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Collaborations between Arts and
Commercial Digital Industry Sectors: A
Curatorial Practice-led Investigation of
Modes of Production

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Abstract

Much work has been done over the past two decades exploring and creating many collaborative, cross-sector environments between arts, computer sciences and research that have supported the production of art, including: new media labs; co- working spaces; media focused gallery spaces; electronic art festivals; and the Internet itself. Less research has been done into the possibilities that exist in collaborations between the arts and commercial digital industries. The combination of two distinct and powerful hierarchical systems has forced a revision of current working practice within each field. This research interrogates the impact of collaborations between the arts and commercial digital industries, and identifies the impact of those collaborations upon curatorial and artistic modes of practice, with a particular focus on production. It identifies some of the inherent value systems, and describes a range of collaborative modes of artistic production that sit along a spectrum of power balances between the arts and commercial digital industry sectors, from Brand Marketing to Artist Practice as Business. The areas of difference in roles and working practices identified through both case studies and curatorial projects include factors such as: Value and Money, Time and Capacity, Crediting and Intellectual Property, and Roles and Working Practices.

The curatorial projects include *Dear Angel* a commission of participatory art which uses both digital and other media, a *NESTA Digital R&D for the Arts* proposal, and for *Thinking Digital Arts*, a commission of an artwork by an artist/creative technologist partnership, and a digital (art) hack production workshop. How the curatorial role works in the interface between the arts and commercial digital industries is analysed. The patterns of difference and the power balances identified in the research aim to be useful to other practitioners.

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Chapter 1: Introduction

Starting Point for the Research

Technological developments have driven major growth within the software, digital and mobile industries. Commercial success in these areas has seen the evolution of new collaborative practices and cultures around the production, distribution and consumption of digital content. A deepening dialogue is emerging between the arts, new media arts, open source communities and the creative digital and technology industries facilitated through creative practice. Much work has been done over the past two decades exploring and creating production environments in which art can develop between computer sciences and research through new media labs; creative innovation labs and co-working spaces; media focused gallery spaces; electronic art festivals and artist-in-residence programmes. Less research has been done into the possibilities that exist in collaborations between the arts and creative digital and technology industries (Harris, 1999). However, as digital technologies have become pervasive, this is an area that, in recent years, has increasingly sparked an interest in both sectors.

In the UK, various initiatives, driven by both sectors, have sown the seeds for new ways to collaborate across sectors and build new arts/digital partnerships: examples include Culture Code NE, NESTA R&D Fund for the Arts, and Sync Scotland. As both sectors try to capitalize on and understand the creative potential and challenges of these new partnerships, the emergence of collaborative methodologies for producing art that explores new technologies (both commercial and open source) within a spectrum of collaborative sites of production are seen. The economic, intrinsic and social value inherent within these activities sites are catalyzed by an increasingly networked and digitized society, and benefit areas outside the core territory of arts and media. While these partnerships are developing fast, there has been little research into the working tensions at play within the process of collaborative production.

Charlie Gere, author of *Digital Culture* (2002), tells us that we must remain critically aware of the underlying structures and frameworks that continue to shape and define our current digital landscape. Likened to the English

countryside, Gere reminds us that while the digital ecosystem may seem almost natural, it is in fact entirely artificial. Gere argues that it is underlying, man-made structures rather than any natural tendencies that determine the way people do business, produce media, entertain themselves, and communicate.

The pervasiveness of digital technologies and the increasingly acknowledged role of the arts in the practice of innovation within the creative and digital industries have signalled a realignment of the arts and cultural sector with the creative industries (within them the commercial digital industries). In their report, *A Manifesto for the Creative Economy (2013)*, Bakhshi and Throsby seek to clarify what is meant by innovation in an arts and cultural context.

This report

‘... focused upon four areas of potential innovation: audience reach, artform development, value creation and business model innovation (Bakhshi and Throsby, 2013, p.75)

New methodologies that identify, articulate, test and present the nuances of cultural and economic value for the arts have primarily focused upon the ways in which the funded arts and cultural sectors capitalize upon digital innovation to articulate the role art can have within the value chain of production within wider society.

The primary application for digital technologies within the arts and cultural sector has been to seek new ways to expand audience reach and develop new business models for sustainable growth, rather than an exploration of collaborative artform development between two distinct sectors.

In his book *The Rise of the Creative Class*, Florida noted that

‘... our economy is powered by creativity. Creativity — “the ability to create meaningful new forms,” as Webster’s dictionary puts it — has become the decisive source of competitive advantage.’ (Florida, 2002, p.6)

The combinations of two distinct and powerful hierarchical systems has forced a revision of current working practice within each field, and has begun to establish terms of collaborative engagement for both. Within the arts, traditional art world concepts, tools and methodologies that support artistic practices that employ

digital technologies have been found lacking. As such, there has been a development of new approaches in relation to funding, commissioning, producing, exhibiting, interpreting, disseminating, critiquing, collecting, selling and historicizing art, after new media. As the relationship between these two distinct sectors (the arts and commercial digital industry sectors) evolves, and collaborative creative practices develop, it can be seen how separate agendas, protocols, roles and working practices are being brokered to enable new sites of artistic and curatorial production. A clear understanding of the evolving curatorial role within the interface between art, new media art and commercial technology is pivotal to articulating contemporary art's position in a digital culture.

The personal starting point for this research is ten years of experience within the funded UK arts sector, specializing in the cultural regeneration and arts development fields. During this time I worked in many roles in the 'traditional' contemporary arts field within organizations such as Durham City Arts (Creative Director) and the University of Sunderland (freelance curator) mainly engaged with facilitating collaborative, community driven art initiatives and producing cross-disciplinary cultural festivals, events and artist commissions. Drawing on my experiences, I became curious about the potential contexts and ways in which people could engage in art/cultural- based experiences through new technologies. My research evolved around questions that had been raised for me in a series of commissions I had produced during my time developing multidisciplinary arts festivals in the North East of England.

Around 2010, I began brokering collaborations between artists who were exploring new technologies in their practice and freelance, creative technologists and developers. An early example of this is *Gala Manoeuvres* by UK artist Tim Brennan, which was commissioned for The Brass Festival in Durham in 2011. *Gala Manoeuvres* was inspired by the memories of older generations and young people's views of the Durham Miners' Gala, one of the biggest political gatherings in Europe that evolved out of coal mining's trade unionism. Brennan's performance-based practice is rooted in walking and the physical experience. His projects involve engaging participants in guided walks and the art of conversation, which he refers to as manoeuvres. The commission involved a series of three live performances — or manoeuvres — entitled MARRA, YAKKA

and KENNER, a colloquial language used by coal miners, now known as PITMATIC. These three live manoeuvres were accompanied by an interactive map-based digital artwork that was developed for mobile phones by a mobile platform developer, Mimosa Wireless. Mimosa Wireless was an entrepreneurial start-up company run and delivered by Adrian Gordon. Like many start-ups, he was a one-man business working from a hot desk office space in a technology park in Durham in the North East of England. His company had been developed from a mobile computing research project he had conducted, a key output of which was the DIMPLE mobile platform on which Brennan's work was hosted (Hall and Gordon, 2010).

The process of curating and producing collaborative commissions such as these between artists and technologists for festival and traditional cultural settings brought me on to unfamiliar curatorial ground. As I did not have a background in technology, my education being firmly rooted in contemporary art studies (BA Fine Art Sculpture and Art History, and MA in Art Museum and Gallery Studies), I found the demands of brokering collaborative commissions between commercial digital and cultural practitioners raised many questions; while the digital aspect of commissioning had presented interesting challenges for me in relation to its production, maintenance, documentation and archival challenges relating to technologies that I had not faced in previous, more non-technology-based commissions. I was particularly interested in the challenges I had faced when collaborating with a commercial technology partner and platform to commission this new work. The issues related to differing agendas and motivations, expectations around finance, differing roles and working practices, and factors around ownership. The shift in relationship with the commercial partner — from transactional to collaborative — forced me to review both the practical considerations and theoretical implications of developing collaborative practices more widely in relation to curatorial practice.

Within the wider context of my field, I began to see an evolving cultural landscape that was strategically encouraging and facilitating cross-sector collaborations through targeted policy and funding strategies; collaborative open lab spaces; initiatives dedicated to brokering new ways for the cultural and digital communities to collaborate; and new (mainly commercial) platforms in which

new ideas, methodologies and art works in this area were being discussed, exhibited and engaged with. The combination of my research context and my previous practice presents an opportunity to contextualize collaborations between the arts and commercial digital technologies within both new media art and the contemporary art production context and interrogate it through the lens of an evolving personal curatorial practice. This thesis, therefore, will investigate the impact of such collaborative contexts and developing artistic practices upon the curatorial role.

Research Question

To achieve my research aim, I focused upon the following research question:

- How is the role of curator, artist and digital technologist being challenged by the differing value systems and modes of production of the arts and commercial digital industry sectors?

This question has informed the key aim of this research, which is to interrogate the impact that collaborations between the arts and commercial digital industries have upon curatorial and artistic modes of practice, with a particular focus on production. Although there is current research in both sectors, there is little existing research in the overlap between the two. As such, my research aims to generate an understanding of art produced within collaborative contexts that are shaped by both commercial and cultural demands and provides a critical analysis of current developments in this field. The research aim has two key objectives, namely to:

- Interrogate the impact that collaborations with the commercial digital and creative media sector have on artistic and curatorial modes of practice.
- Curate a series of practical projects that explore different models of collaborative artistic and curatorial practices developing between the arts and commercial digital industry sectors.

Methodology

In order to examine collaborative production processes emerging between the arts and commercial digital industry sectors, and identify curatorial developments within this field, it was necessary for me to develop a body of curatorial projects that explored both artistic and curatorial development within contemporary collaborative practice. Similar to other art practice-led PhD research, a primary motivation behind this investigation is to 'broaden the horizon of the personal

creative practice' (Chung thesis, 2008, p.14) and gain an understanding of some of the challenges that had been raised for me when working in the field.

The overall methodology of the research is based on previous precedents for art and curatorial practice-led research. It is a combination of a contextual review, which includes examples of practice as well as literature and current discourse, plus a series of reflective practical curatorial projects intended to investigate my research question. This method has drawn from previous PhD theses including Dominic Smith's *Open Source Software Practice, and Collaborative Art Practice* (2011), which analysed a series of practical artistic/curatorial projects and compared the methods of open source production in relation to participatory art projects. Victoria Bradbury's *The Performativity of Code in Participatory New Media Artworks* (2015) examined definitions of code and performativity through practical art projects, in order to evaluate when the performance occurs, and considered ways in which performativity is expressed in code, which led her to develop a more curatorial role in relation to hack workshops. Sarah Cook's thesis *The Search For a Third Way of Curating New Media Art: Balancing Content and Context In and Out of the Institution* (2008), which sought to understand how the dynamic and process-led characteristics of new media art condition how a curator approaches the practice of 'producing and distributing (commissioning and exhibiting) technologically-driven art forms' (2004, p.3), took a less practice-led approach, but was also useful for this thesis in terms of curatorial methods.

My contextual review started from an informed position as a PhD student within CRUMB, the research centre for curating new media art (crumbweb.org, 2000) and the book *Rethinking Curating*, by co-founders Prof. Beryl Graham and Dr Sarah Cook (2010). From here, I was introduced to a body of knowledge produced by curators, artists and scholars working with new media and networked practices.

In order to further understand the field in which I was focusing my research, in addition to researching published materials, I became an engaged and active member of its community. As such, I attended conferences and symposia that explored emerging digital culture and hybrid artistic practice, including both art

and commercially focused conferences. For example, I attended and analysed commercial conferences programmed by the creative digital and technology industries for a commercially orientated audience such as *Future Everything* (2013), which describes itself as an 'innovation lab for digital culture' (FutureEverything, 2014); the CVAN (Contemporary Visual Arts Network) *CVAN/Google Knowledge Exchange Symposium* (2013); and the *Digital R&D in the Arts* annual forum (2014). I have also attended symposia programmed by arts funders and organizations for primarily an academic, arts, creative and technology audience such as Rhizome's *Seven on Seven* (2013); and the *Cultural Value and the Digital: Practice, Policy and Theory* (2014) conference at Tate Modern, London.

My personal curatorial practice led my research trajectory from the start of my research project. Due to my ten years' experience in the field, and familiarity with the processes of commissioning and curating, I felt I had become unconscious of my own ways of working. As such, I drew from Donald Schon's reflective methodology, in order to become more aware of my own decision-making process.

'A practitioner's reflection can serve as a corrective to over-learning. Through reflection, he can surface and criticize the tacit understandings that have grown up around the repetitive experiences of a specialized practice, and can make new sense of the situations of uncertainty or uniqueness which he may allow himself to experience.' (Schon, 1983, p.61)

As each curatorial project was delivered and analysed it informed the next project. As is the nature of working within the arts, some of these projects built upon opportunities at hand (such as the *NESTA Digital R&D Fund for the Arts*, which served to provide an opportunity to observe the infrastructure of collaboration being established by current funders), whilst others such as my final curatorial project, *Thinking Digital Arts*, were devised to explicitly test specific curatorial strategies for collaboration identified throughout the research. This reflective research methodology was initiated from the inception of my research project and developed in tandem with my broadening knowledge of the field, gained from both my contextual review and engagement with the field.

The relationship between the contextual review and the curatorial practice was

framed by this iterative process: my practical curatorial studies create a programme of curatorial investigations and developing modes of modified practice that sit within identified sites of collaborative production as identified in Chapter 3. Each curatorial project also identified the areas where frictions arose, areas such as Money, Intellectual Property, and Roles. Therefore, each curatorial project is analysed under recurring headings to facilitate comparison. In each project, the views of collaborators are noted through quotes and questionnaires, available in the Appendices.

In order to gain a further understanding of practice-led research methodologies within arts, curatorial and design practice, I collaborated with Dr Lucy Livingstone, to co-produce the *Nomadic Salon*, a collaborative, student-led partnership project between the PhD communities at Northumbria University and the University of Sunderland, forged through the Arts and Humanities Research Council's Block Grant Partnership Scheme. The *Nomadic Salon* presented an invitation to various external, practice-led research partners across the North East region to host a series of conversations about what practice-led research means within the context of their organization. Particularly useful *Nomadic Salon* events to this research included the collaboration with Culture Lab, University of Newcastle upon Tyne, which represented a breadth of practice-led, digital art research approaches developing within my research community. *Nomadic Salon* provided a platform for focused discussion around salient contemporary themes in design, new media curating and art practice. With the delivery of each event, an interdisciplinary community of practitioners shared insights from their own practices to help identify points of synergy and departure between creative practices and methodologies. The structure invited groups to coalesce around a speaker in an informal style, while they discussed key themes in their work and provided a provocation for the group to discuss. This discussion method informed my curatorial project *Thinking Digital Arts Hack*, discussed in Chapter 6. Full documentation of this programme of events are available online at <http://www.nomadicsalon.co.uk>. A short video of feedback from *Nomadic Salon* symposium delegates can be found in Appendix 1.

Finally, in order to develop discourse specifically around my research area, I conducted a 'co-operative enquiry' (Reason, 2001) with peers and colleagues

working in the field to gain more insight into the realities of working in this way from an artistic, curatorial and production perspective. The format of this enquiry was an online discussion between invited participants and the wider CRUMB community (see Appendix 3).

Overall, the methodology aims to identify points of similarity and friction within the inherent discourses that frame the arts and commercial digital sectors' perspectives and practices. I sought to identify the often differing: values systems, inherent protocols, collaborative roles and working practices and expected returns within cross-sector collaborations, as they relate to the production of art.

Scope of the Research

This thesis will focus upon the impact of collaborative relationships between the arts and commercial digital industries on contemporary curatorial practice (commissioning and exhibiting). The research is located within the overlap between evolving curatorial practices within emerging collaborations between the arts (including contemporary and new media arts) and (creative) commercial industries.

It is beyond the scope of this research to cover the large amount of literature related to Contemporary Curatorial (including New Media Curatorial Studies), Digital Media and Cultural Studies, Human Computer Interaction, Business Studies and Innovation Studies. It is not a full historical or theoretical analysis of new media art, contemporary art or digital industry development. Instead, it refers to digital culture only to frame the sites of identified artistic production emerging from collaborative contexts between these three fields. The scope of the art practice referred to is primarily visual art or mixed media, and primarily from English-speaking, Western arts practice in the field, particularly within the UK, within the last ten years.

Definitions

Collaboration

Collaboration is defined by Graham and Cook in the CRUMB book *Rethinking Curating* in the following terms:

‘Working jointly with. Unlike interaction and participation, the term collaboration implies the production of something with a degree of equality between the participants.’ (2010, p.114)

Wikipedia, the free encyclopedia, written collaboratively by the people who use it, defines collaboration as follows:

‘Collaboration is working with others to do a task and to achieve shared goals. It is a recursive [1] process where two or more people or organizations work together to realize shared goals, (this is more than the intersection of common goals seen in co-operative ventures, but a deep, collective determination to reach an identical objective ... — for example, an endeavor [2][3] that is creative in nature [4] — by sharing knowledge, learning and building consensus.’ (Wikipedia, 2016)

Herb Kim, Chief Executive of Thinking Digital Ltd, describes collaboration in the following way:

‘For me it says we’re going to “work together”... Perhaps the biggest element of a collaboration as opposed to a partnership or a transactional relationship is that often the 2 parties can’t define beforehand easily what the interaction and relationship will look like? Just a desire to combine relative strengths to create a product whose sum is greater than the parts going in?’ (Private email, Herb Kim, 1st August 2015)

As the definition of collaboration is variable, I will use the term to encompass the definitions above, that is, a working together with a shared goal, which may or may not include transactional elements. I am particularly interested in collaborations between different sectors, specifically the arts and creative digital and technology industry

Co-creation

Wikipedia provides a business-led definition of co-creation:

‘Co-creation is a management initiative, or form of economic strategy, that brings different parties together (for instance, a company and a group of customers), in order to jointly produce a mutually valued outcome.’ (Wikipedia, 2016)

In their report *Reflections on co-creation: open source approaches to co-*

creation, Hadi Mehrpouya et al (2013) propose that

‘Co-creation is, on the face of it, a simple, seemingly self-explanatory term; namely the joint creation of an artefact, service, value system, or experience.’

However, the authors go on to provide useful characteristics for co-creation.

‘However there are commonalities that the authors feel can be helpfully drawn out; namely, co-creation requires the following four components: Collaboration between two or more parties (e.g. performer–audience, designer – end user, company – customer). An element of creativity.

A means of actively seeking engagement with collaborators (i.e. from the leading partner, such as company, performer, or designer). Low entry barrier (i.e. all collaborators are able to meaningfully contribute suitable to their skills sets through the co-creative tasks and context).’
(Hadi Mehrpouya et al, 2013, p.176)

The difference between co-creation and collaboration relates to the context in which these phrases are used. Collaboration is primarily used in relation to arts practices, while co-creation is more prominent within commercial, production contexts. Therefore, I use the phrase collaboration within the context of a commission (a format which originated in the arts sector), and the phrase co-creation in the context of a hackathon (a format which originated in the commercial industries)

Commercial Digital Industry Sector

In 2012, Matthew Williams and Jim Hillage wrote a report *Sector Skills Insights: Digital and Creative*. In this report the creative digital and technology sector is defined thus:

‘The sector comprises digital technology, and creative activities. The digital technology sub-sector provides the infrastructure and platforms through which creative content is often delivered. While the creative industries include film, TV, radio, computer games, publishing, advertising, music, performing/visual arts, design and cultural heritage. Over the years there has been greater synergy between the digital and creative sub-sectors. For instance, digital technology is transforming the creative sector (particularly creative media industries) as well as being an important driver behind the growth of ICT products and services.’ (Williams et al, 2012)

The term “cultural and creative industries” is also sometimes used to describe digital industries which intersect with the cultural sector. On the *Creative Cities* website, the British Council provide a definition for the creative industries and the

creative economy.

‘The term refers to the socio-economic potential of activities that trade with creativity, knowledge and information. Governments and creative sectors across the world are increasingly recognizing its importance as a generator of jobs, wealth and cultural engagement.

At the heart of the creative economy are the cultural and creative industries that lie at the crossroads of arts, culture, business and technology. What unifies these activities is the fact that they all trade with creative assets in the form of intellectual property (IP); the framework through which creativity translates into economic value.’ (Department for Culture, Media and Sport, 2001))

The UK government definition of the Creative Industries is

‘those industries which have their origin in individual creativity, skill and talent and which have a potential for wealth and job creation through the generation and exploitation of intellectual property’ (Department for Culture, Media and Sport,.2001)

David Parrish highlights the definition of the Cultural Industries in his blog article

‘The term ‘cultural industries’ is also used by some agencies, though this term relates to a more specific range of industries and can be regarded as a subset of the creative industries. The cultural industries are defined by UNESCO as ‘industries that combine the creation, production and commercialisation of contents which are intangible and cultural in nature; these contents are typically protected by copyright and they can take the form of a good or a service.’ (Parrish, 2016)

I refer to these three definitions when referring to the Cultural and Creative Industries. For brevity, I will use the phrase ‘commercial digital industries’ to describe the sector that comprises digital technology, creative activities and the technology infrastructure that supports creative content to be distributed.

