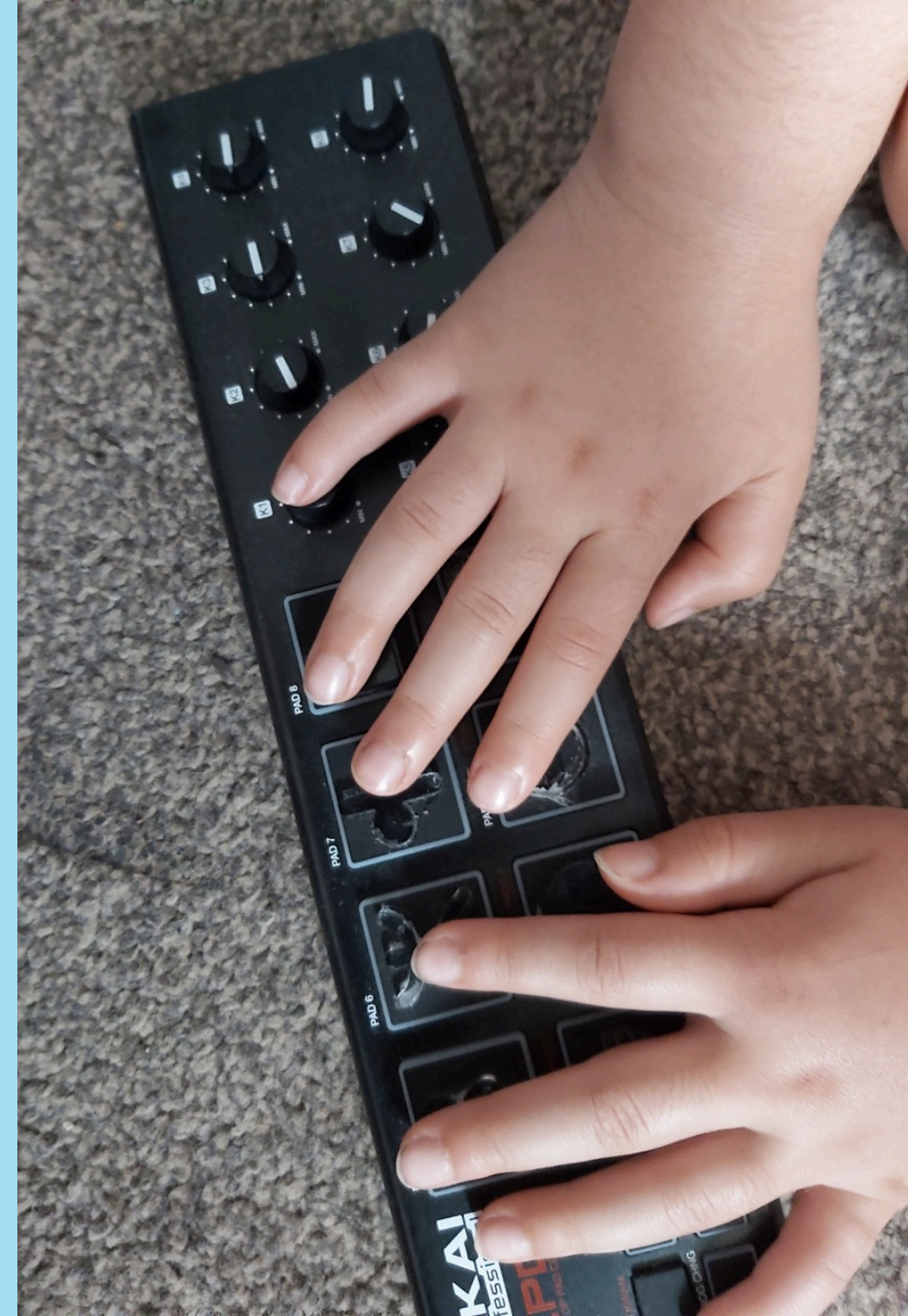
- People with visual impairment have different issues with mobility
- Mobility was previously addressed through cane use and navigation
- Nathan Geering, a professional break-dancer, worked with older adults, young people and dancing
  - There is a need for educating about falls and accidents
  - Took an inclusive approach
  - Technology, Dance and Education Project



# METHODS OF PRACTICE: RATIONALE METHOD

Developed by Nathan Geering

- Worked with visually impaired director, Andrew Loretto, to explore accessibility in breakdance
- Rationale developed a form of audio description through beat-boxing
  - Creates a richer soundscape
  - Stimulates the imaginations of visually impaired audiences
- Rationale Method of Audio Description



# PROJECT OBJECTIVES

The Sound Pad project had the following objectives:

- Participatory practice (information)
- Develop a post-inclusive dance *technology*
- Co-design choreography (mobility)
- Co-create teaching (learning)
- Encourage people with visual impairments to be mobile
- Develop a greater understanding of dance and a sense of inclusion
- Encouragement of artists in their use of a multi-modal pedagogy





# SESSION DESIGN AND PARTICIPATION

Participants included stakeholders:

- Members of associations for the blind (AfB) in Sheffield and Bradford
  - Avoided younger children
- Breakdancers from Sheffield collective
- Rationale (choreographers)
- Groups split into adult and teenagers/young adults from AfB
  - Groups felt happier in different age groups
- Adult group met from January-February 2020
- Younger group met from December 2019-February 2020
  - Younger groups discussed education in particular
  - Both groups discussed dance, choreography and technology
- Sessions attempted to develop a community, giving each participant a voice



# IMPLEMENTING THE THREE PHASES

Open, Axial and Selective  
Coding Phases

# OPEN CODING PHASE

- Restrictions to the project:
  - Short timeframe and tight budget
  - Not able to develop a technology from scratch
- Ableton Novation Launchpad bought in consultation with VI users
- Participants discussed the rationale method language and technology
- Models of dance moves formed
- Participants discussed dance
- Later, AKAI Professional LPD8 bought as it was simpler



Image to the left represents playdough figures of a slice – a dance move. There are six playdough figures on a table. The figures are long and thin, some split. They are coloured yellow, purple, red, green and light blue.

Image to right represents the figures of a bounce – another dance move. There are three figures, each of which is round and some are like chubby human figures, set out on a table top. They are coloured purple, green and yellow.



# AXIAL CODING PHASE

- VI volunteer participants worked with dancers to choreograph movement sequences using adapted Launchpad and LPD8
- Half day sessions, four sessions in total
- Evaluated and observed by researcher and participants
- Communication strategies further evaluated
- Testable hypothesis:  
*Once clear communication processes have been confirmed, the dancers can more easily choreograph the performance piece.*

An example of a breakdance move choreographed by a participant and performed by Nathan Geering: [verbal image] Nathan is moving in time to music. He is a tall man wearing blue jeans, dark coloured trainers with red laces and a baggy purple sweatshirt with a yellow teddy bear design on the front. He is about to spin, and one arm is outstretched to the front of his body whilst another is outstretched behind him.



# SELECTIVE CODING PHASE

- Choreographed sequence and performance created:
- Evaluation showed inclusive capital:
  - Mobility, learning, information and space and place appeared to have been developed through the dance sequences
  - Participants showed they had developed a bond through their community
  - Performance eventually happened in Derby, as Sheffield suffered flooding

**Dancer:** “What was really interesting was that I didn’t know his idea of a step was my idea of a step. We had to ask each other ‘is the the kind of step you mean.’ So, we had to get involved more than choreographers would usually. The [technology] helped a lot.”