The Arts Sector

When I use the term “The Arts” in this thesis, I mean all contemporary arts, including new media. I am deliberately using the term because this research does not attempt to resolve the current debate on digital practices’ position in relation to art or design. However, I will briefly define both new media arts and contemporary arts:

New Media Arts

Wikipedia defines new media art thus

‘New media art is a genre that encompasses artworks created with new

media technologies, including digital art, computer graphics, computer animation, virtual art, Internet art, interactive art, video games, computer robotics, 3D printing, cyborg art and art as biotechnology. The term differentiates itself by its resulting cultural objects and social events, which can be seen in opposition to those deriving from old visual arts (i.e. traditional painting, sculpture, etc.).' (Wikipedia, 2016)

Sarah Cook highlights within her thesis "The Search for a Third Way of Curating New Media Art" that:

'definitions of new media art are constantly shifting as new technologies are developed, become ubiquitous and old ones fall out of use.' (Cook, S, (2008), p20)

She then suggests a definition

'new media art could be said to include: time based, site specific installations, or performances of a durational nature, which are linked to a computer based network such as the internet; art exploiting recent developments in technology and science such as software tools or genetic screening. In new media art, technology can either be the tool used to create the work or the medium in which the work is made (Paul, 2003, p.8). Sometimes it can be both.' (Cook, 2008, p20)

Graham and Cook (2010) define new media art as art which behaves according to Steve Dietz's three categories of connectivity, computability and interactivity. It is worth noting that Graham and Cook do not include all aspects of the Wikipedia definition, such as biotechnology.

It is important to note that the artists I engaged with to deliver my own research were practitioners that continue to push the boundaries between art, performance, live art, design, technology and HCI, amongst other disciplines. Artists and creative practitioners come from fine art, design and new media art disciplines and their practice is interdisciplinary in nature. These included Victoria Bradbury, who explored live and performance art based characteristics of creative code and Dominic Wilcox, who studied both art and design subjects and refers to himself as "an artist, designer and inventor". Therefore my working definition would fit with the Graham and Cook definition and those new media art characteristics that they propose.

Contemporary Arts

Wikipedia provides the following definition of contemporary art:

‘Contemporary art is art produced at the present period in time. Contemporary art includes, and develops from, postmodern art, which is itself a successor to modern art.’ (Wikipedia, 2016)

Graham and Cook highlight that new media art is like any other contemporary art field,

‘... but it also has particular characteristics that distinguish it from contemporary art and by extension from the systems involved in the production, exhibition, interpretation, and dissemination of contemporary art...’ (Graham and Cook, 2010, p1)

The scope of the arts sector organisations described in this thesis are primarily public-sector, and usually have an interest in both production and exhibiting, such as; ISIS Arts in Newcastle upon Tyne or Baltan Laboratories in Eindhoven, Netherlands. For the purposes of this thesis, private auction houses such as Philips Auction House or commercial (selling) galleries lie beyond the scope of the arts sector.

Cultural Broker

The Oxford dictionary defines the term broker as both a noun and a verb:

Noun

‘A person who buys and sells goods or assets for others: *the centralized lenders operate through brokers*’

Verb

‘Arrange or negotiate (an agreement): *fighting continued despite attempts to broker a ceasefire*’ (Oxford dictionary, 2016)

The phrase “cultural broker” is less defined in the arts, but Mary Ann Jezewski defined culture brokering as it related to health as

‘the act of bridging, linking or mediating between groups or persons of differing cultural backgrounds for the purpose of reducing conflict or producing change’. (Jezewski and Sotnik, 2001)

I will use this definition of “cultural brokering” within this thesis as it relates to collaborations between the arts and commercial digital industries.

Structure

The structure of this thesis is informed by the trajectory of my practice-led research journey:

Chapter 2’s The Case for Culture in Relation to the Creative Digital Industries

section provides a historical overview of the theoretical developments around cultural value and policy spanning the past thirty years. Historical tensions between the intrinsic, economic and social agendas that surround the articulation of culture are explored to reveal the potential impact of the current realignment of interests between the cultural and creative industries upon systems of production. This work draws on the work of Bakhshi *et al.* (2013), Holden (2015) and the Warwick Commission (2015). In the same chapter, *Roles and Working Practices* identifies three emerging roles within the interface between creativity and commerce: The Creative Professional, The Broker and The Prosumer, who provide the motivation, framework and skilled actors required to shape the current creative labour market and lay the ground for a deeper relationship between two distinct, but interrelated fields. This work draws upon Clay *et al.* (2014), and Garcia (Garcia, 16th March 2016) amongst others.

The *Art and Other Sectors: Contexts and Values* section draws upon the work of Clare Bishop (2012), Shanken (2010) and Lichty (2013) to highlight the (art) historical argument relating to the ‘digital divide’ between contemporary and new media arts practice and highlight two, once distinct perspectives for the role of technology within the production of art. I investigate how the reframing of the cultural realm with the creative industries (Holden, 2015) has fostered a new position for the arts within the current creative economy and brokered a new relationship between the art worlds (Penny, 1995; Harris, 1999).

Chapter 3: *Context — Intellectual Property, Crediting, and Types of Collaborative Production* provides a useful overview of the evolving landscape of protective licensing developed by and for those engaged in the creation of software, data and digital artworks. All of which could be the output of collaborations between the arts and creative digital and technology industries (see Appendix 2).

The section *Types of Collaborative Production* provides an overview of collaborative sites of production that facilitate engagement between the arts and commercial digital and technology industries. Each model within this particular ‘ecology’ of activity is explored to reveal specific characteristics of each.

Three curatorial projects (Chapters 4, 5 and 6) investigate developing curatorial strategies, informed by reflective, action research and my broadening understanding of the field. Each curatorial project has been informed by the spectrum of collaborative activity identified in Chapter 3. Each provides an opportunity to investigate the roles and working practices, similarities and frictions inherent within identified sites of production, and explores the terms of collaborative engagement within each.

Chapter 4's *Dear Angel* had no commercial partner and provides an opportunity to explore the ways in which participatory and new media art strategies can act as a broker or intermediary and link distinct cultural festival programmes. I examine modes of artistic and curatorial practice that facilitate participative, interactive and collaborative artistic strategies both online and off and track the evolution of the role of the audience from participant to prosumer.

In Chapter 5, the NESTA R&D Fund for the Arts project investigates the funder-led brokerage model identified in Chapter 3. In my role as researcher, rather than curator or producer, this second case study provides an observational position from which to investigate the constructed nature of a funder-brokered site of collaboration. It offers an 'inside' and 'behind the scenes' perspective throughout the (unsuccessful) application process for the NESTA Digital R&D Fund for the Arts. This project investigates the collaborative relationship between three cross-sector partners, which was comprised of the arts (ISIS Arts), creative digital and technology industries (Vector 76) and academia (CRUMB, University of Sunderland). The process of developing the application reveals common barriers and benefits inherent in cross-sector collaborative models of production and identifies further tensions specific to developing models of collaborative art commissioning within 'triple helix' (Clay et al., 2014) collaborative contexts.

In Chapter 6, my final case study, *Thinking Digital Arts*, provided an opportunity to draw upon my understanding of how emerging policy and theory (Chapter 2) is driving interaction within an expanded spectrum of collaborative practice (Chapter 3), and the critical learning provided by the two previous case studies described in Chapters 4 and 5 and apply it to broker a series of collaborative contexts for production in which experimental, collaborative and co-creation strategies can develop. Chapter 6 presents two distinct strands of curatorial

practice that operates within emerging collaborations between the arts and commercial digital industries. It reflects upon the curatorial strategies employed within each; that is, a one-on-one 'pairing' commission, and a group co-creation within the context of a live hackathon event.

Finally, Chapter 7 presents my conclusions about my research, identifies my original contributions to knowledge and suggests areas for further research.

Chapter 2: Context — Values and Roles

Introduction

Because the research question concerns how roles are being challenged by the different value systems of the sectors, this chapter provides a review of recent, theoretical developments surrounding the identification and measurement of economic, intrinsic and social benefits generated by culture and engagement with the arts. Historical tensions between these agendas are tracked, including tensions between other sectors of art and science, computer technology and design. These tensions are analysed in order to provide a critical understanding of the role of the arts and cultural sector within the value chain of production by collaborations. A term used in commercial manufacturing, Wikipedia defines a value chain of production as

‘a set of activities that a firm operating in a specific industry performs in order to deliver a valuable product or service for the market... Inputs, transformation processes, and outputs involve the acquisition and consumption of resources — money, labour, materials, equipment, buildings, land, administration and management. How value chain activities are carried out determines costs and affects profits.’ (Wikipedia, 2016)

Three emerging roles are identified which provides a useful way to understand the impact of specific roles emerging within more recent, collaborative, cross-sector relationships, where arts practice and commercial, technological invention, consumer product and individual (prosumer) experience overlap. These have been called The Creative Professional, The Broker and The Prosumer. The chapter concludes by providing a brief overview of historical strategies that have bridged arts and sciences by artistic and curatorial activity within the new media arts field and identifying the perceived tension between new media and contemporary art value systems.

The Case for Culture in Relation to the Creative Digital Industries

The tension between the intrinsic, economic and social benefits of culture and the arts has been the focus of much debate since public funding for the arts began in 1946 with the creation of the Arts Council. Declining support for the publicly funded arts due to the onset of austerity in the UK in the past five years, coupled with the recognized potential for financial gain through diverse income streams

made possible via digital technologies, and the reframing of the arts together with commercial creative industries, has brought this debate into sharp focus once again. While it has been broadly accepted that arts and culture hold a significant range of values for society, the role, mechanisms and means by which it does so, continues to be hotly disputed (Holden, 2015).

For more than three decades, public funding has been directly informed by the instrumental and economic register of benefits and 'spill over' values generated by the arts for other fields such as 'economic impact; urban regeneration; improved educational attainment; better health; reduced unemployment; and so on' (Crossick and Kaszynska, 2013, p.2–3). Much work has been done by cultural economists in developing economic valuation methods for the identification, capturing and valuation of perceived public benefits generated by the arts, in order to justify public funding (Bakhshi, 2009; Bakhshi and Throsby, 2010). However, it has now been both acknowledged and largely accepted that the instrumental terms that cultural value has been broadly defined by has led to an oversimplification of role of the arts in the chain of value production (McCarthy and Wright 2004; Holden, 2006) and does not articulate wider, more nuanced, non-commercial values, such as any public and private benefits inherent in arts experiences, which 'transcends the purely economic' (Throsby, 2010, p.7).

Cultural professionals have generally seen existing economic and instrumental valuation methods for arts and culture as only a partial fit for understanding the holistic, 'intertwined' picture of the value generated by the arts. In their report, *Understanding the Value and Impacts of Cultural Experiences: A Literature Review*, Carnwath and Brown concur that drawing artificial boundaries between types of value and impact that are integrally intertwined diminishes 'the appreciation of the whole' (2014, p, 9). Bakhshi *et al.* (2013) recognizes the tensions that arise when applying multiple perspectives to the analyses of a complex system that bridges both the arts and commercial sectors. He explains that economic arguments have held little traction within the arts and cultural sector. He highlights that the language of economics, 'goods and services' remain removed from 'the decisions of most artists, and audiences they engage with' which 'are made on aesthetic, emotional, spiritual or intellectual ("intrinsic") not utilitarian, grounds' while economists remained unconvinced of the value the

arts and culture could generate (Bakhshi *et al.*, 2013, p.71–72). More recently, this oppositional debate has been shifting position. As Donovan (2013) identified, the arts are now willing to engage with economic perspectives much more readily than before. While culture and arts organizations are warming to the language of economics, they are also demanding a more holistic valuation framework that balances non-economic, alternative approaches to identifying, capturing and measuring intrinsic, social along with economic value ‘to robustly articulate the value of culture’ (Donovan, 2013, p.5) when making their case for public funding.

Klamer asserts that there are many kinds of value aside from the economic one that can be derived from culture and arts and this follows through to cultural goods

‘In Klamer’s view, cultural goods differ from other goods “because people may consider it a symbol of something — a nation, a community, a tradition, a religion, a cultural episode — and endow it with various meanings over and above its usefulness”’. (Carnwath and Brown, 2014, p.37)

The various meanings that people attach to cultural products reveal predetermined expectations of what art is supposed to mean and the qualities it is supposed to have. More recently, however, there has been a shift in focus to the cultural experience rather than the cultural product, making engagement — consumption and production — central to increased levels of participation. As such, participation resonates with both cultural and commercial experiences, and so the realm of the ‘servicescape’ and customer satisfaction with a cultural product is entered (Carnwath and Brown, 2014, p.101). Marketing research focuses on consumer value, motivations and customer satisfaction, and states that experiencing and marketing a cultural experience is similar to that of any other product experience. By associating this thinking with cultural value, a bridge is created that aligns cultural and commercial experience. The relationship between the arts and a more commercial marketing perspective of satisfaction becomes more pertinent to cultural value as the focus shifts to the individual’s engagement with culture and the choice and experience that they have.

‘There is a considerable body of literature in the field of marketing that explores the value of arts and culture from the perspective of consumers. This work has rarely been considered in wider discussions of value and impact, in part because marketing researchers have a narrow understanding of value, one that focuses exclusively on the components of economic value that are expressed in the marketplace through price and

demand.’ (Carnwath and Brown, 2014, p.19)

Thus, there is a deeper alignment between the art product and the context in which it is experienced. This is exemplified by the setting up of NESTA in 1998, the same year that the Creative Britain Initiative to support the recently defined “creative industries” was launched. With an initial endowment of £200 million, the broad ranging aims for NESTA included:

“build the bridge between an idea and a product”; “be a National Trust for Talent”; “pull down the artificial barriers between science, technology and the arts”; “turn creativity into products and services which we can exploit in the global market”; and “advance public appreciation of the creative industries, science and technology.”’ (Bhaskhi *et al.*, 2013, p.21)

It has now been broadly acknowledged that creativity, innovation and commerce will drive the economy in the 21st Century, just like science and technology drove the 20th Century. The focus of recent research on cultural value has centred on articulating the wider, more nuanced, value inherent in arts experiences (Crossick and Kaszynska, 2013, p.2–3), and the role of the arts ecology in securing them. Holden’s report, *The Ecologies of Culture* (2015), commissioned by the AHRC Cultural Value Project, highlights a desire to foster a deeper understanding into how to nurture the arts role in generating value through creativity that could lead to economic benefit.

Holden seeks to further understand the systems at play by applying an ‘ecological’ perspective to analyse connections between the subsidised (funded), voluntary (home-made) and commercial culture and the creative industries that have sometimes been ‘underpinned by a desire to justify public funding of the arts on the grounds that such investment eventually leads to commercial profit’ (Holden, 2015, p.4).

Bakhshi *et al.* (2013) also articulate this shift in focus, when they recognize that the Creative Britain project, launched in 1998 had ‘aspirations well beyond the obvious core territory of the arts and media, extending into design and even science, medicine and engineering’. The Warwick Commission (2015) also points to the current position of the arts in relation to business and technology when it cited the United Nations definition of the UK’s creative sector as being at ‘the crossroads between the arts, business and technology’ (Neelands *et al.*, 2015, p.20) and argues that the arts generates benefits and value for all three sectors.

Holden's insight into the 'flow of people, product, ideas and money' within the 'ecology' of culture and creative digital and technology industries provides an overview 'that does not privilege one type of value — over others that attach to culture' (2015, p.2). While values may be perceived as being equal, the hierarchal balance of power, found in any organic ecology, remains a dynamic driver within both the arts sector and commercial collaborators that attach themselves to culture through collaboration.

Alan Davey positions 'a strong, confident and innovative arts ecology' as the 'bedrock' or 'lifeblood' to both the creative economy and wider civic society. He too acknowledges the urgency for the arts to be

'...accurately interpreting the shifting landscape in which it operates and then skilfully manoeuvring its development tools to ensure the arts continue to be at the heart of civil society, valued by local communities across the country.' (Fleming and Erskine, 2011, p.20)

Accessibility and affordability of new technologies, coupled with the convergence of media platforms in the commercial digital sector and the rise of global social networking has revealed the potential for an evolving, hybrid creative arts practices to articulate a more holistic case for culture that could satisfy and benefit both the arts and cultural sector and the economists.

In his paper for State of the Arts, *Yes, Britain's got talent, but is that enough? An essay on art, commerce and the creative economy* (2013) Martin Smith acknowledges that the arts and commerce have historically been 'uncomfortable bedfellows'. Terminology such as the 'cultural and creative industries' is relatively new and conceptually confusing.

'By combining a range of previously distinct creative, commercial and professional activities and bundling them up as "the culture industries", "the cultural industries", "the creative industries" or "the creative economy", analysts have elided certain concepts that sit together somewhat uncomfortably. One thinks of the contrasting notions of cultural value and economic value, private markets and public infrastructure, price and beauty, data and aesthetics, personal identity and mass media, and entrepreneurship and collaboration. Add in the "c" word, creativity, and the "i" word, innovation, and you are soon in awkward territory with lots of square pegs being banged metaphorically into round holes.' (Smith, 2013, p.20)

However, Smith makes a powerful argument for the need for the arts and cultural sector to get organized, recognize the importance of understanding competition and the value of their role in collaborations. He urges the arts to create an investment, rather than funding focused ‘industrial strategy for the cultural and creative industries based on a fuller understanding of the dynamics of the creative economy and on a formal partnership with government’ (Smith, 2013, p.32) in order for growth to be achieved

As Vicki Heywood notes, it remains for artists and cultural producers to realize this ambition.

‘How can rhetorical commitments to new forms of leadership, innovative practice and generous collaboration turn into something real? This is where arts organizations and artists can come in. Their ethos, their method, their creativity can act as the catalyst for new ways of being and thinking.’ (Smith, 2013, p.5–6)

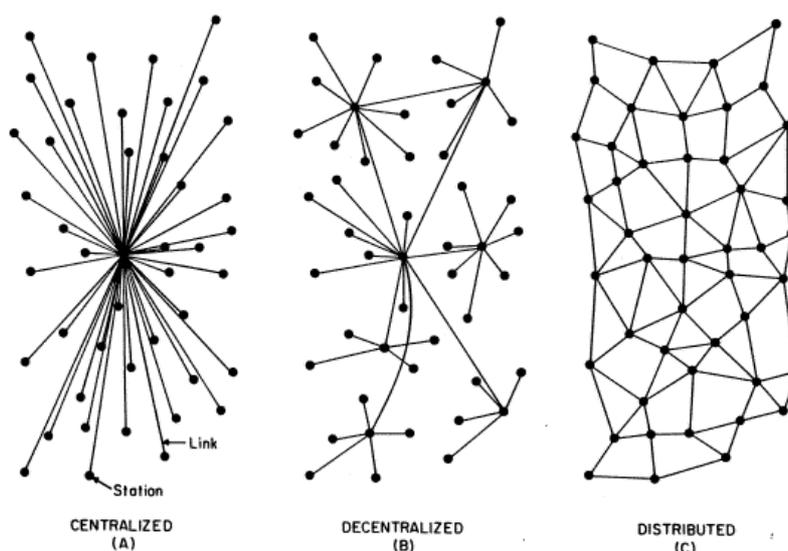


FIG. 1 – Centralized, Decentralized and Distributed Networks

Figure 1: Network Diagrams, Paul Baran 1964

Paul Baran’s network models provide a useful visual to understand networks in relation to systems of communications within computer technology; that is, centralized, decentralized and distributed. Graham and Cook use these diagrams to highlight the relationship between systems, networks and space both physical and immaterial, for producing and distributing art (2010, p.58). Within the collaborative production between arts and commerce, the balance of power within these networks becomes important. It is the larger actors that hold

the power to define the underlying network of activity in which smaller actors must operate. Within a digital 'ecology', this power balance directly impacts the way people do business, communicate and facilitate sites for the production of art and wider culture. This is significant given that for the most part the arts and cultural sector, and the burgeoning creative industries are generally made up of networks and clusters of smaller scale organizations and businesses. These smaller scale operations must operate within the modes of production that are established by larger actors.

It is worth noting that the distinctions that frame these differing sectors remains tangible because, as Vicky Heywood identifies, they are interdependent upon each other. When describing the 'Cultural and Creative Industries' in her introduction to the Warwick Commission's report on the future of cultural value *Enriching Britain: Culture, Creativity and Growth*, she says

'Culture and creativity exist in a distinct ecosystem. They feed and depend on each other. The points of connection between the Cultural and Creative Industries are where the potential for greatest value creation resides — culturally, socially and economically.' (Neelands *et al.*, 2015, p.9)

This thesis focuses upon those collaborations that support these points of connection and the three agendas (cultural, social and economic) that have been central to much of the recent research into the values being generated through the collective growth of the arts, cultural, creative industries and digital and technology industries, and analyses how the emerging systems, processes and language evolving between them impact upon arts and curatorial practice.

Art and Other Sectors: Contexts and Values

As well as differences in values between art and commercial digital sectors, there are histories of differences between art and other sectors or disciplines, which although outside of the scope of this thesis, are useful to briefly examine here in the wider context of curating. The relationship between art and science via curated projects has a particularly long history. In his book, *Art and Innovation*, Craig Harris highlights the fears of C.P. Snow who wrote in the 1940s that

'large segments within society were not communicating with each other and were creating language, educational, and social infrastructures that reinforce the gulf between these domains.' (Harris, 1999, p.3)

However, in 1993, Simon Penny highlighted that C.P. Snow's 'somewhat dated

dualism' between arts and science must include a third term — 'consumer commodity economics' — in order to have a greater relevance to contemporary culture. Penny argues that as artists are immersed in and subject to the values, persuasions and drivers within consumer culture, and use commercial tools to create their art, there is a natural slippage between what is art and what could be a commercial product.