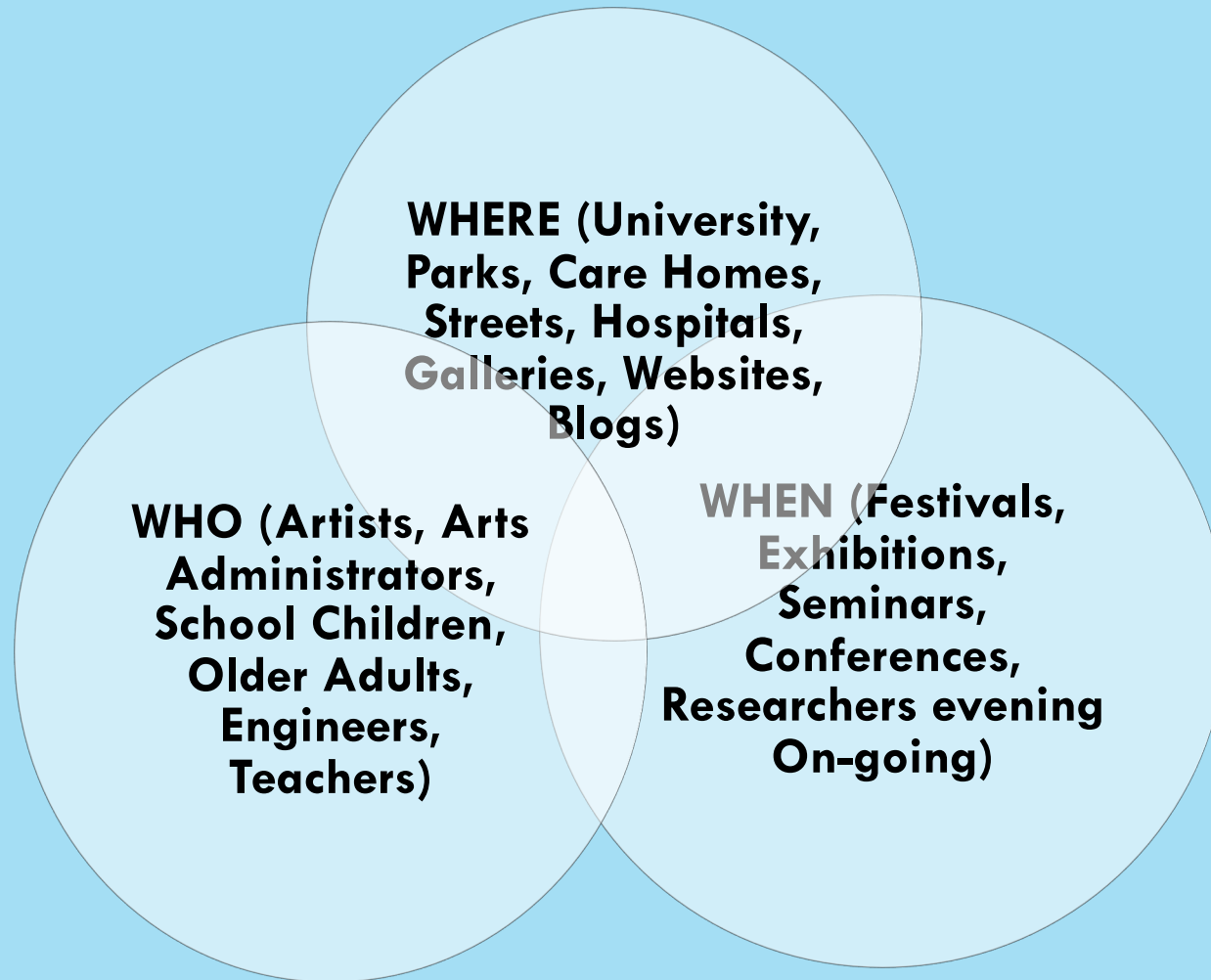
**Derby audience member:** “The sounds effects gave me a better understanding of dance moves and made the performance really enjoyable.”



# IMPLEMENTING THE THREE PHASES

Open, Axial and Selective  
Coding Phases

# RIVER IS THE VENUE – INCLUSIVE ARTWORKS



# CONTEXT - TRADITIONAL PUBLIC ART

Traditionally, public artworks commissioned to inspire:

- Nationality and cultural pride
- Political or religious ideology
- Power

Linked to a permanent geographical space that reflected this status (Mitchell, 1990; Johnson, 1995; Levinson, 2018)

They were often placed up high, physically away from their audience, inaccessible to those with disabilities (Argyropoulos & Kanari, 2015).