'In this liminal territory, "art practice" and technological invention overlap. What is conceived, as an art project can become a product to be marketed, a potential money-spinner. I attach no value to this slippage between one role and another, it simply indicates the soft edges of art discourse in this territory.' (Penny, 1995)

As Florida (2002) notes, creativity is the new commodity. The creative economy is (re) shaping the landscape in which artists produce their work, which is being progressively defined by political, economic and social forces. Yet, as artist Stephen Wilson suggests in his essay *Reflections on PAIR, Xerox PARC* (Harris, 1999), the arts occupy a critical, independent role within this evolving landscape, one that lies outside the influence of commercial marketplace drivers: Wilson suggests the arts are independent and critical.

'The arts can function as an independent zone of research. They could become the place where abandoned, discredited, and unorthodox inquiries could be pursued. They may well value research according to criteria quite different from those of the commercial and scientific worlds.' (Harris, 1999, p.188)

Concerning the relationship between art and computer technology, in 1996, cultural theorist Lev Manovich drew a line between computer art and fine art describing the former as Turing land and the latter Duchamp land. Turing land represented the land where technology was taken seriously and is interested in experimental research processes; while Duchamp land satirized technology and wanted a finished art product. In their book, *Rethinking Curating*, Beryl Graham and Sarah Cook highlight the range of artistic and curatorial activity that is successfully bridging these two 'lands'. They posit the art world's interest in process-based art and curatorial interest in the behaviours of new media art practice form this bridge. They also cite lab models developed by new media artists such as Michael Naimark, who helped establish a number of prominent research labs including the MIT Media Laboratory (1980), the AtariResearch Lab (1982), the Apple Multimedia Lab (1987), and Interval Research Corporation (1992). Following these earlier, commercially focused research and development

labs were art and technology focused labs such as Eyebeam, where it is claimed, on their website, that the phrase ‘creative technologist’ was invented.

‘Eyebeam was conceived as a non-profit art and technology center dedicated to exposing broad and diverse audiences to emerging artistic practice critically engaged with new technology, while simultaneously acting as an educator of technology’s potential for creativity.’
(Eyebeam.org, 2016)

Concerning the differences between contemporary and new media art, Manovich’s opposing art ‘lands’ indicates a long-standing debate (Shanken, 2010; Bishop, 2012; Lichty, 2013; Quaranta, 2014). Claire Bishop’s article *The Digital Divide* (2013) and the reactions it created on the Art Forum website, reflects the opposing views within this debate. Duchamp land exponents state that the digital revolution ‘signals the impending obsolescence of visual art itself’ (Bishop, 2012) while those supporting the Turing land philosophy argue that there is no divide just a ‘a model of the art world that is getting old fast’ and that ‘Visual art will not become obsolete, the digital divide already is’. Patrick Lichty provides a useful account of this dialogue in his article *A disjointed conversation — Claire Bishop, The Digital Divide, and the State of New Media Contemporary Art* (2013) where he finishes with the following reflection:

‘... we [new media art] are the agents of change that are now becoming undeniable that reactive texts like Bishop’s only makes clear. New Media culture is steadily creating its own culture that is pervading all aspects of society, including the art world. Now that the digital is has pervaded culture, I for one would like to sit at the table with a cup of tea, a twinkle in my eye, and watch the future unfold as we are met with uneasy glances.’
(Lichty, 2013)

While the history and nuances that surround this debate are beyond the scope of this thesis, it is worth noting the two very different relationships that have evolved between contemporary and new media art and technology. As Christiane Paul notes:

‘We need to distinguish between digital technologies as a tool and as a medium in discussing digital or new media art. Artists now commonly employ digital technology as a tool either to produce a more traditional art form (such as a sculpture or a print) or to store and deliver works (a digitized version of a painting on the Internet or a video on a DVD).’ (Paul, 2008)

As such, it can be broadly argued that the contemporary art field has primarily viewed new technologies as a tool for documenting art, distribution or marketing while new media art has primarily engaged with developing those same

technologies as a medium within their production of art itself. Collaborations between the arts and creative digital and technology industries suggest a third perspective, one that sees the creative exploration of technology as both medium and tool within the same creative output.

The relationship between art and design is also a distinction where digital media challenges the boundaries. It is notable that one of the few exhibitions at a national collection in London was at a design museum: Louise Shannon, Curator of Digital Design in the Contemporary Programmes Department at the Victoria and Albert Museum (V&A) curated *Decode: Digital Design Sensations* (Graham, 2014, p.172).

Above all, it has been the behaviours and processes of new media art, such as collaborative models of practice, which have now begun to blur the lines between commercial, cultural and research fields. New media or 'digital' artists who are critically engaged in their own creative practice, and have acquired technical and programming expertise may have become highly desirable within a growing creative digital and innovation sector. However, they bring with them the values, ethics and practices that have evolved within new media arts culture, such as open source, which has become a powerful and often disruptive voice in a landscape that is predominantly occupied by commercial interests (Smith, 2011).

Therefore, the differences between art and commercial digital sectors are also impacted upon by the differences in values between art and other sectors. Julian Stallabrass, whose book *Internet Art, The Online Clash of Culture and Commerce* (2003) notes that although *net art* and the commercial interests within the Internet have significant distinctions, their co-habitation of an essentially commercially driven space invites challenges. Commercial companies have begun to seek new ways to engage with these artists and their creative digital practices through advertising, patronage, commissioning, and collaboration. The proliferation of business-led interfaces that harness the power of global networks to engage and mobilize new audiences for culture via the Internet, including You Tube, Vimeo, Google Art Project and Kickstarter, have forced the wider, publicly funded art sector to reflect upon how it can

engage with technology in a meaningful, purposeful way that will, in the near future, enable the sector to reap the digital dividends for the arts, to paraphrase Sir Peter Bazalgette, Chair of Arts Council England (Smith, 2013, p.25).

Roles and Working Practices

Just as the value systems of different sectors are changed and challenged if sectors collaborate so too are their roles and working practices. Indeed, through my research I have identified three relatively new roles that facilitate collaboration between creativity and commerce, which have been named The Creative Professional, The Broker and The Prosumer. The following section analyses these three roles in order to reveal a deeper understanding of collaborative practices between the arts and creative digital and technology industries.

The Creative Professional

The realignment and rise of the creative industries with culture, coupled with interdisciplinary pedagogical approaches developed over the past fifteen years through media art and design courses, has been a catalyst for what David Garcia (Garcia, 16th March 2015) has coined the 'creative professional', who operates within this context and blends a creative, technical and entrepreneurial mind-set. This integration of creative arts with science, technology, engineering and mathematic (STEM) skills, are developing businesses that align the arts, academia and industry. The creative professional operates within Holden's ecology where the dynamic flow of people, products, ideas and money between the arts and digital industries is mediated via the creativity.

Brighton Fuse takes a specific look at creativity and how it can foster innovation and growth within the creative economy. The report identifies ways to nurture what they call 'fused' and 'super fused businesses', which are exhibiting exponential growth in our current climate. A key finding for this research is acknowledging the importance of arts and humanities skills for economic growth:

'The findings emphasize the importance of the arts and humanities to a sector that has often seen them as "soft" subjects. By integrating these creative arts with science, technology, engineering and mathematic (STEM) skills, businesses are pursuing a powerful growth agenda.' (Sapsed and Nightingale, 2015, p.4)

Reports such as *Brighton Fuse* and *Ecology of Culture* and *Growth in the Arts* all

cite the mobility of labour between commercial and publicly funded fields. High 'labour mobility' between publicly funded arts sectors and creative digital and technology industries have been nurtured through hybrid production practices. Garcia notes how this creative labour market lays the ground for deeper collaboration between these two distinct, but interrelated fields. Garcia argues that the mobility in the labour market is made up of 'General Purpose Companies' that capitalize upon the hybrid creative practices that are developing through media art and design pedagogical practices that have emerged over the past two decades. He asserts that:

'These companies and other organizations frequently use digital media as a catalyst for cross platform hybridity. The general acceptance of this kind of creative hybridity is reflected in the currency of a term designating a new kind of professional: *the Creative* — a term that, these days, frequently displaces "artist" or "designer".' (Garcia, 16th March 2016)

Often these creative professionals work within both the arts and commercial contexts simultaneously. These professionals drive the evolution of a spectrum of collaborative, rather than transactional, professional relationships emerging between two fields.

The Cultural Broker

With the rise of digital culture and open innovation-based business practices, the role of the intermediary or 'broker' has grown in importance. Within the commercial industries, brokering provides the bridging required for coordinating innovation by bringing together the range of different organizations and knowledge needed to create successful, product-led, innovation. Individuals, agencies and firms create a 'system of complementary organizational categories that shape, pilot and ensure systemic integration". Within open innovation, intermediaries have a particular role and function:

'Basic functions include process coordination and matchmaking between innovation seekers and potential solution providers, knowledge and finance broking, testing, standardisation, project valuation and portfolio management etc. Each of these activities facilitates the exchange and the building of new knowledge, creates opportunities for experimentation, helps the emergence of standards and common goals, and the formation of partnerships.' (Wikipedia, 2015)

I first came across the term 'cultural broker' at the *CVAN/Google Knowledge Exchange Symposium* at Google HQ (London) in 2013. A young artist who was undertaking a residency within Raspberry Pi Ltd had called for a deeper

appreciation of the need for ‘cultural brokers’ to foster engagement between the arts and cultural sector and the commercial digital industries. I felt this term was useful for my research. NESTA R&D Fund for the Arts utilised the business-based model of brokering relationships between ‘innovation seekers’, ‘potential solution providers’, ‘knowledge’ and ‘finance’ for cultivating collaborations between the arts, academia and industry. In their recent report, *The Collaborative Arts Triple Helix project (CATH) 2014*, Richard Clay *et al.* analysed the value that a brokerage role can bring to these triple helix partnerships. Within this context, the role was deemed universally valuable by representatives from all sectors in helping to introduce potential collaborators to one another and alerting triplet members to potential barriers posed by working with different sectors to their own. These included understanding and using different language, differing administrative and working practices, business models, commercial and non-commercial drivers, and strategic goals. Coupled with highly developed interpersonal skills brokers can facilitate collaborative contexts that help participants to feel comfortable outside their professional ‘comfort zones’ and establish trust (Clay *et al.*, 2014, p.5).

Four interactive roles are described that operate within Holden’s (2015) three spheres of culture (Publicly Funded Culture; Commercial Culture; and Home-made Culture); these are Guardians, Connectors, Nomads and Platforms. The ‘connector’ role aligns with that of the broker, and Holden cites ‘commercial producers’ and ‘curators’ as examples of what Claire Reddington of Watershed calls ‘nodes in the system’ (Holden, 2015, p.30). Reddington notes that the connector role is growing but its value has yet to be fully recognized within the ecology itself and by funders who:

‘should value the role of the connector in assisting emergent activity: “Our role is not to sit on the energy, it’s to move it on. We push it on.”’ (Holden, 2015, p.18)

Thus within collaborations between the arts and commercial technology, where creativity is being accessed to drive innovation, the brokering aspect of the curatorial role is becoming increasingly significant.

The Prosumer

‘A **prosumer** is a person who consumes and produces media. It is derived from “prosumption”, a dot-com era business term meaning

“production by consumers” (Wikipedia, 2015)

The final role that has emerged at the boundary lines between the arts and creative digital and technology sector is the prosumer. Several writers have discussed how changing concepts of audience roles in interactive or participatory digital media have impacted upon curating (McCarthy and Wright, 2004; Muller, 2009; Graham and Cook, 2010) but as audiences are not directly related to my research question, this role is explored in less detail. The individual is central to user-centred design and much of the research within Human–Computer Interaction (HCI) is commercially oriented and can be found within traditional cultural, media studies and HCI studies. While this area lies outside the scope of this thesis, it is worth noting that HCI research has led to radical improvements in the study, planning, and design of the interaction between people (users, consumers) and computers. *Performance-Led Research in the Wild* by Benford et al provides an interesting survey of interactive artworks developed through collaborations between artists and HCI researchers and experienced “in the wild”, which primarily means within a live gallery (and other cultural) settings. The research highlights an evolving understanding of the benefits and value of collaboration, co-design, research and experience between (interactive) art and HCI. (Benford et al., 2013).

In her PhD thesis, Elizabeth Muller explores evolving interest in human experience in the field of HCI and how theories, methodologies and practices inform the fields of interactive arts, curating and audience studies. Citing the work of McCarthy and Wright, Muller observes the perceived ‘dangers’ of commercial interest from the corporate sector in the ‘quality’ of the user experience in end user design, and how this interest can both determine and shape what that ‘experience’ will be in a consumer market:

‘Business momentum may take a potentially rich idea and reduce it to design implication, methods or features’ (McCarthy and Wright, 2004, p.11)

According to McCarthy and Wright, the impact of business momentum on HCI research is seen to revert the definition of interaction back to an earlier, more technologically determinist position of what experience is. In addition, that corporate interest has led to an oversimplification to interaction design and superficiality of experience within the commercial marketplace, in order to drive

sales (Muller, 2009). While HCI research and artistic practice may intersect with the corporate sector, commercial interest does not dictate activity. It does, however, have an impact and helps shape the quality of experience for an audience of art.

The augmentation of Web 2.0 with social media has provided the perfect backdrop for the Toffler's (Toffler, 1980) mass customisation of commercially driven products and for the first time, a globally networked platform on which to create highly interactive platforms through which:

'individuals and communities share, co-create, discuss, and modify user-generated content. It introduces substantial and pervasive changes to communication between organizations, communities, and individuals' (Wikipedia, 2016)

These new online communication and aesthetic practices have helped fuel the unprecedented growth of the creative media business sector. Both are equally engaged with developing new ways for the growing market to (re) present, create, access and consume media content and technology. Nick Warner, a curator based in London writes about the prosumer in relation to online art in his article *Prosumerism* in *Art Monthly* (September 2013). He highlights the increasingly artistic agency of the prosumer, who he theorises might be understood as today's 'digital civilian'.

'The civilian's proactive consumption of online material implements the streamlined feedback system of web 2.0 social-networking and hyper-democratic user-generated sites to constantly produce content, connections between content, social groupings and subgroupings. Where the consumer of yesteryear would passively digest the spectacle provided, whether capitalist, political or cultural, the prosumer likes and shares, rates and reviews, remixes and uploads.' (Warner, 2013, p.369)

Thus, prosumer behaviour and expectations, facilitated via accessible and inexpensive technologies has drawn artists and non-artists alike closer to the role of the 'curator, archivist, researcher and appropriator' (Warner, 2013).

The roles of the creative professional and prosumer signal the development of a collaborative landscape for the production, curation and engagement of art. Within the context of my research, the role of cultural broker provides possible theoretical and practical strategies for the role of the curator to bridge two distinct, collaborating sectors within a society being radically shaped by

commercial technologies.

Summary

This chapter analysed the current landscape of cultural production and engagement and has shown it to be a field that is moving increasingly within closer proximity to the commercial sphere. The values, agendas, infrastructures, roles and working practices within both the arts and commercial industries are undergoing a radical review. As understanding develops, similarities and frictions are revealed and new practices and protocols are researched, developed and implemented, a more balanced relationship should be possible within cross-sector collaborations. The languages used to express value are often attached to particular sectors or disciplines. Therefore, developing one where the values, roles and practices of each sector are respected equally could mean the outcomes are beneficial to both.

In the UK, we have seen the growth of strategic alliances between the arts, technology and research fields that have begun to explore and foster innovative relationships between the cultural and technological sectors. These collaborations have thus far focused upon the disruptive potential that new technologies and a networked distribution system (such as the Internet) bring to both arts and business partners in relation to their systems, business models, mobilising data, access and creation of existing and new markets of consumers, prosumers and audiences. Secondary to these areas has been the production of art. Chapter 3 will examine the current landscape of art production, which moves from those sites of production where the balance of power is weighted more towards the commercial digital sector, sliding through to an increasingly balanced relationship, before moving to sites of production weighted towards the arts.

Chapter 3: Context — Intellectual Property, Crediting, and Types of Collaborative Production

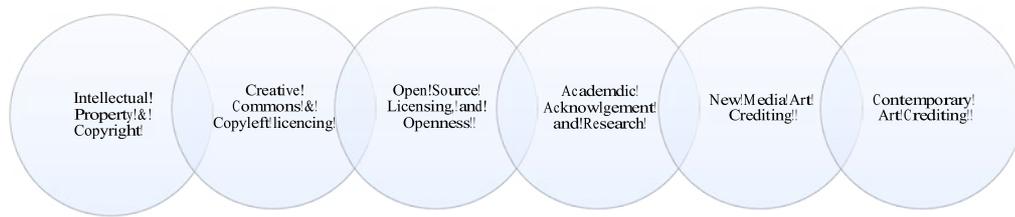


Figure 2: Intellectual Property and Arts Crediting Frameworks

Introduction

Because the research aim concerns the interrogation of collaborations, this chapter provides a review of the structures of collaborations, starting with structures of IP (intellectual property), and crediting in the arts, before moving on to analysing structures of collaboration in terms of balances of power. Crediting, and IP: Protective Protocols

Throughout my research, including my curatorial projects, intellectual property and crediting has recurred as an area of friction between sectors, and so the context is briefly examined here. Collaborative protocols that emerge from creative engagement between the arts and commercial digital and technology industries have shown a more central role for intellectual property, however, sector specific models for crediting and attribution, drawn from academia new media arts and contemporary arts also inform emerging models of collaborative production. Established precedent within these two areas has informed more balanced protective licensing frameworks within digital culture that are exemplified within more current frameworks such as Creative Commons, Open Source Licensing, and Crediting in Contemporary Art.

The diagram above (Figure 2) provides a brief overview of existing protective frameworks that have evolved thus far and signals the interrelationship between commercially focused intellectual property rights to more balanced current frameworks emerging to protect non-commercial, creative attribution rights for digital production, distribution and reuse through to arts focused crediting protocols drawn from the new media and contemporary arts fields. Further

information on each framework can be found in Appendix 2.

Ways of Working — Types of Collaborative Production

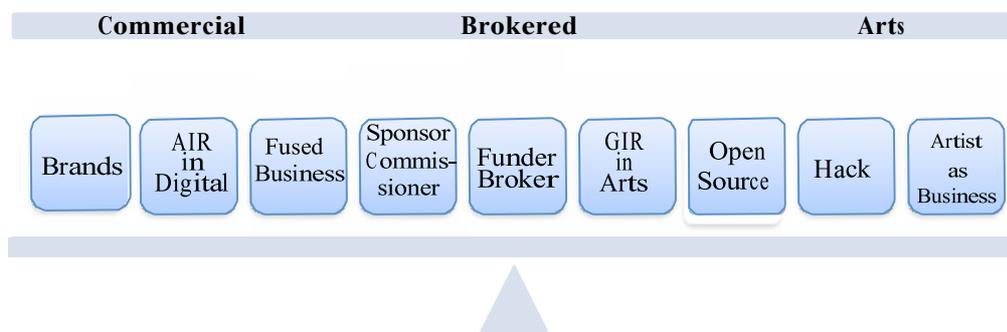


Figure 3: Current Models of Collaborative Production: Balances of Power

This section provides an analysis of the current collaborative contexts for art production between the arts and commercial digital industries. The typology of models (Fig 3) emerged during the final write-up phase of the research project trajectory. The spectrum of relationships were highlighted and noted, throughout my ongoing contextual review, aspects of these models were piloted and tested throughout my own curatorial projects, and identified tensions and similarities were offered for discussion with my professional peers, during the CRUMB discussion list. The typology of models of production evolved from this research, practice and discussion, and were crystalized towards the end of my research trajectory. This typology aims to provide useful ways of considering ways of working within collaborative contexts of production.

There is currently a wide variety of unfixed terminologies concerning 'labs', 'residencies', 'hacks' and research and development (R&D) structures, as outlined in Graham and Cook (2010, p.234–242). Writers such as Angela Plohman have provided useful analyses of certain structures and roles, including the role of the media lab as a 'broker, communicator and context provider' (2010, p.323).

Each model of collaboration provides a brief background and overview of activity and analyses specific challenges inherent within each. The analyses reveal where the balance of power is weighted more towards the commercial digital sector, sliding through to an increasingly balanced relationship, facilitated

through brokering, before moving to those sites of production weighted towards the arts, see Figure 3. Moving through this spectrum, key characteristics of each model are identified.

Brand Marketing Production

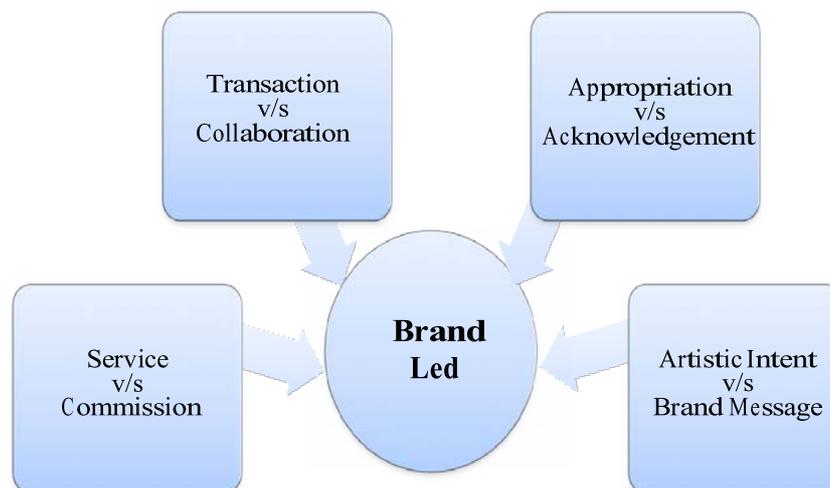


Figure 4: Model of Collaborative Production: Brand Marketing Production

Service versus Commission: Brand advertising agencies work directly with artists and art production as a way to align brand clients with ‘creativity’.

‘As media and interactive artists explore new forms of engagement, the solutions they come up are more and more relevant to agencies trying to find new ways to keep up creatively.’(Cameron, 2011)

The key aim is to differentiate the brand within an increasingly saturated visual landscape and access potential consumer markets through creative, multi-channel marketing strategies and user engagement. Artists working with the potential of new technologies in relation to communication are seen by brands, as possessing the ‘creative’ ideas, skill sets and vision required to generate the perceived value and brand infiltration required by brand briefs for their budgets; examples of successful campaigns include Jeff Lieberman and Dan Paluska *Absolut Quartet* (2008) and *Giant Xylophone in Forest* (2011) by Drill Inc, commissioned by NTT Docomo (Atkin, 17th March 2015).

Transaction versus Collaboration: Brand-led production contexts are transactional rather than collaborative relationships between brands and artists, and are mediated exclusively by brands and advertising agencies (this relationship reflects Herb Kim’s definition of collaboration, cited on p.18 of this thesis). There are many positives for artists working with commercial brands, as it

affords artists the opportunity to charge commercial rates for their creativity, conduct arts based research and development, develop technical skills, and access commercial equipment and scales of budgets that would generally be out of reach to those working in the arts sector, while gaining access to new, often global audiences and potential markets for their work (Atkin, 17th March 2015). Within this model of production, the artist occupies the role of a service provider and must often work within the tight brief and linear product-focused process and short timeframes defined by the brand industry, rather than the more organic, exploratory context of a commission, which recognizes the needs of the artist to produce their work and develop their practice (Jeffers, 10th March 2015). Working within a commercial context has exposed artists to poor working practices by advertising agencies in relation to creativity and intellectual property theft and by appropriating art works without the consent of or acknowledgement to the artist for commercial purposes. This reveals a lack of understanding on the part of the commercial advertising industry about attribution protocols valued in the arts. Therefore, this model of production raises specific tensions between the arts and commercial, creative digital and technology sectors, relating to differing motivations and value systems, roles and working practices, attribution practices and the infrastructural chain of command which shapes the decision-making process.

Appropriation versus Acknowledgment: In his article *Welcome to Optimism* (2010), Andy Cameron discusses the evolving relationship between media artists and advertising agencies in relation to creativity theft. He cites examples of art works that have been appropriated by advertising agencies, without the consent of or acknowledgement to the artist including artist Chris O'Shea's *Hand From Above* billboard installation, commissioned by AND Festival, which 'inspired' Space150's very similarly executed advertising campaign for *Forever21*. The negative reaction from the creative community highlights the importance of appropriate crediting and acknowledgement within the arts sector.

Golan Levin, suggested that 'new-media artists — especially those creating the open-source arts-engineering technologies on which so many advertising campaigns depend, have become a de-facto, unpaid R&D department of agencies...' (Levin, 2012). Levin reveals a 'deep history' of media artists whose

work has been appropriated and used commercially with no acknowledgement or financial gain for the artist involved, including Myron Krueger's *Video Place*, 1974, Michael Naimark's *Aspen Movie Map* (1978– 1980), and Memo Atkin and Quayola's *Forms*, 2012.

Levin uses the language of commerce (financial, reputational and backlash from the creative community) to highlight the negative impacts of creativity theft when addressing the industry itself. While cited benefits align addressing the needs of artists with the core motivations of the industry: 'Credibility in perpetuity; Genuine product; Unique expertise secondary rewards; Faster time to market.' Levin provides explicit ways that brands can engage with to develop better practice when choosing to work with artists to create their advertising campaigns within his presentation, including:

'Initiating dialog with artists; Researching the provenance and original author of a project; Crediting, acknowledging and recognising the artist's skill and concept; Paying a licensing fee artist to secure goodwill and support of the artist; Release the code for new projects via open-source licensing; supporting communities who are producing the free, open-source tools that they are using; Hire a developer to contribute to open source toolkits; Buy the artist, not the art; Responsible management. Keep a record of where ideas come from' (Levin, 2012)

Brokering Artist Intent versus Brand Message: In my CRUMB discussion, Memo Atkin highlights the challenges that exist when working as an artist within a commercial context when motivations are misaligned.

'Often while *we* are motivated by artistic R&D, commercial commissioners are motivated by something else — getting more hits on You Tube, more shares on Facebook, selling more products, winning an award, getting a promotion etc. And it can be very tiring trying to pull a project in one direction, while those who are commissioning you are trying to pull it in another direction.' (Atkin, 17th March 2015).

Atkin suggests that it is the curator, who 'can start sowing the seeds of this cultural exchange' and proposes extended curator-in-residence programmes as a possible solution to developing understanding between both sectors; thus allowing the curator to act as a cultural broker and to instigate partnership programmes with cultural organizations from within commercial organizations, 'reaching out as opposed to reaching in from outside'. The cited value being that both sides (arts and commerce) will see more of and learn how the other side expects to operate by integrating the commercial agenda to generate product

with the arts' aim to foster critical, autonomous environments in which artists practices and rights are respected and protected.

'Of course this is not easy. It's going to be hard, and very painful. But if we don't at least aim for it, then it's never going to happen.' (Atkin, 17th March 2015).

Levin's presentation and Atkin's comments point to the fact that there is clearly a lack of awareness, understanding and potentially respect for the motivations, working practices and protection of artistic practice and art systems of production. This could be mediated through brokerage. Early examples of brokering of this nature include Andy Cameron, who, while he worked within the advertising industry, also worked as a new media artist and formed part of the creative coding community. He is broadly recognized as a brokering voice from within the advertising field that fought to bring change to attitudes and working practices when working with artists (Atkin, 2015). In response to criticisms raised by the creative coding community in relation to the Google *DevArt* project 2014, Julia Kaginsky, Director of NEW INC, New Museum, hosted a discussion *Artists & Brands: Defining Rules of Engagement*, to try and map appropriate terms of engagement between artists and brands to nurture a more balanced relationship between the two. Do we need, as Atkin suggests, parallel roles (curator/artistic director etc.) within the creative digital and technology industries to broker non-commercial motivations, misaligned agendas and different working practices and protocols within collaborations?

Artist-in-Residence Programmes in the Digital Industries

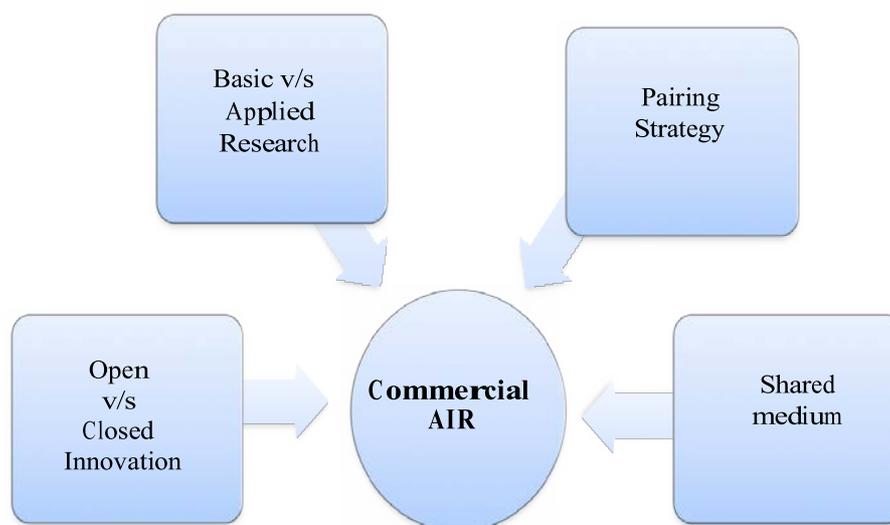


Figure 5: Model of Collaborative Production: Artist-in-Residence Programmes in the Digital Industries

Commercial artist-in-residence programmes provide an opportunity for a more collaborative rather than transactional relationship to develop between artists and scientists within a commercially driven context. Changing motivations, research and development methodologies and business models within commercial research labs present both opportunities and challenges for artists working in this context. Historical precedence provides valuable insight into the needs of artists and scientists working collaboratively within these contexts of production and contemporary practice highlights the impact of changing agendas upon developing relationships.

As many collaborations between the arts and commercial digital industry are based within 'research and development labs', a definition of research and development will be useful for both sectors. In her book *Art, Research, Empowerment: On the Artist as Researcher*, Efva Lilja cites the following definition for artistic research as practical and clear introduction:

'Artistic research is research conducted with artistic practice as its base and artistic practice as its object.' ... You can go on to say that artistic research is research conducted by artists, who research within and through the arts. Artistic methodologies are applied and the end result is presented in the way that is best suited for the content and theme of the project. It may be as a performance, a concert or an exhibition, a text or a mixture of different media. The research can take place within groups with cross-disciplinary and/or scientific competences or as a solitary effort. The process and the results are documented and made available for peers.' (Lilja, 2015, p.13)

While within industry, the *Cambridge Dictionary* defines research and development as

“the part of a business that tries to find ways to improve existing products, and to develop new ones.”

Thus, as there is a clear difference in motivation for both, it could be argued that arts take a more ‘fundamental’ or ‘basic’ approach (with an emphasis on ‘research’) whereas the commercial sector is increasingly adopting an applied approach (with an emphasis on ‘development’).

Open versus Closed Innovation: Within this model of ‘closed invention’, research and development laboratories developed opportunities for invited artists working with technology to take up a period of residence within their businesses and research departments to leverage external knowledge in order to innovate new projects and products.

Basic versus Applied Research: Before the increased focus upon applied, sponsored research and patenting, commercial companies operated on the closed model of invention. This model valued fundamental or ‘basic’ research and development of products without reference to their potential commercialization.

‘These are places where people delight in the pursuit of excellence for its own ends, and only then look up and wonder who might buy what they have created.’ (Ind, N., Fuller, C. and Trevail, C. 2012, p.37)

In his reflections of his time on the Xerox PARC *PAIR* artist-in-residence programme, artist Stephen Wilson called for these centres of research to be designated as national treasures (Harris, 1999, p.206) and praised the range and depth of research these early basic research centres nurtured. They supported research that could be fruitful both commercially and more generally in cultural terms, and have a major impact in a range of fields outside of their own including education, commerce, entertainment and ‘event the nature of knowledge itself’ (Harris, 1999, p.203).

Pairing Strategy with Shared Medium: Organizations such as AT&T Bell Laboratories and Xerox PARC are exemplars of this closed model of invention. They developed a method of pairing an artist and an engineer in a ‘one-to-one

equal collaboration', which formed the basis of a rich history of artists taking up residencies. The one-on-one 'pairing' methodology was devised

'To bring technology to the artist, and that such collaborations would benefit both artists and engineers as well as society as a whole.' (Harris, 1999, p.9)

Xerox PARC scientist David Biegelson conjectured that the success of artist–scientist pairings depended upon creative enquiry and dialogue and 'the existence and identification of a "shared natural medium."' For Biegelson the 'art' of these collaborations lay

'in the creativity of the researchers and artists in enlarging their views of the meaning and limits of their media.' (Harris, 1999, p.26)

Thus critical engagement with the media, facilitated by creative dialogue deepened the understanding and broadened perspectives of collaborators.

The Xerox PARC's *PAIR* programme developed a sustained and resourced artist-in-residence programme model, which was particular to its own environment. *PAIR*'s long-term commercial research goals, which would assist in producing continued innovation, were open-ended and reflective of its context. The values inherent within these projects were required to be 'relevant enough to raise eye-brows in the boardroom' (Harris, 1999, p.xii).

The PARC *PAIR* programme 'marriages' (Harris, 1999, p.13) between artists and PARC scientists were directly informed by AT&T's 'one-on-one pairings'. Rich Gold, instigator of the programme sought and selected external, curatorial and specialist arts advisors 'who represented a broad range of interests, aesthetics and ideas' (Harris, 1999, p.28) to propose artists for the short- and subsequent long-term residencies. This external panel provided insight into how contemporary artists use new media, how artist-in-residence programmes should be designed, and how participants should be selected.

Acknowledgement, attribution and value were concerns raised by this external arts panel.

'There was concern that PARC would reap substantial benefits from the knowledge, creativity, and experience of the artists without acknowledging either these benefits or the financial needs of artists participating in the programme.' (Harris, 1999, p.26)

This panel of specialists strove to ensure that intellectual property rights, working

practices and value of the artists' engagement were protected in this commercially focused context; thus shaping a more balanced weighting of power within the design of the programme from the outset.

Stephen Wilson's observations and detailed account of his experiences at PARC PAIR provide a valuable insight into differences in the working practices of artists and researchers and points to the potential role the arts can hold within collaborations of this nature:

'Our culture must develop methods that help us avoid prematurely suppressing valuable lines of enquiry and development. I believe the arts can fill a critical role as an independent zone of research. They could become the place where abandoned, discredited, and unorthodox inquiries could be pursued. They might very well value research according to criteria quite different from those of the commercial and scientific world. The roles of artists could incorporate other roles such as researcher, inventor, hacker, and entrepreneur.' (Harris, 1999, p.187–188)

Fused Groups

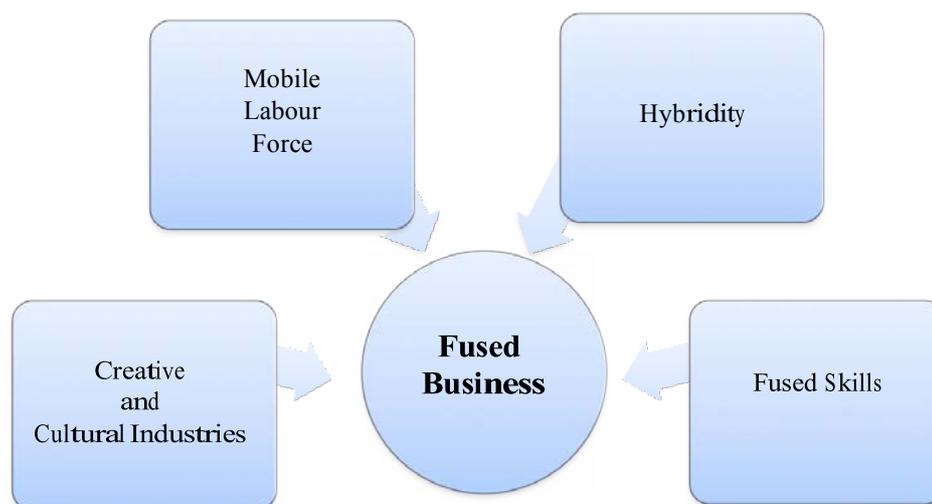


Figure 6: Model of Collaborative Production: Fused Groups

Creative and Cultural Industries and Hybridity: The *Brighton Fuse, Ecology of Culture and Growth in the Arts* report investigates the Brighton technology cluster, where it has discovered that 48% of Brighton's entrepreneurs were found to be arts, design, and humanities graduates, reinforcing the importance of the arts and humanities for growth in a sector that has often seen them as 'soft' subjects (Sapsed and Nightingale, 2015, p.4). It highlights the importance of integrating creative arts with science, technology, engineering and mathematic (STEM) skills and businesses in order for creative digital businesses to thrive

(Schmidt, 2011). The sample of businesses reviewed also points to the imbalance of 'fused' firms between the cultural and creative industries, with 94% of digital agencies showing a fusion of skills sets. By comparison, only a quarter of arts organizations show any level of fusion (Sapsed and Nightingale, 2015, p.11).

Inspired by the success of Silicon Valley, policymakers have invested in gaining a deeper understanding of the needs of 'fused' CDIT business and creative clusters which are 'geographical agglomerations of firms that compete, collaborate, innovate and grow together' (Sapsed and Nightingale, 2015, p.3) that sit within creative cities. Creative incubators and hubs are understood as contexts that fuse lab and digital start-up cultures: tangible examples include NEW INC (NYC), Pervasive Media Studio (Bristol) and Fish Island Labs (London). These hybrid models sit within distinct organizational systems and blend elements of a creative lab and a co-working environment. All seek to support collaborative artistic and creative experimentation, entrepreneurship and innovation within a multidisciplinary community. It could be argued that incubator models prepare the ground for fusion to occur.

Mobile Labour Force with Fused Skills: Equally, looking at the wider arts and technology collaborative landscape outside of the Brighton technology cluster, there has been a growth of commercial artist studios, led by artists with technical expertise and business minds, who display a similar fusion of interdisciplinary skill sets, within teams, or individuals, including:

- FIELD, a commercial business that 'creates expressive and dynamic artworks for digital platforms: audio-visual installations, experiences for web and mobile, and shareable digital artefacts...' The studio, led by co-founders Marcus Wendt and Vera-Maria Glahn also delivers
- 'branded art for a global audience, and generative systems for intelligent design solutions.' (FIELD.io, n.d.)
- Hellicar and Lewis state that they 'use craft, design and technology to work with brands, companies and institutions to invent new ways of communicating in real time.' (<http://www.hellicarandlewis.com/>, n.d.)
- Kimchi and Chips: 'formed in 2009 to combine the disciplines of code, form,

material, concept and mechanism.’ (Kimchiandchips.com, n.d.)

All three companies have created technology-focused work for galleries, festivals, brands and public installations pointing to a closer alignment between these different contexts and a fluidity of labour between both. This establishes a new network for curatorial dissemination and engagement with a more diverse global audience within a broadening arts system

Geek-in-Residence Programmes in Art Organizations

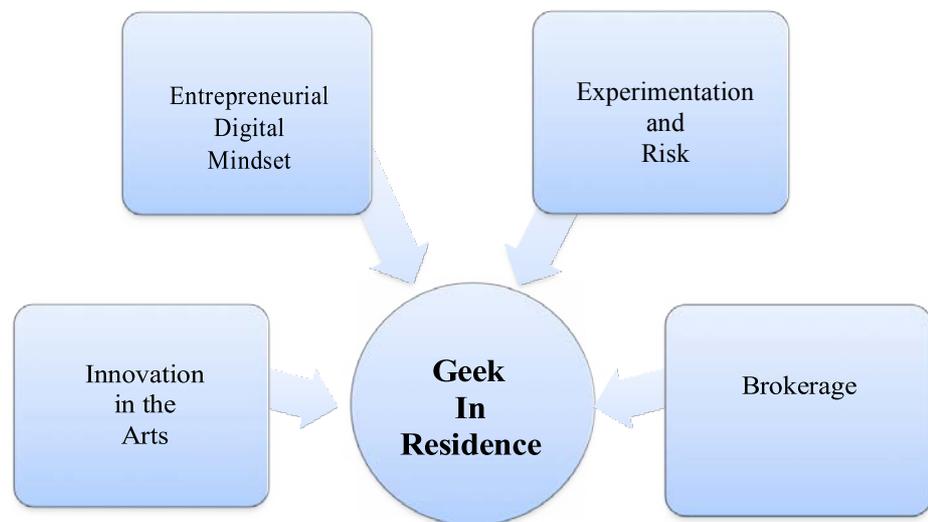


Figure 7: Model of Collaborative Production: Geek-in-Residence Programmes in Art Organizations

Innovation in the Arts: In the past few years there has been flurry of arts funded, culture-led, experimental interventions, seeking to foster digital innovation in the arts. Similar to the model above, cultural organizations have invited commercial technologists (developers and designers) to take up a period of residence facilitated through geeks-in-residence programmes.

These technology residencies in the arts mirror the commercially focused artist-in-residence programmes discussed above and flip the power balance from that weighted to commerce to that weighted towards the arts. Early examples include the Australia Council for the Arts, who have run two versions of their geek-in-residence scheme since 2009. This initiative informed a variety of similar programmes in the UK, which have been facilitated by both arts organizations and arts funders, including the Edinburgh Festival’s *Geeks-in-Residence* and *Happenstance* project.

Edinburgh Festival's Innovation Lab, which is part of the Edinburgh Festival, recruited their first 'geek-in-residence', Ben Werdmuller, in mid-2010, which inspired a two-year geek-in-residence programme with Sync (2012–2014)

Entrepreneurial Digital Mind-set: Commercially led artist-in-residence programmes in research and development labs such as Xerox PARC, discussed above, sought to facilitate collaborations between artists and scientists through one-to-one 'pairings' or 'marriages' in order to develop new product ideas and nurture continued innovation within a context that was already deemed innovative. Culturally led geek-in-residence programmes, however, work in a slightly different way, for different ends. Geek-in-residence initiatives do not broker relationships between an external technical innovator and an internal cultural specialist to develop new ideas, rather they invite external, 'open' innovators with a digital mind-set, technical skills and connections with the creative digital and technology industries into a host cultural organizational structure in order to nurture innovation and instigate positive change within that organization. Geek-in-residence programmes match the host's interests and the 'geek's' skills. However,

'... as well as the making of the project, the second important element of the residency is that the geek exposes as much of their process as they can to help the two-way knowledge transfer between them and the host.'
(<http://identi.co.uk/stills/> Accessed: 15th October 2015)

An example of a funder-brokered geek-in-residence programme, the *Happenstance* project was one of eight schemes selected for the pilot *Digital R&D Fund for Arts and Culture*, launched by NESTA, Arts Council England and the Arts and Humanities Research Council (AHRC) scheme in autumn 2011. The project consisted of a series of creative technology residencies, placing three pairs of creative technologists into three arts organizations: the Site Gallery in Sheffield, Lighthouse in Brighton and Spike Island in Bristol.