# CONTEXT - CONTEMPORARY PUBLIC ART

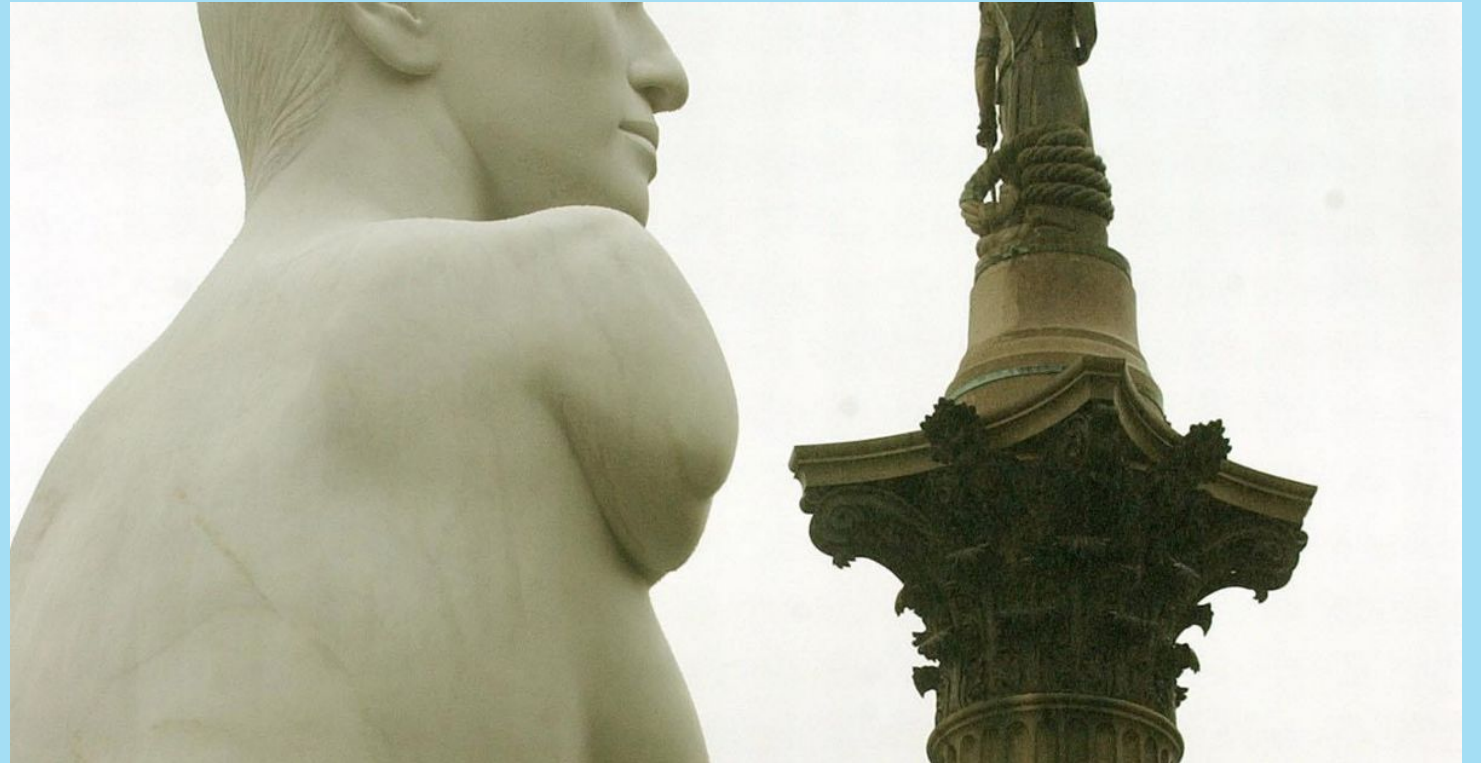
Latter years of the twentieth century:

Subjects of public artworks moved closer to the public imagination

- Less elevated issues and ideas
- Communicated broader beliefs
- Spectrums of humanity and religious ideals (Hall & Robertson, 2001)

Despite these changes, participatory artworks still inadvertently excluded viewers

Viewers physically, intellectually and socially less able to access artworks (Smith, Ginley & Goodwin, 2013).



# OUTLINE OF THE PROJECT

Project called River is the Venue (RiV)  
Awareness of flooding throughout Bath  
Commission artists – focus on disability  
Develop participatory, accessible artwork

Participant groups of stakeholders:

- Art spaces
- Schools
- Colleges
- Local universities
- Care home residents
- Patient groups

Two main aims:

- To explore the development of sensorially and intellectually accessible participatory artworks through the experiences of artists-as-co-teachers
- To examine the commissioning of participatory artworks as a means of socially inclusive participatory education

As before, conducted in three phases

# OPEN PHASE

Meetings designed to discuss flooding of Bath and what was needed / wanted:

- Experts: local councils, water companies and the environment agency, arts centres and sewerage companies
- Lay participants: Local residents, local association for the deaf, local people with disabilities, local science and arts association, students, teachers, museums

Discussed local experiences of flooding, local inclusion, being disabled in Bath

- Tensions with local authorities, water and river authorities about siting works