'The specific aim of *Happenstance* was to explore different ways of working between arts organization and technologists, and to discover how one-off technological innovation could become "embedded" into the organization at a deeper level. This "deeper level" might include changing internal culture and processes, changing attitudes to technology, approaches to internal communication and external network or improving digital literacy.' (Bilton, 2012, p.9)

Inspired by the Australian geek-in-residence programme, the *Happenstance*

project was guided by a set of modified 'agile development' principles (Agile Manifesto 2001) taken from the commercial software development processes, to create a bespoke model of innovation for arts organizations that combines elements of manufacturing and service-based innovation. The agile approach to development emerges from commercial, open innovation working practices, which are gaining traction within the arts as they strive to develop understanding and skills in this field. Agile working practices promote:

'a flexible approach to software development which emphasizes collaborative, adaptive teamwork practices, efficient software engineering and quick design cycles through self-organising, explorative work' (Aoyama 1998; Schwaber 2002) 'in an environment of mutual trust and respect' (Agile Manifesto 2001).

While Chapter 2 identified reluctance from the cultural sector to consider an economic valuation of the arts, (p.30), geek-in-residence programmes highlight a developing appetite for cultural organizations to learn from and embed a commercially driven mind-set and practices within their organizational infrastructures. The exchange between (technology) resident and (cultural) host is positioned within fundamental theories around creativity, which combine the technologists asking 'how' through their research and the organizations asking 'why' through the organizational implementation of the 'value' to affect innovative change within their own development (Bilton, 2012 p.38).

Whereas similarities and differences of values, roles and working practices between the distinct fields were acknowledged as productive elements within the innovative process, for commercially led AIR programmes, the *Happenstance* project suggested a level of adaptation from both sides in order to create the context for innovation to happen.

'This interaction is more likely to be productive if both sides are primed to adapt to the other, from senior management downwards, and if the pressure to produce quick results is balanced by a more open-ended expectation of incremental change on both sides.' (Bilton, 2012, p7)

Hosting commercially focused technology developers within cultural organizations in a residency framework was seen to nurture technological innovation at 'a deeper level' in order to reshape 'internal culture and processes', 'attitudes to technology', 'approaches to internal communication and external network' or 'improving digital literacy' (Bilton, 2012, p.8). The cultural value inherent within this activity being the potential 'secondary outcomes' gained by

the adoption and adaptation of experimental outputs of the geek-in-residence by the host cultural organization. If managed selectively and carefully, exposing cultural organizations at all levels to the creative scrutiny of commercial digital and technology perspectives can bring about desired, organizational change.

Experimentation and Risk: While AIR programmes sought to provide creative perspectives and artistic skills to further research into projects and potential commercial products, GIR programmes aim to embed digital innovation within arts organizations to affect open-ended organizational change in behaviours and attitudes, and foster connections in order to become competitive in this area. Thus, the results of experiments were not taken through to creating a product, rather

‘The results of these experiments were then picked up and selectively adapted by the arts organization based on their specific capabilities, and the needs of internal stakeholders and users.’ (Bilton, 2012, p.15)

As such, there is a distinction made and shifting of focus from experimental ‘outputs (the achievements and results of each residency)’ to developmental, secondary ‘outcomes (the uses to which these outputs were directed)’. These secondary outcomes included ‘changes in behaviour, culture or attitude’ within the organization (Bilton, 2012, p.11). The methodology to achieve these outputs and outcomes is one of experimentation, which brings with it an acceptable level of risk of failure.

Brokerage: Unlike the curatorial selection at Xerox PARC, residents were not chosen solely because of their particular practice, interests or way of working, which could be ‘paired’ with corresponding employees. Technologists were required to be ‘organizationally literate’ in order for their ideas and skills to be responsive to the needs of the host organization. Within this structure ‘pairings’ were curated by an identified specialist broker:

‘“Casting” the right technologists to the right organization was a specialist task, managed in this instance by Caper.’ (Bilton, 2012, p.6)

This highlights the importance of who is doing the choosing or casting within collaborations between different sectors. It has been acknowledged that the *Happenstance* project was the consequence of a series of curatorial choices and actions that framed the residencies (Bilton, 2012, p.13). The *Happenstance*

project highlights the familiar frictions and criticisms that also arise for artists participating in AIR programmes.

‘Complaints about “gimmicky” or “pointless” technology are not dissimilar to complaints against ‘self-indulgent’ artists. The occasional friction we observed between technologists and arts organisations during Happenstance is inherent in the innovation process and managing these tensions is an essential task in any creative organisation.’ (Bilton, 2012, p.15)

These frictions experienced within residencies resonate with Biegelson’s observations of the Xerox PARC *PAIR* programme, except this time, it is cultural professionals rather than the scientists who are required to enlarge their views on the ‘meaning and limits’ and potential application of technologies within their particular context. As noted above, managing frictions that emerge within the process of innovation is an important task when brokering cross-disciplinary creative residencies. However, this brokering role also takes on curatorial responsibilities within this model. Geek-in-residence programmes must also address the creative needs of the residents. Similar to artist-in-residence programmes, the host organizations acknowledge that:

‘Whilst protecting the artist from external pressures and distractions, the host organization also provides a sounding board for ideas and a framework of possibilities.’ (Bilton, 2012)

While this kind of curatorial support is no doubt valuable to residents, one wonders if this curatorial understanding of residents’ needs was sufficient. Had an external panel of expert commercial technology advisors been consulted at the inception of this project, as Rich Gold had done with PARC *PAIR* (Harris, 1999, p.23), what kind of concerns would have been raised to protect commercial technologists from their field, when working within an arts context? A context in which there was an explicit agenda to capitalize on the instrumental application of the innovative products and ‘solutions’ developed by the residents and ‘make incremental tweaks to processes, knowledge and resources’, foster entrepreneurship and innovation skills and expertise (Bilton, 2012, p.38). Would they be different to those raised by EAP in relation to acknowledgement, role and value?

While the focus of the NESTA Digital R&D Fund was primarily to explore the ‘possibilities of digital technologies for developing new hybrid products and services, and for finding new ways to engage with users and audiences’ (Bakhshi

and Throsby, 2010), the *Happenstance* project provides a clear example of how brokering collaborations between the arts and digital industries introduces new responsibilities for the curatorial role to instigate cultural change by ‘opening up new ways of collaborating and communicating within teams’ (Bilton, 2012, p.42).

Sponsor Commissioner

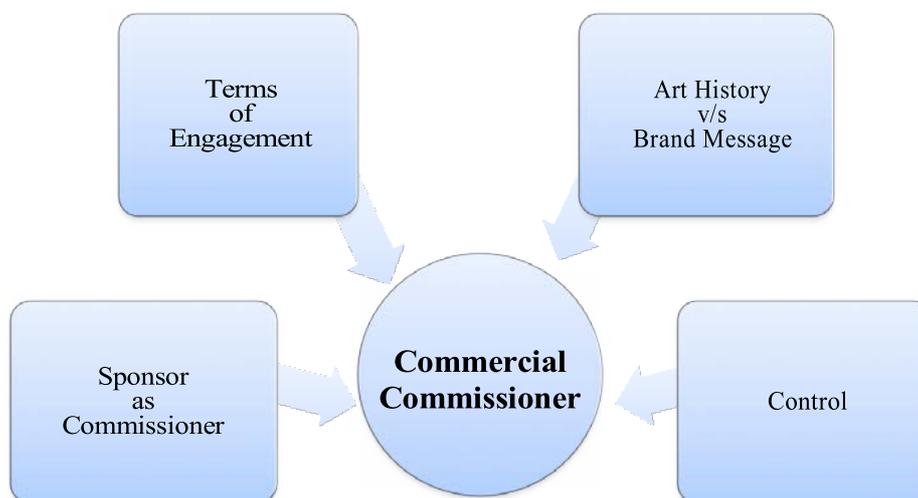


Figure 8: Model of Collaborative Production: Sponsor Commissioner

Perceived differences between the role of the curator and role of the producer lie within the context in which they support the realisation of the artwork; the former being (usually) within an exhibition context, while the latter positions and communicates a project ‘within the wider cultural, social or political context’ (Kate Tynedall). Holden in his *Ecologies of Culture*, argues that both the curator and producer operate as connectors and must ‘build and hold together the frameworks of relationships and meaning that will attract the necessary support and finance, and engage those for whom it is intended’ (Holden, 2015, p.30). For many new media curators, the role of curator, commissioner and producer are conflated. There is no one ‘mode’ of curating, but understanding the modes of curation is essential, particularly when it comes to collaboration (Graham and Cook, 2010, p.15). When working with art that employs digital technologies for its production, distribution and engagement, two metaphors describing the curatorial role on the CRUMB discussion list (2003) suggest the role of the curator can be described as ‘curator as producer’ and ‘curator as collaborator’. However, within the contemporary arts field, they can often remain distinct roles.

In her book *The Producers: Alchemists of the Impossible* (2006), Tynedall

concentrates on the role of the producer through the practice of individuals and describes how ‘the producer leads in navigating between a bold vision of an idea and how feasibly — and brilliantly — to deliver it, how to give the idea life and locate it in the world.’ Michael Morris, Co-director of *Art Angel* highlights the time it often takes to produce a piece of art to fruition, saying that ‘patience is one of our most important commodities’ (Tynedall, 2006, p.58). He goes on to suggest that the community needs to be cultivated around the work ‘and give it meaning’ (Tynedall, 2006, p.59), and recognizes the subtle division of collaborative roles and the ‘separate but shared’ responsibilities held by both. Marc Boothe, founder of *B 3*, highlights the capacity for the role of a producing platform to be ‘a kind of cross-art form “incubator” ’ (Tynedall, 2006, p.8). New media curators exploring various contexts both inside and outside of an institution, match art (content) to space and place (context); as such, the considerations raised by Morris and Boothe are pertinent to both curator and producer.

Sponsor as Commissioner: Commercial technology companies have traditionally supported the production of art through arms length patronage and sponsorship, engaging with artists through association and brand alignment. However, more recently, global companies such as Google have stepped into the ‘curator as producer’ commissioning role. There have been concerns raised around the way that technology companies inhabit this role. Georgina Voss cites specific issues ‘which are tied to the materials, tools, and structures that they bring and the means of control’ (Voss, 2014).

An example of this mode of production is the Google *DevArt* project. Google *DevArt* was led by Google Creative Lab UK, a team responsible for managing and marketing the Google brand ‘to remind the world what it is they love about Google’ ((Linkedin.com, n.d.). Google *DevArt*, described the work on their project website as

‘art made with code, by developers that push the possibilities of creativity and technology... *DevArt* is the opportunity to open their creative process, share their art with the world and be a part of a new movement in art.’(Devart.withgoogle.com, 2015)

The project manifested as a group show with three commissioned works by selected artists (Zack Lieberman, Varvara Guljajeva and Mar Canet (Var Mar) and Karsten Schmidt) and one based on the outcome of a competitive, open call

for 'proposals' which included a significant proof-of-concept. The selection panel for this open call featured representatives from both the (new media) arts and commercial digital industries. The panel was made up of the invited artists, the curator Conrad Bodman and representatives from Google: Steve Vranakis, Executive Creative Director, Google Creative Lab and Paul Kinlan, Developer Advocate, Google. The winning proposal was by Cyril Diagne, co-creator with Béatrice Lartigue and together the four commissions formed a key part of *Digital Revolutions*, a blockbuster, internationally touring survey exhibition 'of computers and creativity' curated by Conrad Bodman for Barbican International Enterprises in 2014 (Barbican, 2015). Google took on the role of producer and paid for the production of each of the four commissioned artworks as well as sponsoring the *Digital Revolutions* exhibition, although the etiquette of the curator was kept in place through the relationship with Bodman, who validated the commissions by providing a curated exhibition context for the work.

Terms of Engagement: Julia Kaganskiy, David Horowitz, Igal Nassima and Sam Hart hosted a discussion, *Artists and Brands, Defining Rules of Engagement*, in New INC, New Museum, NYC. Kaganskiy explains that she was

'motivated to capture some of the criticisms coming from the creative coding community as well as the sentiments of marketing agencies, arts organizers, and brands themselves, with the intention of crystalizing some of this information in a way that could provide all parties with some guiding principals as to how interactions between these parties should occur.'
(Kaginsky, J. and Berman, S. (2014))

Within this discussion, the role of the Barbican and the curator was criticised as failing to be a 'firewall' between artists and Google, and provide sufficient curatorial expertise and support for the *DevArt* artists within the commissioning process. There was also widespread criticism for failing to ensure the *DevArt* marketing campaign, which was managed solely by Google's marketing team, had adequate art historical rigour and balance between brand and curatorial messages:

'The Barbican should have done things differently, they should have acted as a firewall for artists and ensured that the marketing campaign set the correct tone.'

It continued that

'... many felt that usage of the term "DevArt" to conjure eidetic branding, and the language with which Google chose to introduce the supposed

neologism was historically insensitive, if not revisionist.’ (Kaginsky, J. and Berman, S. 2014)

This tension between ‘art history versus brand marketing’ messages is an important issue worth noting.

Zack Lieberman and Cyril Diagne were very positive about their working experience and production support provided by individuals at Google Creative Lab to create the artworks. Lieberman (2014) states:

‘The actual working experience was very positive overall. Their support of the project was great. The mechanics of getting the products done, especially all of the small things that go into putting a show together were handled very well on Google’s end.’ (Kaginsky, J. and Berman, S. 2014)

However, Lieberman admits that Google’s working practices, including the short timeframe, large-scale budget and the weighting of power in the Google–Barbican collaboration were a cause for concern (Kaginsky, J. and Berman, S.2014).

Control: The criticism of Google’s competitive producing model that came from the arts world and creative coding community was immediate and on going before, during and post exhibition. Criticism around the competition aspect of the commissioning process raised by the creative coding community on social media centred on ‘rules requiring usage of Google APIs and proprietary systems and the quantity of material needed to meet submission guidelines being of chief concern.’ Cultural theorists, such as Georgina Voss, questioned ‘the means of production and the types of cultural output which are permissible and possible under these circumstances.’ Indeed, upon initial announcement of the competitive open call, Voss (2014) articulates the impact of the ‘power balance’ within collaborations.

‘Google’s sponsorship might indeed usher forth a new form of artistic engagement — but not necessarily in the way that’s being presented’ suggesting that those arts organizations hoping to build their digital skills and resilience ‘might do well to also develop literacy in the forms in which this control takes, and how best to address it’ (Voss, 2014).

These artistic criticisms culminated in a virtual, alternative exhibition called *Hack the Art World* led by artist Jan Vantomme. *Hack the Art World* used Google technology to geofence the exhibition around the Barbican for the duration of the

Digital Revolutions exhibition. A discussion blog on the *Hack the Art World* project website hosted a hot debate, centred on key concerns between those artists who took part in the virtual exhibition and the artists who had been commissioned by Google for the exhibition at the Barbican (2014). Neither the producer (Google) nor Barbican (curator) took part in any discussions that emerged because of this project, which also raised criticism from the sector. The Barbican did, however, make a statement about the exhibition in *Wired.com* celebrating and welcoming the debate provoked by *Hack the Art World* and reasserting that Google had been ‘an excellent partner to work with... Their support has provided an outstanding opportunity to artists working with code by investing in them to present large-scale new commissions as part of a wider exhibition that will significantly raise the profile of digital art.’ (Collins, 2014)

Funder Brokered Partnerships

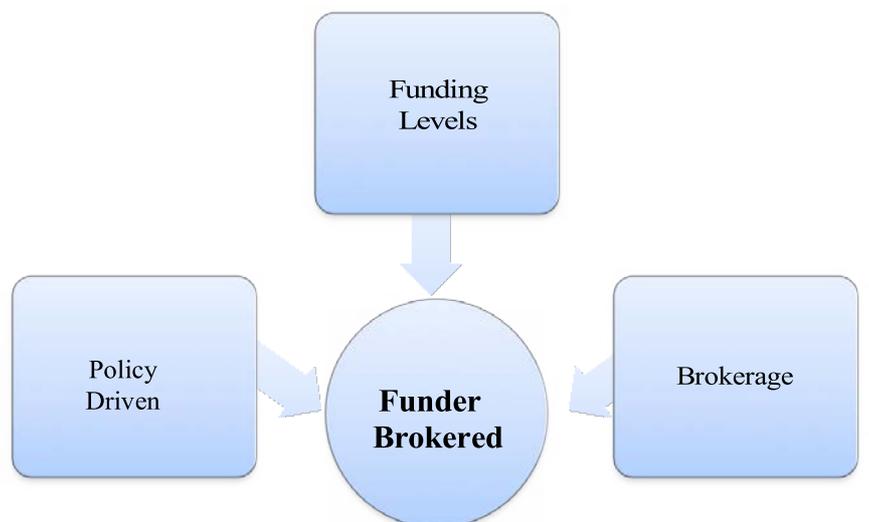


Figure 9: Model of Collaborative Production: Fused Broker Partnerships

The funder brokered model of production shares many of the characteristics identified within the geek-in-residence model including Experimentation and Risk, Entrepreneurial Digital Mind set and Applied Innovation within the arts and cultural sector. This model looks at the funders themselves and identifies characteristics of strategies being employed to facilitate collaborative models of production.

Policy Driven: As highlighted in Chapter 2, the concept for the NESTA Digital R&D Fund for the Arts was primarily informed by *A Manifesto for the Creative Economy* (Bhaskhi *et al.*, 2013) a NESTA report written to inform policy with

regard to the creative industries, and sought to establish a more constructive relationship between technology companies and creative businesses, which was grounded in 'proven definitions and data, and roles and protocols revised for the digital era' (Bhaskhi *et al.*, 2013, p.10). Two strategic projects were launched to help realize this ambition. Arts Council England, the Arts and Humanities Research Council (AHRC) and NESTA collaborated to create this three-year, applied, action research programme, tasked with exploring the potential of collaborations to innovate digital audience development strategies and business models for the arts. Within the same period, the AHRC launched the *Cultural Value* research programme dedicated to 'understand better the value of the arts and culture in ways more varied than economic value alone'.

Funding Levels: The fund brought arts organizations, commercial technology providers and a third partner, academia, together to explore the possibilities of digital technologies for developing new hybrid products and services, and for finding new ways to engage with users and audiences (Bakhshi and Throsby, 2010). Projects were awarded up to £125,000 of support and 'was most readily accessed by established collaborators' (Clay *et al.*, 2014, p.4). The Arts and Humanities Research Council (AHRC) also committed £16 million during the period 2011/12–2015/16 to support four Knowledge Exchange Hubs for the Creative Economy that

'connect excellent research in the arts and humanities with a range of creative and cultural organizations to generate new and exciting knowledge exchange opportunities, foster entrepreneurial talent and stimulate innovation and contribute to the development of the UK's Creative Economy.' (Ahrac.ac.uk, n.d.)

The *Collaborative Arts Triple Helix (CATH)* project was funded by the latter fund and provides a deeper insight into the funder-led brokerage model for collaborative production, such as those supported by the NESTA Digital R&D Fund for the Arts and Culture. The project facilitated and conducted research into 'triple helix' collaborations involving three sectors: higher education (HE); small cultural organizations (SCOs); and small- and medium-sized enterprises (SMEs). The action research project focused on exploring motivations and initiation, workflow development and value and impact through live case studies and semi-structured interviews. The project examined the barriers, benefits and impact of a brokerage model on 'triple helix' collaborations.

A key finding from the *CATH* project suggests implementing a ‘stepped’ funding model to support ‘triple helix’ collaborations’. Firstly, the report suggests that minimising perceived risk through a small initial commitment would foster opportunities for developing new partnerships. Secondly, a series of funding ‘steps’, which support the evolution of cross-sector relationships should begin with a first step, brokered through a ‘light touch’ application and seed funding in order to establish ‘trust, understanding, and strong working relationships.’ Once these relationships have been built, a second funding step is suggested to ‘develop and user test digital outputs some of which might be market ready’ before a final step to ‘develop finished outputs’ is put in place, in line with the NESTA R&D Digital Fund for the Arts (Clay *et al.*, 2014, p.4). This staged level of funding allows for the time it takes to develop a deeper understanding of each partners’ sector, identify challenges and benefits for each, articulate agendas and motivations, establish roles, make provision for different working practices and consider licensing options for the output.

Brokerage: Rather than an external agency, a part-time, named ‘broker’ was employed to facilitate 19 teams, known as ‘triplets’, each of which included members drawn from all three sectors that applied successfully to use a £4,000 *CATH* voucher to develop a digital prototype suitable for public release or further development (e.g. a smartphone or touch table app, or a web resource) (Clay *et al.*, 2014, p.2). The *CATH* broker required specific skills within collaborations of this nature:

‘You need someone with knowledge of the collaborating sectors’ languages and the operational and strategic parameters within which their organizations operate. But, you also need a broker with wonderful interpersonal skills. The ‘Broker’ is going to work with a wide range of people and needs to be able to grasp quickly what those people’s individual motivations are for engaging in collaboration.’ (Clay *et al.*, 2015, p.4)

The role was deemed universally valuable by collaborators from all sectors in that it helped to introduce potential collaborators to one another, alerted triplet members to potential barriers posed by different sectors’ use of language, their differing administrative practices, business models, commercial drivers, and strategic goals; created collaborative contexts that helped participants to feel comfortable outside their professional ‘comfort zones’ and established trust; and it assisted sustainable collaborations to emerge by offering the triplets funding

advice (Clay *et al.*, 2015, p.5).

A lack of resources, finance and time prevents cultural organizations from researching new technologies in a fundamental, organic fashion, as many artists do. In order to keep abreast of rapid progression in technological development, and maximize the potential of new technologies within the cultural sector, this fund offered the opportunity for cultural organizations to engage in an applied, rather than fundamental methodology for testing new technologies within a cultural context (Quinn, 3rd March 2015).