# THE AXIAL CODING PHASE

Commissioning of the artists in consultation with participants

Developing art works with the community

Participant feedback on artworks

Some tensions, as arts groups tried to protect the artists

However, artists themselves seemed to be open to new thinking

Development of an accessible website

Exhibition at local festivals and in the arts centres



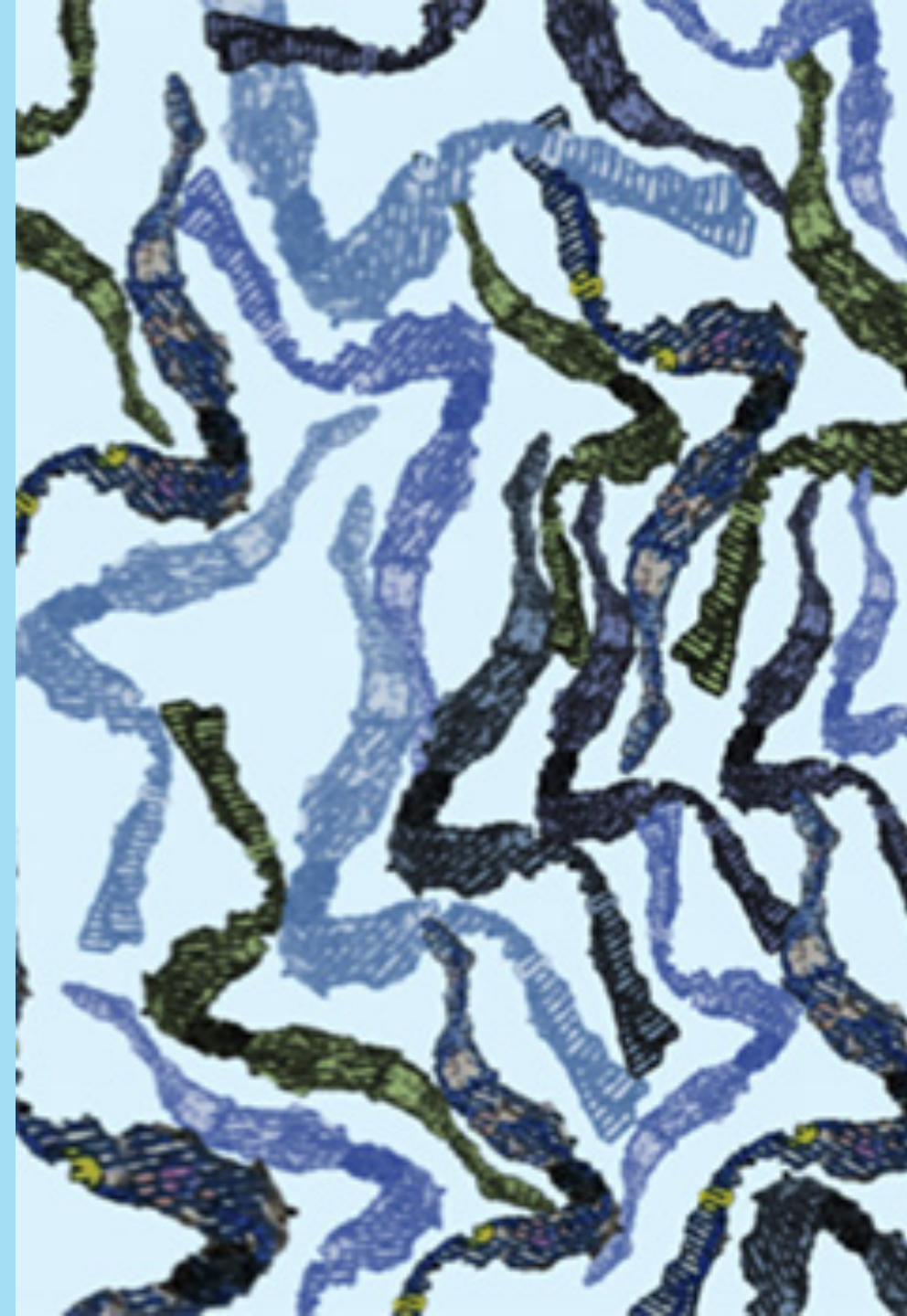
## SELECTIVE CODING PHASE — EXPERIENCES OF LOCAL MEMORIES

Mark: Performance Artist - “Having grown up in this area the stories of the disastrous floods were often recounted, particularly on car journeys through Pensford. Although I started with a plan for my RIV piece I left space in its framework to incorporate new discoveries and developments. The piece itself kept growing even throughout it’s delivery during the Forest of the Imagination and related events. My only concerns for accessibility were for safety near water and traffic. As I was mostly sited away from the river bank and roads this was not an issue.”



# SELECTIVE CODING PHASE — EXPERIENCES OF PARTICIPATION

**Alison: Installation artist** – “I have had people tell me they have been to look at the flood markings under Ha'penny Bridge & had several conversations about the phenomenal scale of water mass that the flags indicate when in position and how that would behave differently spread out in the flood conveyance system which was rewarding to realise people understood and were as fascinated by the physical modelling of it as I am.”





# SUMMARY

Technologies for People with  
Disabilities

# SUMMARY

- Arts, technologies and education for people with disabilities have gone through distinct eras of evolution
- At the beginning of this evolution, both education and technologies focused on physical medical issues
- As technologies and education evolved, they did more to consider the needs of all users, and still considered people with disabilities as a separate user group
- Slowly, mainstream technologies have started to include people with disabilities in educational development and the design process – technology became ubiquitous
- Nowadays, contemporary technologies and education, used correctly, have the potential to consider all people's individual needs
- We need to consider this issue moving forward, and co-develop and design accordingly from the ground up