Group Collaboration Hackathons

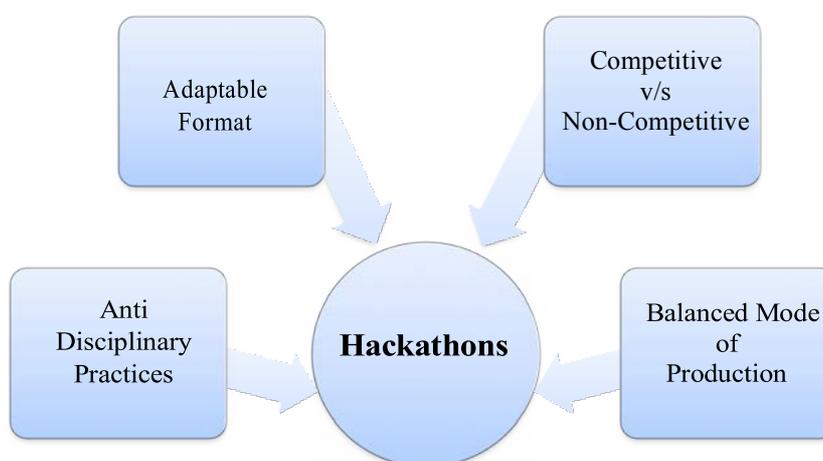


Figure 10: Model of Collaborative Production – Group Collaboration Hackathons

Hackathons or the now more commonly referred to ‘hacks’, are an intensive, short-timeframe, problem solving format for production that have become an increasingly prevalent way of working for the co-creation of content in the commercial and artistic digital sectors. Originating within the commercial digital sector as an innovation strategy for developers to think creatively about solving technical problems, the format has been appropriated by the arts and cultural sector more recently as a way to both meet and work with the commercial digital sector skill sets in an experimental, low risk way. (Gunatillake, R. 2012) Wikipedia has defined hackathons (as they are most commonly known within the commercial digital sector) thus:

‘A hackathon [...] is an event in which computer programmers and others involved in software development and hardware development, including graphic designers, interface designers and project managers, collaborate intensively on software projects in competition with other teams.’ (Wikipedia,

2015)

Anti-disciplinary practices: Hacks represent anti-disciplinary practices emerging at the boundary lines that intersect with the (publicly funded, commerce and open source) arts, culture and creative industries, creative digital and technology industry, design, engineering and science sectors. Hack formats are shaped by the agendas that drive their development and reveal the granular needs of vastly differing communities of professionals including; artists, hackers, makers, creative coders, engineers, scientists, data architects, technologists, arts and cultural professionals, and venues and businesses. Unlike the commercial artist-in-residence and arts geeks-in-residence programmes, both of which are particular to their specific environments, the hack format has proven to be portable and works well in both commercial and arts based contexts.

Adaptable Format: The hack format has proven to be adaptable to an arts and cultural context. *Hack the Space* at Tate Modern Turbine Hall took place on the 14th June 2014 and re-launched The Space collaborative, online platform. *Hack the Space* was the first hack event to take place at Tate Modern and employed an Open Innovation business strategy to access external expertise and nurture innovation within a contemporary art venue. *Hack the Space* was hosted within a prestigious, contemporary arts venue, for the launch of a digital arts platform, using drawn data generated by high-profile artists, but the event itself was delivered by the 3 beards, a commercial creative digital business. (3beards, n.d.)

Hack the Tate appropriated and applied a commercially orientated methodology to shape a competitive context in which artists and participants would generate a range of creative project outputs where 'participants pitch a finished prototype to a panel of judges' to win funding for development. The high profiles of both the artists, such as Ai WeiWei, who were attached to the data used in the live event and the brand value of the venue (Tate Modern), propelled the *Hack the Space* from grass roots activity amongst individual enthusiasts (artists, makers, commercial technologists) to a nationally reviewed event that boasted a live audience of over ten thousand people. As with all commercial hack events, invited participants were not paid for their time, however, the promise of further 'development' funding, the opportunity for artists to raise their profile and have

access to both a professional and public audience continued to hold a value. Like the geek-in-residence programmes discussed above, *Hack the Space* provided an institutional value for Tate Modern by bringing a digital mind-set into their venue and fostering new relationships with the new media arts and commercial, creative digital and technology industries, while capitalizing upon the existing working infrastructure and practices of the contemporary arts sector.

Competitive versus Non-competitive Working Process: *Transmediale Afterglow* — *Art Hack Day* events are globally peripatetic, driven by a particular theme and held in collaboration with venues and events within the new media art field. Unlike 3 Beards, *Art Hack Day* is a non-profit Internet-based organization that 'bridge the gap between art, technology and entrepreneurship with grassroots hackathons and exhibitions that demonstrate the expressive potential of new technology and the power of radical collaboration in art' (ART HACK DAY, n.d.)

Thus, the motivations that shape *Art Hack Day* events are different from *Hack the Space*. The events are aimed at those 'creative professionals' who have a practice that defies the boundaries of specific fields, i.e. an anti-disciplinary practice. *Art Hack Day*, *Transmediale* and the hack format in general received criticism by artist communities for their event format *Transmediale Afterglow* (2014) that involved a 48-hour research and development period (art hack) which produced work for a 'flash' exhibition at the end of this period. Constant Dullart, a new media artist publicly declined his invitation to the *Transmediale Afterglow – Art Hack Day* event, highlighting emerging issues around the real costs of 'experimental innovation' that utilize commercially based methodologies to generate art for an exhibition-based context. In an open letter to organizers, Dullart raised some tangible issues around the motivation, agenda, working practices and dissemination being employed.

Additionally, Dullart expressed concern about the 'creative corporate' hack format, timeframe and context being created for art production:

'A fast, cost effective, even competitive, corporate way in which a large quantity of approaches can be included, competing with each other, stimulating ridiculous work hours, without any fee or compensation. Stimulating easy and quick solutions to personalise mass-produced technology with an artistic flair. After which the work is presented without any chance of contemplation, or for that matter curatorial

intervention...'(atractivoquenobello, 2014)

The issue of finance and payment and fair working practices needs to balance the perceived value of the experience of collaboration. The curatorial decision to host a 'consecutive exhibition' post a research- and development- focused art hack event can be detrimental to the experience for the work produced, the artists involved and the intended audience.

The experiences in *Transmediale Afterglow — Art Hack Day* influenced my curatorial decision not to host a consecutive exhibition for my own case study *Thinking Digital Arts Hack*. A decision was made not to call it an exhibition, and instead market the public event as an 'informal showcase' of the work that had emerged during the day (Bradbury, 2015). However, while the language may have been modified from 'exhibition' to 'informal showcase', and understood by those working in the field, it had little bearing on audience expectations. The lack of curatorial input into the showcase raised criticism from audiences who, despite the marketing message, still expected a curated exhibition, raising issues around how the language used around these events is still being defined and understood. This will be further explored in Chapter 6.

Balanced Mode of Production: *Inhabiting the Hack* is a critical, collaborative research project led by Dr Helen Thornham, as part of the Communities and Culture Network+ that is currently running until December 2015. This project provides a critical perspective on current practice within hacks as a site of meaningful production for the arts and raises questions around the format as an autonomous site of production. The practice-led research project examines 'the notions of innovation and creativity ingrained in digital culture' and seeks to interrogate hacks and the 'relationships between innovation, practice, imagination and material' they uncover, capture and exploit (Inhabitingthehack.github.io, 2015). Researchers are working with a range of curators and artists (including myself) to develop 'alternative styles of hack events, often informed by traditional arts activities such as residencies and retreats' rather than commercially driven methodologies evolved for a different sector. The researchers view hacks as:
'intensive events, which make things invisible

- Play hides work (and workers' rights e.g. minimum wage legislation, etc.)
- Pitches and prizes hide intrinsic value
- Product focus hides reflections and learning
- Emphasis on pre-planning and problem solving inhibits exploration
- Extra-curricular dates/times exclude carers
- Appropriation of language (hack, retreat, kata, camp, pattern) loses wider cultural significance in translation
- Focus on the "pitch" as end-product privileges hylomorphic design over material'

(Private email, Alex McClean, 15th June 2015)

I have noticed similar challenges to the hack format through my research. Issues around the intensive format can present the production of art as something that can be done quickly or easily. As a curator, you need to be very aware of how you present the research and development output of an intensive period of time. For example the language used for marketing a public event is important — calling the public presentation a showcase, rather than an exhibition and can help manage audiences' expectations of what they will see when they come to view the work. The ratio of artists and non-artists in each grouping can have a direct impact upon the working processes during the day. Finally, group dialogue at the beginning of the event can frame the development of interests and relationships throughout the hack. This will be further described in Chapter 6 when I discuss *Thinking Digital Arts Hack*.

Open Source Production

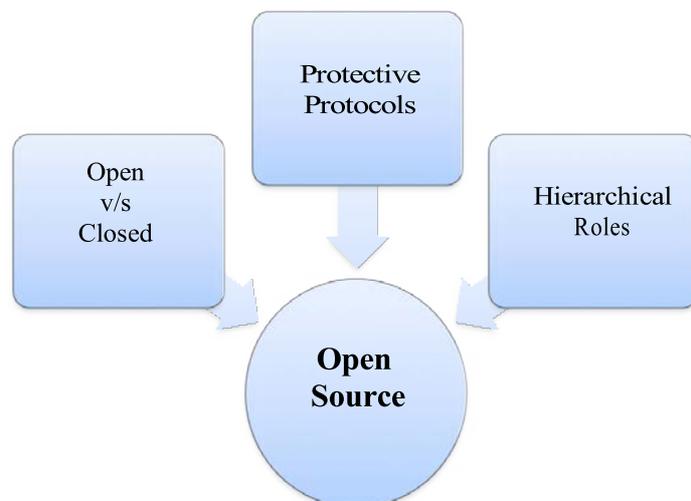


Figure 11: Model of Collaborative Production: Open Source Production

Open versus Closed: Open source methods enable groups of people to produce and develop software by making the structure of the software visible to all

programmers, rather than hidden as in the case of proprietary software. Sometimes, the software is available free of charge, in which case it can be described as FLOSS (Free Libre Open Source Software), which has its own standard licensing frameworks. This mode of production presents an evolved, strategic infrastructure that supports growth and dissemination of open digital products. Lerner and Tirole (O'Mahony, 2003, p.1179–1198) highlight that the terms 'open source' and 'free software' refer to the licensing terms associated with a piece of software and provide a way to protect collaborative work via an open source license. Open source licenses and the broader ethos of free software was originally developed by Richard Stallman in 1984 to ensure his free operating system, the GNU system, remained freely available, was protected from appropriation and encouraged others to join him in sharing their code. Siobhan O'Mahony (2003) explains that 'the future stream of benefits that would stem from the collective resource would be made unavailable to the community' if a commercial vendor adds proprietary code to the open source communities' work; thus reinforcing the need for open source licensing to establish clarity around the infrastructure of collaborative, open production with free distribution, within a competitive and closed field (O'Mahony, 2003, p.1179–1198).

Protective Protocols: In his paper *FLOSS Culture* (2011), Adnan Hadzi explains how copyleft includes and extends copyright ownership and attribution to an author, which 'protects the work from being altered by others without the author's consent and restricts the reproduction of the work' by 'allowing for free re-distribution of the work and, more controversially, the right to change the work if the altered version attributes the original author and is re-distributed under the same terms' (Hadzi, 2011). Hadzi identifies evolving methods for extending existing licensing with new working environments to suit contemporary practices.

Hierarchical Roles: Dominic Smith's (2011) research provides an interrogation of an evolved body of practice, open source and new media art. Smith provides a useful insight into the evolving features and behaviours of production protocols that enable the 'sharing, distributing and protecting work under the term open source, from GPL, Creative Commons to free art licenses'; the values, ethical and political systems that surround open source and new media arts practices (i.e. freedom, sharing, recognition of skill); and reveals hierarchical roles that enable

the production, distribution and protection of art produced within the rhetoric of innovation and the framework of appropriated, but evolved commercial modes of production (gatekeeper, instigator, developer and participant). Smith highlights the impact and reciprocal relationship between protective licensing, agendas and motivations, and roles and working practices within collaborations.

While open source software developers follow many similar procedures followed by commercial software developers to create software, differing values and motivations keep licensing environments distinct (Smith, 2011, p.38). Smith recognizes that within participative new media art projects, the recognition of good craftsmanship is a 'classic incentive' for artists to become involved in collective projects within open source communities. *The Shredder* project provides a useful breakdown of the hierarchy of roles and 'layers of participation' between the project instigator, project leader, gatekeeper, participant and user, and how these relationships shape the final, collaborative work.

'Due to the fact this is a collaborative piece that has been open to iteration and modification by second parties, a situation has arisen where the development methods are reflected in the aesthetic of the final work and continues the dialogue about the benefits to the creative process that conducted/moderated freedom can bring.' (Smith, 2011, p.81)

He distinguishes between different levels of 'openness' and different kinds of hierarchies within production systems, including hierarchies of skill, approval, gatekeeping, and time:

'Recognition of skills amongst peers can also aid in the progression through a project hierarchy into a gatekeeping role. This is a recognized status that can bring many benefits, such as the opportunity to display your work to a wider audience... Recognition goes to the "wise" leaders who take advantage of informal structures; structures that have been influenced by the nature of computing.' (Smith, 2011, p.26)

Thus, as with all models of production discussed here, it is the 'gatekeeper' who remains in a position of power to moderate freedoms within the creative process and shapes the context within open source collaborations.

Artist Practice as Business

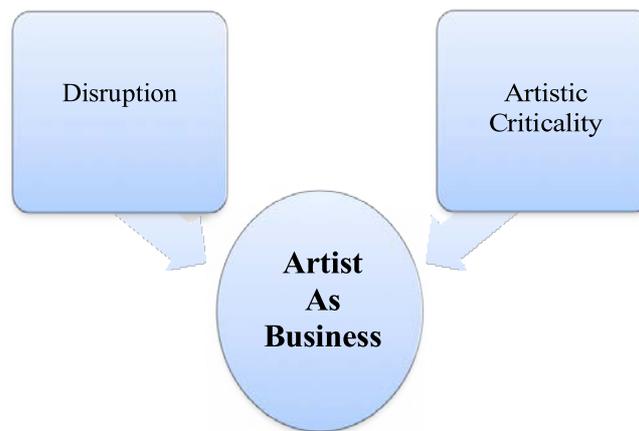


Figure 12: Model of Collaborative Production: Artist Practice as Business

Disruption: According to Wikipedia,

‘disruptive innovation is a term used in business and technology literature to describe innovations that improve a product or service in ways that the market does not expect’
(Wikipedia, 2015).

Artist Practice as Business represents a growing number of artists and activists who are using ‘disruptive’ artistic strategies to infiltrate, appropriate and critically interrogate the impact of global commercial digital business and open innovation models through ‘performing criticism’, that is, inhabiting the commercial context that they are critiquing. There has been a recent rise in this kind of artistic response, as exemplified within *networked art activism* (Marc Garrett, 2015). *The Disruptive Art of Business* is a concept created by Tatiana Bazzichelli (2010) to describe ‘open possibilities of transformations and interventions adopting disruptive business strategies as a form of art.’ These ‘disruptive’, ‘hackivism’ artistic strategies (Bazzichelli) are employed in the business of social media, and by artists who are devising interventions with the critical intent of simultaneously revealing and disrupting ‘the smooth flow of global corporate capitalism’ (Byrne, 2009).

Bazzichelli’s proposition of ‘disruptive business’ recognizes that the web is a predominately commercial field, and that we are already involved in the ‘capitalist ornament’. In a world where sharing, networking and cooperation are now the norm, by using these kinds of “disruptive strategies”, artists are now highlighting the mechanisms operating within the web by critically performing them

(Bazzichielli, 2013 p.8). In her interview with Marc Garrett at Furtherfield in 2014 entitled *We need talk about networked disruption and business*, Bazzichielli explains that the 'disruptive business' approach enables artists to 'climb out of oppositional loops in order to find different ways of being, and refocus on potential art strategies in relation to a broken economy'. By employing disruptive business strategies, artists can perform within the capitalist framework and not against it.

An example of disruptive hacktivism is *Face to Facebook*, 2011, by Paolo Cirio and Alessandro Ludovico, which saw the duo steal one million Facebook profiles, filtering them with face-recognition software and posting them without user authorization on a custom-made dating website, sorted by the characteristics of their facial expressions (Face-to-facebook.net, 2011). The artists employed the working practices of commercial business (in this case Facebook) to illustrate the risks for individuals sharing data on social networking websites. The project gained international attention and sparked a legal battle with Facebook the company.

John Byrne's article *The Yes Men: Art and the Culture of Corporate Capital*, interrogates the impact of disruptive art strategies used by artists such as Cirio, Ludovico and The Yes Men, in relation to the instrumentalisation of contemporary art practice for corporate agendas within a neo-liberal context that is rooted within a 'free-flowing circuit of commodity exchange' suggesting that artists:

'They act as a virus, like a corrosive within (rather than a corrective to) the increasingly affirmative systems of technocratic capitalism, And, if the systems of technocratic capitalism now count contemporary art amongst their most valuable means of dominance, the work of The Yes Men offers us a glimpse of autonomy in an allegedly post- autonomous work.' (Byrne, 2015)

Artistic Criticality: As part of my continuing research, I invited conceptual artist/designer Jennifer Morone to speak at the Thinking Digital Conference in May 2015 in order to contextualise disruptive arts practices in business within a commercially focused context. Jennifer Lyn Morone has been exploring issues surrounding what she refers to as 'extreme capitalism' through a protest-based art project. The project, which Morone has explicitly described as 'not a speculative' essentially involved incorporating herself as a corporation, Jennifer

Lyn Morone Inc, and becoming founder, chief executive and product — of the business.

‘If you have to exploit something, then at least exploit yourself,’ (Appendix 6h)

Morone tracked every physical and mental asset her ‘company’ could offer, collected data not only on digital activity, but also on everything right down to emotions and corresponding bodily responses tracked by a sensor system. The project interrogates the motivation behind data mining, whether by governments or companies and the questions it raised about the role of the individual and his or her values in such a society.

The conference audience, which was primarily drawn from the commercial sector, responded positively to the criticality of Jennifer’s project, reinforcing the point that this kind of artistic strategy can open a dialogue between what is often seen as oppositional perspectives. The work also made an impact in the local press, suggesting the breadth of impact work of this nature can have in both specialist and public contexts. (A full list of online links to the press coverage can be found in Appendix 6f.)

Within this practice, Bazzichelli suggests that criticality can be useful for both sectors

‘for reflecting on different modalities of generating criticism, shedding light on contradictions and ambiguities both in capitalistic logics and in artistic and hacktivist strategies, while rethinking oppositional practices...’
(Bazzichelli, 2013, p.228)

Given that artists often appropriate business systems without permission, this could be an equivalent reflection of the Brand Marketing Production tactic of appropriation, but if both sectors can reflect on their own production methods in relation to value, then this can be an important characteristic.

Summary

There is a rich and long history of collaborations between the arts and commercial digital industries, but they are often described inaccurately. Each mode of production discussed above sits along a spectrum of power balances between art and commercial digital industry sectors and highlights the impact of

control on the context in which the final work is produced and specific, progressing practices emerging within them.

This chapter revealed a sliding scale of commercial influence within collaborative sites of production, moving from brand-led contexts, where the brand holds the power to control and shape the artistic output, through to artists co-existing within commercial infrastructures, to reveal and disrupt the mechanisms of capitalism within digital society. Identifying and acknowledging specific, differing demands inherent within each site of production, lays the ground to explore the impact of these systems upon modes of curatorial practice.

Artist- and geek-in-residence programmes highlight a desire for each sector to embed a different perspective, mind-set and practice within cross- disciplinary contexts. The range of strategies employed reflects the different agendas and motivations of the host; for instance, within commerce the focus remains on the development of innovative products, while in the arts the aim is for organizational and sector development.

Funder-led initiatives highlight the powerful, top-down policy frameworks for collaborations between the arts and commercial digital industries that seek to nurture economic growth within the cultural and creative industries. These frameworks directly impact the modes of collaborative production that takes place within facilitated collaborations; while fused businesses articulate the mobility of hybrid creative and commercial practices that flows between these two sectors through a cultural employment landscape.

With the rise in interest in collaboration, comes increased expectation. Sponsors are no longer content with an arms length approach to supporting the arts through financial donation alone. They see a value in gaining an understanding of art production and strategies employed by artists for the development of new systems and products, and so are devising new ways to engage artists through collaboration with the arts. This move highlights a tension between the money that the sponsor can offer, and the value that the arts bring to the collaboration, thereby creating a more equal relationship between both. This equality is shaping emerging terms of engagement, as the needs of both partners begin to be

understood.

Experimental contexts such as hackathons represent the desire for the arts sector to gain a deeper understanding of innovation practices emerging within the commercial digital industries. This commercial format has been appropriated and modified to suit a variety of cultural contexts to meet various arts objectives. The adaptability and scalability of this collaborative format provides the potential for an autonomous context for new working practices to develop.

Open source production highlights how licensing protocols can work within and for the arts sector as well as business. Developed for and by a community with its own established values, politics, ethics, and hierarchal infrastructure, protective licensing can provide a collective and unifying voice in a predominantly commercial field (see Appendix 2).

Disruptive, artistic intervention within capitalist networked practices opens a dialogue through practices between the arts and commercial digital industries. As digital technologies become more accessible, understood and pervasive within society, artistic strategies that expose the mechanisms of commercial endeavour are becoming more prevalent, and gaining the interest of a greater number of people.

Recurring themes from the types of production concern who has what levels of control over:

- Crediting and IP (related to money and value)
- Emphasis on research or development values
- Who 'hosts' who in which institution, for example whether geeks are resident in arts organizations or vice versa
- Who is selected or paired with who and who does the selecting (with reference to curatorial roles)
- Marketing — who decides which languages, will translate across the sectors

Through understanding the context of the production they are working within, the role of the curator can move from that of a firewall within those modes of

production that are weighted towards a purely commercial or art agenda; broker insights into best working practices for businesses interested in fostering collaborations with arts partners and vice versa; and mediate the often different language and systems inherent within distinct fields and sectors. Art and its inherent values instigate the conversation between two distinct fields, while a strong curatorial voice can broker a meaningful dialogue. In the following three chapters I will describe three curatorial projects that further explore the factors of value, money, and intellectual property, which my research has identified as the overarching tensions that emerge within cross-sector collaborations between the arts and commercial digital industries.

Chapter 4: Curatorial Project 1 — *Dear Angel*

Description of Project

The first curatorial project was delivered during the first year of research and provided me with an opportunity to interrogate new media arts practice and participatory strategies through commissioning and exhibition formats. The project enabled me to reflect upon the different role of the curator in participatory (digital and non-digital) artworks.

Having worked in arts production for many years, a key role I held within the project was that of arts producer, and led on all practical aspects of project management and delivery. However, as this project was now my first curatorial research project, I also held the position of both curator and researcher.

Within the wider context of this research, the most useful experience within this curatorial role primarily came into play within the *Dear Angel* exhibition. My role involved selecting, and supporting the exhibition of both existing and specifically commissioned new media, interactive and online artworks that critically engaged with some of the key concepts that *Dear Angel* touched upon. These themes are; online and offline communication tools and platforms; contemporary engagement with 'place', its histories, present and future; the impact and affect of regeneration and development on place and its communities; and how artists are using opportunities for mass, global audience participation afforded by digital technologies in the production and experience of art. (Appendix 4b)

My role as researcher was grounded in observation and reflection throughout the life cycle of the project. This combination of roles within *Dear Angel* (producer, curator and researcher) drew upon my previous career in arts management, and provided a bridge to enable me to engage with my research project at an early stage curatorial practice.

The project was made up of four distinct, yet connected strands of activity, presented under the banner brand of *Dear Angel*. Key elements in the project are a participatory art commission entitled *Dear Angel*, exploring methods of contemporary communication by digital artist Stevie Ronnie; a cross-disciplinary

exhibition showcasing new media and participatory art practice entitled *Dear Angel: Exhibition* at the Globe Gallery, Newcastle upon Tyne; *Dear Angel: Stevie Ronnie*, a solo exhibition of work by Stevie Ronnie that included the *Dear Angel* commission at the Lindisfarne Gospels Pop Up Gallery, Durham; and a two-day artist-in-residence programme, inspired by the theme of the project, delivered on Holy Island during the Festival of the North East finale celebrations in June.

Dear Angel provided an opportunity to examine modes of new media curatorial and artistic practice within a variety of online and physical contexts; investigate the decentralized model of curation and production employed by the Festival of the North East, of which the *Dear Angel* project was a part; investigate participation strategies within contemporary and new media art practices and the impact of these practices upon the role of the artist and curator.

The *Dear Angel* project explored the opportunity for participatory and new media art strategies to act as a broker or intermediary to link distinct, iterative festival programmes. Artwork was showcased in both digital and non-digital settings and accessed a range of different audiences across the North East of England. This project had no commercial partner and provides a comparison study to subsequent case studies. For the purposes of this thesis, I will focus only upon the new commission *Dear Angel*, and the group exhibition of the same name. Further information is in Appendix 4.

Mode of Production

The *Dear Angel* project was framed as a bridge between two major regional arts, heritage and cultural festivals, the Festival of the North East (FOTNE) and Lindisfarne Gospels Durham. The former was delivered with a broad range of partners in various locations and venues across the North East of England in June 2013, while the latter was delivered across County Durham during July and August 2013.

FOTNE collaborated with many of the region's arts, heritage and cultural venues to celebrate the breadth of arts and science, heritage, history, industry and technology activity happening across the region. This was the first large-scale festival in the region to bring these different fields together within a culturally focused context. The Lindisfarne Gospels Durham Festival celebrated the

exhibition of the medieval, illuminated manuscript, *The Lindisfarne Gospels*, produced on the island of Lindisfarne in honour of St Cuthbert in the 7th Century. By hosting the FOTNE festival before the Lindisfarne Gospels Durham Festival, the hope was that the *Gospels* were contextualized as not simply religious artefacts but as also outstanding examples of a long heritage of creativity in the North East.

The final evaluation of the FOTNE, written by Mark Robinson, highlights the register of benefits that the festival is measured against. From this evaluation, it clearly sits within an economic framework and employs traditional regeneration, tourism and social impact evaluation strategies to report on the project (Robinson, 2013). Thus, the festival operates within the traditional cultural language of ‘spill over’ value, noted in Chapter 2. Success is aligned closely with strategic Arts Council England funding and local authority objectives, and primarily uses quantitative rather than qualitative measurement strategies indicated by audience reach, the economic benefit generated for the region and the number of new commissions to emerge from the funding. A similar set of metrics were used to evaluate the perceived values within the Lindisfarne Gospels Durham Festival.

The *Dear Angel* project was commissioned by FOTNE and supported by Arts Council England. It was conceived to ‘celebrate the heritage and current creativity and innovation of North East England’, and bridge two distinct festivals. The premise, structure, funding, delivery and evaluation of both the *Dear Angel* project and the two festivals that contextualised it reveals the current practices and discourses in which the arts currently perform and articulate their value in wider society. Chapter 2 mapped a development of theory towards a more holistic spectrum of measurements in relation to cultural value, but in practice, an instrumental and economic register of benefits and ‘spill over’ values of economic impact, tourism and educational attainment through participation remain the key metrics for evaluation within large-scale, cultural festivals such as these.

Festival Model: Decentralised Curating Strategy

Similar to the Brighton Digital Festival, FOTNE developed a festival model that employed a decentralised structure for delivery (see Baran’s diagram in Figure 1,

p.37). This model sees the majority of events organised independently by a network of organisers rather than a core festival team, enabling an extended reach and scale that would otherwise be impossible. Within FOTNE, the majority of decisions relating to the festival structure and content development was developed by a steering group made up of representatives of key partners, — Arts Council England, NewcastleGateshead Initiative, a Local Authority Liaison Group — and four artistic advisors who were engaged to ensure the benchmark of selected projects remained high and to help bring the festival together. From August 2012 a small, core production team was tasked with developing the programme framework and liaising with venues and producers for specific events or projects. Like the Brighton Digital Festival, FOTNE partners produced and funded their own projects independently, with a small number of projects receiving investment from FOTNE. *Dear Angel* was one of fifteen projects to receive festival investment.

This decentralised approach to curating and producing a festival is a direct result of the reduced levels of funding available to the arts due to the austerity measures implemented by the UK government during the past five years. These measures have forced many organizations to rethink programming strategies, and engage in collaborations to survive. Collaborative strategies have developed out of strategic aims to develop and engage increasing numbers of audiences that help justify public spending on the arts. The positive feedback FOTNE evaluator Mark Robinson received from collaborators and the numbers engaged are a clear indication that the North East cultural sector responds well to this kind of production collaboration.

Commission of Participatory Artwork



Figure 13: Stevie Ronnie, *Dear Angel* commission, 2013. Installation shot at the Globe Gallery, 1–30 June 2013.

Photography Colin Davsion

Inspired by *The Lindisfarne Gospels*, a handwritten manuscript and ancient form of early distributed communication, the premise of *Dear Angel* was to bridge the gap between the written letter as a physical, tactile object and communication technology in the digital age. The theme of this artwork was ‘Home’ and involved an open invitation for the public to handwrite, type, record, make or illustrate a letter home to the *Angel of the North*, an internationally recognized, iconic public sculpture for the region. The open call for the commission, distributed via mainstream press and festival partners’ cultural platforms, garnered a global public audience of over 1200 people. By keeping the benchmark for participation low, the commission positioned art as a conduit for deep and broad public participation, both online and off.

Graham and Cook note that

‘New media may be immaterial, but it can also be “located”; and this hybridity between the site specific and the online is often found in the participative projects ...’ (Graham and Cook 2010, p.120)

With their example of *Learning to Love You More* (2002–) by Harrell Fletcher and Miranda July, Graham and Cook provide examples of ‘what kind of systems might encourage participation (whether “at a distance” or face-to-face) and what challenges this participation might present to mainstream arts organizations’ (Graham and Cook, 2010, p.120). Similar to Ronnie, Fletcher and July act as

'hosts' for others' participation, which is recorded as text, images and sound online, and builds over time.

Like of *Learning to Love You More* (2002–), the *Dear Angel* commission developed a range of strategies that encouraged participation, stimulated ideas and helped a broad range of individuals and groups develop and submit letters to the project. The bar for engagement was kept low, but also ensured a benchmark for quality by providing examples and practical support for participants to access. The strategy for initial public engagement involved a series of downloadable 'ideas packs', developed by the artist for participating individuals and groups, and suggested activities and exercises that creatively explored the idea of writing letters were made available on the project website for download (see Appendix 4a). These 'ideas packs' included exercises aimed at generating letters in a variety of media (physical letters, emails, tweets, audio, video, etc.) (Dear Angel, 2013). Each contribution was displayed within the final *Dear Angel* commission, which was specifically designed to host a range of physical and digital responses (see Figure 14).

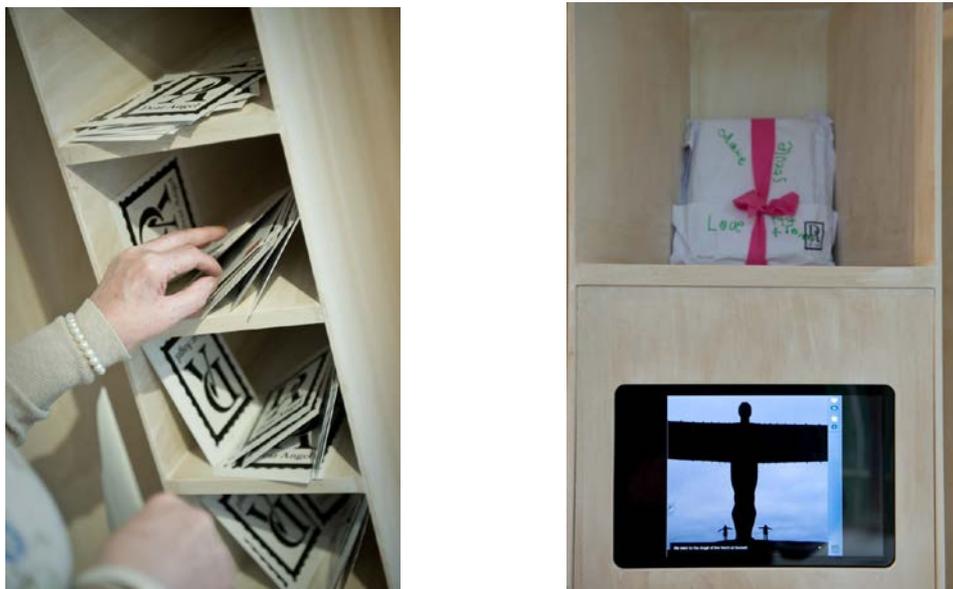


Figure 14: Stevie Ronnie, *Dear Angel* commission, 2013, offline postcards and letter submissions and online Facebook and Twitter posts, installation shot at the Globe Gallery, 1–30 June 2013. Photography Colin Davison

Each contribution was displayed using the range of formats that were accessed to create them, including postcards, letters and online social networking sites such as Facebook and Twitter. Seats were specifically designed to be part of the artwork and had writing tables built into their design, and paper and pens available so audiences could continue to contribute to the work during each

exhibition period of the project. Alongside the physical prompts, an open call in local papers invited participation.

All FOTNE programme partners were invited to become advocates of the programme and encourage participation from the communities they represent and work with. All letters and communications were displayed, unedited and unfiltered, thus, both positive and negative comments about the North East were exhibited. This range of strategies enabled the project to crowd source a more honest picture of how people feel about the region through a widely participatory process, which was received positively in the local press:

‘Did people respond? They certainly did. And I can think of no better way of killing an hour than by sitting next to the *Dear Angel* rack and sampling its contents. There are letters and poems and even cartoons. All are addressed to the Angel and it does make me feel a little nosy to be reading them. But that’s the name of the game... It’s a bran tub, a lucky dip. Once you start reading, it’s hard to stop.’ (Whetstone, 2013)

Dear Angel Exhibition



Figure 15: Stevie Ronnie, *Dear Angel*, 2013, branded postcard design. Design by Russell Maurice

The *Dear Angel* exhibition presented participatory, interactive and collaborative artistic modes of socially engaged arts, participatory arts practice and new media arts fields together in one exhibition. The exhibition sought to explore how the public engages with artistic strategies that employ new technologies in the wider framework of our evolving digital society. As the curator, I sought to establish a deeper understanding of the evolving role of the artist, curator and audience within emerging new media arts practices that employ new technologies.

'But if digital media is not considered in relation to more traditional art forms, we're constructing to different kinds of art history. What happens to art history if digital artworks cannot be seen alongside paintings or sculptures, even though the works deal with the same societal issues or conditions?' (Berndes and Dekker, 2013, p.20)

The exhibition focused upon the themes that emerged from the commission itself, which included: on/offline communications, place and mass participation.

Full details of each work can be found in Appendix 4b. The *Dear Angel* exhibition articulates an evolution from established offline modes of participation within the contemporary art field (Theresa Easton); through to digitally aware online/offline practices that encourage and incite multiple forms of participation (*Dear Angel*); to interactive engagement practices that are seen in art that engages with new technologies (Victoria Bradbury); to the ways in which audiences (prosumers) are now producing as well as consuming content for social networks (Tom Schofield); to the artist providing a solely online framework or platform that is populated with content by audience online participation (Revue).

The exhibition enabled the Globe Gallery, who had not exhibited networked, media based artwork before this show, to benefit from having previously unconnected spaces linked to a wired network, and from having showcased a range of digital artworks in their spaces. The experience of engaging with new media artists to support the month long exhibition period enabled gallery staff to gain new skills and knowledge around invigilating artwork that includes new technologies. Bringing these works together in the context of one exhibition provided an opportunity for audiences to experience the differing roles related to participatory, interactive and online collaborative practices.

Roles and Working Practices

Curator

In new media art, curators can also be described as cultural context providers and producers (Krysa, 2006), and facilitate engagement between artists and their audiences. Upon reflection, the artist and curator utilized a 'modular' mode of curatorial practice for the development and delivery of the *Dear Angel* commission and exhibition, which fitted the decentralized structure. This mode of curating was theorized by Sarah Cook in her PhD thesis and shared in

Rethinking Curating (Graham and Cook, 2010, p.155), and was based on the work of freelance curators Kathleen Pirrie Adams, Nina Czegledy and Iliyana Nedkova.

Dear Angel also relates to the 'modular' model, which describes how an exhibition might be just one incarnation of a multi-strand or multilevel interpretational event structure (a platform) with 'guides on the side' or local project managers at each location. While Czegledy and Nedkova were working in simultaneous countries across the world, *Dear Angel* was working in various counties across the North East region, within two distinct festival structures. The two distinct festivals that the project linked to provided local project managers in each location and the distinct elements that made up the overall projects, which could be scaled up or back 'without drastically affecting its overall coherence' (Graham and Cook, 2010, p.155). This approach created flexibility within the project's development that enabled a collaborative relationship to emerge between the artist and curator.

Scholz highlights that the once clear line between curator and artist are increasingly blurred as the 'model of the well-informed expert advances to that of the cultural editor who channels the perspectives of other cultural producers... The power of the media art curator is somewhat decentralized but she is still important as an expert and cultural legitimiser' (Krysa, 2006, p.198). In order to encourage widespread participation and capture the perspectives of participants, or to use Scholz's phrase 'cultural producers' within the *Dear Angel* commission, both the artist and the curator were required to reframe their role from that of the expert to that of facilitator.

'This broad cultural context of increased content provision, facilitated by the World Wide Web is the precondition for the emerging paradigm of the artist as cultural context provider, who is not chiefly concerned with contributing content to her own project. Instead, she establishes configurations into which she invites others. She blurs the lines between the artist, theorist and curator.' (Krysa, 2006, p.189)

Dear Angel provided a context to engage audiences both online, using commercial social networking platforms, and physically, through the postal system and through contributions made during the exhibition. Like the festival format of distributed collaboration, the control and power usually enjoyed

separately by the curator and the artist had to be extended to each other and also to those who took an active part in the project in order to be successful.

Artist

The lead artist, Stevie Ronnie, self identifies as both a poet and a digital artist, with a background in commercial computer programming. His understanding of technology from a programmer and web developer perspective creates a bridge between contemporary and new media participatory art practices. As such, in *Dear Angel*, Ronnie's role showcases the evolution of the artist from single author to that of 'cultural context provider', a role which has been developed in many new media and Internet- based collaborative artworks seen within the *Dear Angel* exhibition.

In *The Medium is the Message*, Marshall McLuhan tells us 'As new technologies come into play, people are less and less convinced of the importance of self-expression. Teamwork succeeds private effort.' Within the *Dear Angel* commission, the artist established an open participatory system in which members of the public would become co-authors of the work. A reframing of authorship was necessary for Ronnie to provide a context in which the choices audiences made had a direct impact to the shape and form the final artwork took. In his evaluation of the project, Ronnie states:

'Making an artwork that was openly participatory during its production and exhibition was another new experience. The challenge was to ensure that the quality of the audience experience was maintained while allowing anyone to contribute to the work at any time. In order to allow this to happen I had to let go of the urge to edit the contributions and to trust that the framework I had provided would be strong enough.

I am happy with the way that this worked and the experience has shifted my perception on the possibilities of participatory art.' (Ronnie, 2013)

Within *Dear Angel*, this evolution of a facilitating or hosting role of the artist as cultural context provider suspended single authority in favour of a co- authored and participatory approach. The artist nurtured engagement between the artwork and a broad range of participants across a range of digital and physical media.

Audience

The *Dear Angel* commission facilitated a context in which audiences could produce content both online and offline. The content was created prior to the

final work being constructed and the formats employed by those audiences defined and shaped the final art object and experience. The final artwork was designed so that audiences could also continue to add to the work during its distribution and exhibition, enabling the content to evolve and change as audiences continued to contribute to it. Thus, there was an explicit relationship between the context, which was facilitated by the artist, and the content, which was produced by the audience.

The *Dear Angel* group exhibition presented participatory and interactive art strategies emerging within contemporary and new media art fields side-by-side, clearly showing an evolution from viewer to participant. In so doing, it identified some of the challenges and commonalities within artistic modes of participatory practice emerging within both fields and reflects upon the impact of the commercialisation of the Internet and social networks upon the behaviours and expectations of audiences.

Reflections on Values

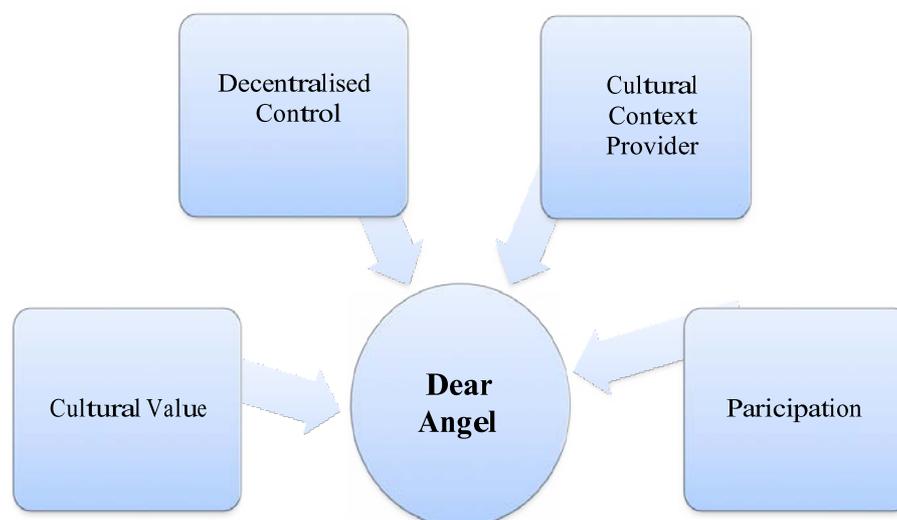


Figure 16: Model of Production: Dear Angel

Money and Time: *Dear Angel* was funded by the Arts Council England with seed funding from the Festival of the North East, and as such, the budget for the project was based in best practice within the arts. The artist wrote the Arts Council application on a speculative basis for no fee, which is normal practice within the field, and built in an artist fee based on guidance from Arts Council England. The fee was based on an estimation of the days to be spent on the project multiplied by his daily rate. As with many art commissions, the artist

inevitably did many more days than was being paid for during the lifespan of the project and thus, his fee did not reflect the actual time he spent developing and delivering the project. While the commissioned artists for the exhibition did receive a small fee for creating new work, it was more akin to a contribution rather than one based on a daily rate. This was due to the limited budget available; however, this approach is also fairly normal practice in the arts field. Despite the lack of a standard rate of pay, the invited artists were still keen to take the opportunity of showing their work in a well-known regional gallery within a large-scale and well-publicised arts project.

Intellectual Property: *Dear Angel* was devised and delivered by artist Stevie Ronnie for a cultural festival. The key outputs included an arts commission with a group, gallery based exhibition. As such, normal conventions and protocols used within the contemporary arts and new media arts were applied to crediting and ownership of the work, as described in Appendix 2.

Cultural Value: *Dear Angel* revealed that despite an evolution of theoretical arguments for a more holistic evaluation of cultural value, as discussed in Chapter 2, as there was no commercial partner present, cultural value continued to be articulated and measured within an instrumental and economic register of benefits within large-scale, culture and heritage focused festivals, rather than taking a more holistic approach that includes qualitative measurements relating to the audience experience.

Decentralised Control: Operating in the role of curator and producer, *Dear Angel* explored the opportunity for modes of participatory and new media art and curatorial strategies to act as an intermediary that can link distinct festival programmes. The exhibition outputs of *Dear Angel* was distributed across different locations, for a broad range of audiences, meaning the project enabled a practical application of contemporary new media curatorial theory and techniques within a variety of exhibition contexts. Modes of new media practice, which reposition the role of the artist from single author to cultural context provider, revealed a development within the power dynamics between the curator, artist and audience.

Cultural Context Provider: Within *Dear Angel*, the evolution of the role of the artist as cultural context provider suspended single authority in favour of a decentralised approach. The strategies employed within the *Dear Angel* project as a whole, directly informed the final curatorial project *Thinking Digital Arts*.

Participation: Exhibiting contemporary and new media arts practices in the same exhibition, the diagnosis of the *Dear Angel* exhibition highlighted the challenges and opportunities for curators, artists and audiences to move between the physical and online experience within participatory artworks

Summary

The *Dear Angel* curatorial project provides a useful analysis of the current landscape of digital and non-digital arts practice within the fields of socially engaged contemporary and new media arts practice. The project had no commercial partner, and so provided an opportunity to explore the ways in which cultural value is currently both articulated and measured, and identifies the impact of new technologies upon the role of the artist, curator and audience. The decentralised curation model employed by the Festival of the North East, of which the *Dear Angel* project was a part, could be argued to be influenced by the ways of working and collaborating influenced by digital systems of working. The *Dear Angel* commission explored ways in which participatory and new media art strategies can act as a broker or intermediary and link distinct cultural festival programmes. The curatorial selection of the artists was very much informed by the artists' knowledge of digital methods as well as offline methods. Modes of artistic and curatorial practice that facilitate participative, interactive and collaborative artistic strategies both online and off revealed an evolution of the role of the audience from viewer to participant.

Chapter 5: Curatorial Project 2 — *NESTA Digital R&D Fund for the Arts Application*

Description of Project

The NESTA Digital R&D Fund for the Arts application provided an opportunity to practically engage with the funder brokered production model for arts and commercial digital industry collaborations, discussed in Chapter 3. This model for brokering collaboration represented a desire from three separate, strategic funders that specialize in the arts, academia and commercial digital innovation (NESTA, ACE and AHRC). Their intent was to fund experimental cross-sector collaborations with the explicit intention to develop tools and explore technologies to extend audience reach for cultural organizations and explore new cultural business models for income generation via digital technologies. *NESTA Digital R&D Fund for the Arts* is a collaborative research project that brings together the arts, digital industries and research to experiment with new models of practice, test ideas which may potentially fail, self-reflect and share new knowledge of developing collaborative practices.

It is worth noting the various roles research played throughout this project. Unusually, within the context of my three curatorial case studies, my primary role in this project was that of researcher, rather than curator. This was primarily a result of NESTA, ACE and AHRC's overarching priority to fund cross-sector or "triple helix" collaborations through "R&D" focused applications with 3 partners: an arts organisation, a university and a digital industry (Clay et al., 2015). My researcher role was two-fold, firstly, I was named researcher in the NESTA application, working under my primary investigator (PI) Prof Beryl Graham from CRUMB, University of Sunderland. In this role, I devised the research strategy for the applications, in collaboration with my PI, drawing in support from other colleagues when needed (such as the support of Dr Lynne Hall, Reader, Department of Computing, Engineering and Technology, who gave advice on HCI and computing science methodologies for our second application). Secondly, as this project application process would form one of my curatorial case studies (Chapter 5) in my PhD research, I held a PhD researcher role in this project. As with the *Dear Angel* project (Chapter 4), my research methodology

was primarily based in observation and reflection, knowing the outcomes would inform my final case study *Thinking Digital Arts* (Chapter 6).

In this proposal, ISIS Arts (the arts organization), Vector 76 (the creative digital and technology business), and CRUMB, University of Sunderland (research partner), collaborated to produce two funding applications for *UrbanARt*, a new commissioning model that would explore and make use of an existing virtual reality model of Newcastle and Gateshead developed by Northumbria University, to engage new audiences in visual and media arts projects via an online 3D immersive environment. The extended funding cycle included the successful submission of two, first stage Expressions of Interest forms and two unsuccessful second stage full applications to the *NESTA R&D Fund for the Arts*. All applications are attached in Appendix 5.

Mode of Production

As discussed in Chapter 3, the funder-brokered model for collaboration had the following characteristics, which were drawn from my contextual review of the field: Policy Driven, Funding Levels and Brokerage. These are the characteristics that framed this curatorial project. Through the practical development of a live application, many of these characteristics were reaffirmed and many more emerged. Each application will be reflected upon in order to draw out specific tensions that arose during the period of collaboration.

Chapter 2 highlighted that applying multiple (economic, intrinsic, social) perspectives to an evaluation of cultural value in order to justify cultural spending can cause tensions (Bakhshi, H., Hargreaves, I. and Mateos- Garcia, J., 2013). However, when applied to a particular context, which is informed by cross-sector perspectives and driven by collaborative motivations, the tensions experienced shift focus from the perspectives expressed to the relationships and roles involved.

Some Benefits of Collaboration:

For Academics:

- New research questions identified
- Expertise gained through application of research in non-academic environments
- Case study material
- Teaching material
- Opportunities to present/speak at academic and non-academic events and conferences
- Opportunities for new exhibitions
- Publications
- Further collaborations
- New audiences for research
- Further research/impact/KE funding
- Internships/student projects
- Invitation to act as adviser for public/private body
- New contacts/networks
- Press/media coverage
- Increased reputation/profile/goodwill

For Partners:

- New knowledge and skills
- New products, processes or services
- Improved quality
- Prototype development
- New networks/contacts
- New audiences or customer bases
- Increased turnover/sales/visitor numbers
- Ability to enter new markets
- New collaborations
- Increased reputation/profile/goodwill
- Increased customer satisfaction
- Skills development for employees
- Press/media coverage
- Further funding



Figure 17: NESTA Digital R&D Fund for the Arts Workshop, 2013. Some Benefits of Collaboration handout, 24th July 2013

A *Digital R&D Fund for the Arts Workshop*, held at the Baltic Centre for Contemporary Art on 24th July 2013, explained the benefits of collaboration for potential partners. Within the list above (Figure 16), the funders reveal a brokered realignment of commercial, cultural and academic agendas by creating a research context to develop both cultural and commercial products and services for a merging cultural market and audience. It is interesting to note that the arts and commercial industry benefits are put in the same column, while the (longer) academic benefits list is kept separate. This could be due to the fact that the value of these facilitated collaborations were validated by proven academic methodologies and outputs; thus, the fund had a role and series of benefits for academic partners. The process of developing an iterative series of applications for the *UrbanARt* project, enabled the relationship between the partners to develop, and reaffirmed many of the common barriers, benefits and impact of a brokerage model which were revealed within ‘triple helix’ collaborations highlighted by the *CATH* research, discussed in Chapter 3.

The strategic collaborating funders who collectively created the resource to fund collaborative projects between the arts, the creative digital and technology industries and academia, performed the role of cultural broker. The motivation behind the project was articulated by Emma Quinn, lead researcher for NESTA, who stated that its intention was to investigate the difference between individual artists exploring new technologies and the challenges for arts organizations who don’t have resources or money to investigate new

technologies that can support the delivery of their programmes.

‘Traditionally artists explore and experiment with new technologies as a matter of course, but the arts organizations that help to support the work of practitioners don’t have the luxury of resources or money to also investigate the right digital platforms or processes to help in the delivery of their programmes. Much of the technology that is used by arts organizations is taken up by word of mouth, rather than because of proven examples of good practice.’ (Quinn, 3rd March 2015)

The fund supported 52 projects exploring how to use technology to engage audiences and/or to create new business models for arts organizations. In this way, the projects are rooted in research and development rather than focused upon an end product. The success of a project was therefore rooted in the learning achieved, rather than the economic return.

‘We have supported 52 projects experimenting with technologies, platforms and processes and testing them to find out if they are able to engage audiences or develop business models. Thus what doesn’t work as anticipated, is as valuable to the arts sector as the projects that prove that something does work. Reports, toolkits, how to guides, open source software etc. are being created by the projects to benefit the sector.’ (Quinn, 3rd March 2015)

As such, Quinn notes that knowledge generation and dissemination was key to this funding strategy. Projects were supported because the funders felt that ‘they can provide wider learning for the arts and so sharing the learning is a key element of their deliverables.’ (Quinn, 3rd March 2015)

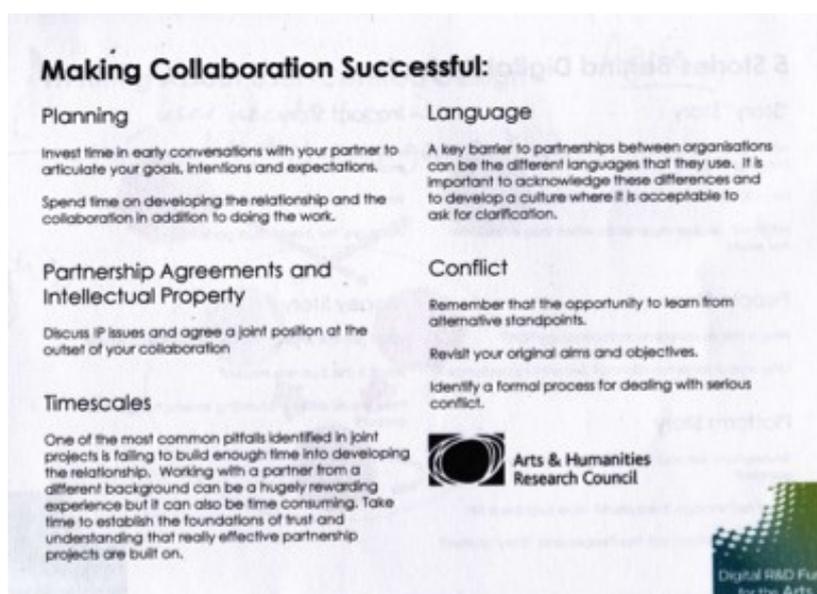


Figure 18: NESTA Digital R&D Fund for the Arts Workshop, 2013. Making Collaboration Successful handout, 24 July 2013

Within this fund, clear stipulations and protocols around remuneration and

intellectual property were laid out, which aided the organizational structure of the funded partnerships greatly, as all three sectors operated within very different contexts and had misaligned sector expectations. All partners were to receive the same rate of remuneration, whether they operated within commercial rates, arts rates or academic rates of pay. A clear strategy that articulated how intellectual property would be approached was demanded at the inception of the project. The *Making Collaboration Successful* guidance above maps out the broad barriers and opportunities inherent in collaborations between partners from different backgrounds; Planning, Partnerships Agreements and Intellectual Property, Timescales, Language and Conflict. However, it could be argued that these highlighted areas could relate to any cross-sector collaboration between any fields.

This section analyses specific areas of friction and similarity within a project proposal that combines commercially available gaming and AR technologies with arts commissioning. Thus, it directly relates to the role of the curator within triple helix collaborations

Iteration A: First Application

Throughout the application phase of fundraising for *UrbanARt*, which extended over a period of nearly 12 months, specific areas of tension between the partners were revealed which required brokerage. These included; motivations, money, time, roles and working practices, research methodologies, ‘fused’ skill sets and experience and differing perspectives of the application of the technology itself, as a tool or as a medium for the production of art (as described in Chapter 2). The premise of the proposal (to commission the production of digital art) remained unchanged throughout the cycles of application. However, the focus of the application evolved with each iteration, in line with the submission criteria. This section will track the progress through the application cycle and highlight key areas of tension identified.

Within the first Expression of Interest (Appendix 5a) it was proposed that four artist residencies would each explore a different aspect of the virtual cityscape; the built environment and interactions within the public space, tourism and

applications for user generated content, community engagement and data visualisation. From the four residencies, one pilot project would be selected to take forward, be more fully developed to a beta stage and made publicly available as part of the completed virtual online map for user testing and analysis. This beta stage project could be experienced by audiences through a locative website, mobile application, virtual game or world. The virtual model would use existing gaming technologies to augment and modify the existing cityscape data in order to facilitate a game play context that explored opportunities for experiencing 'interactive and participative art' (Appendix 5b).

The first full application (Appendix 5b) developed the model 'commissioning to beta mode',

'a new model for commissioning artwork with artists and technology partners.' (Appendix 5b)

The 'commissioning to beta' model acknowledged the research and development production context and recognized that the chosen 'pilot' project would be a newly produced beta version of a potential final work. The beta version of the artwork would be presented to and tested by a live and networked audience, in order to gain a deeper understanding of audience experience of new media art hosted within a virtual gaming environment. The research focus was concerned with analysing production methods, and audience experience of contemporary art through immersive technologies in order to identify the tensions between art and digital sector working practices such as 'IP, Time/Capacity and Budget in order to propose possible solutions to organizations, including production labs.' (Appendix 5b)

Roles and Working Practices

Arts Organization

The fund demanded that the lead partner for each application be an arts organization. Thus, the projects were lead by and created for the arts sector. This position meant that ISIS Arts led on the application process, writing the bid, negotiating the budget, drafting in supplementary partners as required and negotiated the intellectual property strategy inherent within the project.

ISIS Arts were tasked with managing the overall project including the creative art production, the technology development and the research. They committed to hosting regular steering groups to ensure that all partners met the timeframes, aims and objectives. This role, in many ways, gifted authorship of the project to the arts organization, rather than creating a balanced, non-hierarchical collaboration. While they had many leadership responsibilities within this project, a key aim for ISIS Arts, a commissioning organization, was to explore new models of art commissioning using gaming technologies.

Commercial Digital Industry

Vector 76 specialise in the development of applications and events, combining 3D virtual worlds and augmented reality technologies to deliver unique virtual projects that interface with the real world. Vector76 have vast experience in the creative digital sector including video game design, animation and music production. Their Augmented Reality Apps are published on iPhones, iPads, Android smartphones and tablet devices

The company was the main technology provider and steering group member.

They were responsible for:

- Optimizing VNG for use on the gaming platform and developing the App
- Liaising with Northumbria University for VR data usage for the platform
- Providing technical support to the artist and creative technologist
- Engaging with focus groups throughout the project
- Building projects by transferring 3D model assets and artist content directly into the virtual space
- Making work accessible via iOS and Android for mobile/tablet users

For Vector 76 a key aim of the project was to apply and develop their specialist skills in virtual immersive and augmented reality applications to a funded, creative project.

Researcher — CRUMB, University of Sunderland

CRUMB, the University of Sunderland, was the lead academic researcher and steering group member. Cited responsibilities included:

- Devising and delivering the research strategy.
- Appointing, steering and monitoring the focus groups.

- Informing the building of the online platform in relation to this research.
- Identifying the qualitative data needed from the platform for audience evaluation.
- Delivering the research findings to partners and the arts sector

In my role as researcher, rather than curator or producer, the process of making this series of applications provided an observational position from which to investigate the developing relationship between a three way pairing between a commissioning digital arts organization, a commercial digital partner and an academic institution. The distance that this role afforded enabled me to identify and reflect upon specific areas of similarity and friction that arose throughout the project

Similarities and Frictions Identified in Iteration A

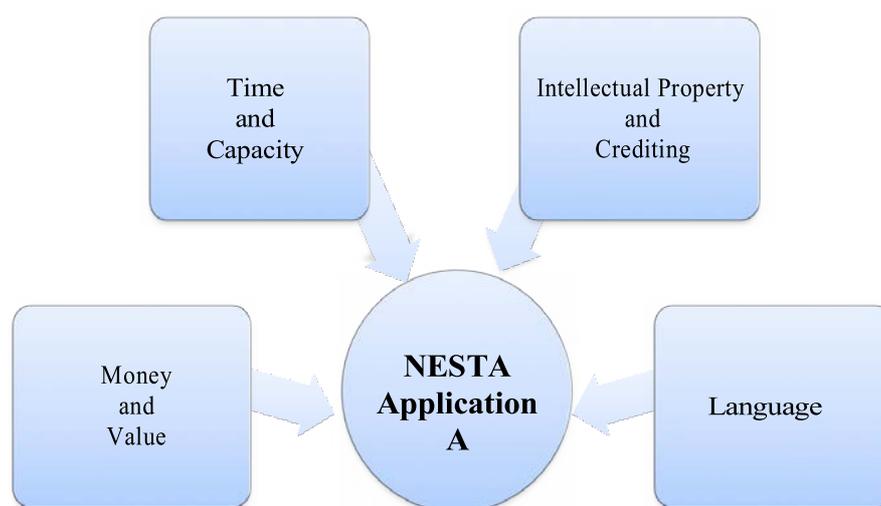


Figure 19: NESTA Digital R&D Fund for the Arts — Iteration A: UrbanArt Application Characteristics

This initial expression of interest and application reaffirmed those expected tensions raised by the strategic broker (funder). The advice they provided (Figure 17) proved useful as areas of difference were identified and confirmed during the application process.

Money and Value: During the *Digital R&D Fund for the Arts Workshop*, an adviser gave specific verbal advice that the budget should be split evenly between partner organizations. Thus highlighting the disparities in financial rewards expected across three different sectors. Within the *UrbanArt* application, both the academic and commercial partners expected a significantly

higher daily rate than the arts charity. The academic partner was required to work within its institutional framework in order to set a daily rate. The commercial partner set their fee based on commercial viability, and sought to make a profit on the project, rather than a loss. As they were a non-profit organization, the arts partner had to be explicit about how their fee was calculated, and this was based on a full cost recovery model of payment. An even split of the budget was important for the balance of power within the collaboration and equality within payment structure nurtured an equality of roles within the relationship.

Time/Capacity: The expected daily rate had a direct impact upon the amount of time each partner was prepared to dedicate to the project, based on payment received, which highlighted differing working practices within each field. For example, the commercial partner required a list of specific, billable tasks and timeframes in order to provide a quote for the application budget; while the arts organization used a more strategic overview of the stages of the project to allocate a number of days to dedicate to the project.

Intellectual Property: Agreeing intellectual property (IP) issues at the beginning of the project was a key consideration predetermined by the funder. While the academic and commercial partners felt comfortable with their position around IP, it was clear that the arts organization felt that they needed to draw upon the expert support available within their board and their partners in order to understand the implications of IP to the project and their organization. This more central role for intellectual property highlights the imbalance of familiarity and confidence around issues of IP between the arts and commercial digital industries, as discussed in Chapter 3, Protective Protocols and Frameworks.

Language: Within the application form, specific commercial language was used to ascertain the viability of the project's business model. Questions relating to 'gap analysis' the 'key trends in the market' and 'who are your competitors?', 'Do you have pricing objectives?' and 'What are your distribution channels?' reflect the commercial focus of this fund and posed a challenge to the arts organization, unused to presenting a cultural project in these terms (Appendix 5b).

The commercial language also extended to the discussions at the fund

workshop day, where the examples of research methodologies concentrated on 'focus groups', which is a primarily commercial media method. In the first application, the researcher had identified that existing research into audience studies broadly concerned only quantitative or demographic audience studies, or commercially oriented Human–Computer Interaction (HCI) research. As such, they had sought to build upon qualitative, practice-led, new media art methodologies developed by Muller, Mounajjed's research on Rafael Lozano Hemmer's artworks, and Gaver's *Cultural Probe* method (in Graham and Cook, 2010, p.187) to address missing areas of research concerning audiences' experience of art and processes of collaboration. The methodology was informed by existing research on cultural audiences and how online content can encourage physical attendance/participation (Synovate, 2009), and some HCI approaches which address art and design artefacts, including Sarah Pink's sensory ethnographic methodology for researching non-verbal audience experiences, and Larissa Hjorth's research on gaming cultures, technologies and experiences, as well as some previous NESTA/ACE project methods including *Scratchr*, *Happenstance*, and *Knowle West Media Centre* (Pink, 2009; Hjorth, 2011; Native 2013; NESTA 2013).

The research focus aimed to inform and encourage collaborative (technology and arts) commissioning, exhibition and audience digital art policies, strategies for the exhibition of and audience engagement with new media art, especially to identify new audiences in different locations. The analyses on collaborative production methods aimed to evidence useful methods, including the 'commission to beta' mode, and to identify the tensions between art and digital sector methods such as IP, Time/Capacity and Budget in order to propose possible solutions to organizations, including production labs.

Moreover, the research on audiences sought to utilize qualitative and quantitative data to track numbers of participants and patterns of audience use and reveal patterns of reception concerning the breadth and levels of online audience engagement, the kinds of experiences audiences can have in virtual, augmented-reality arts experiences, and the impact of online engagement to wider non-digital engagement with the arts.

To meet these research aims, the methodology proposed to use inbuilt data systems, and an adaptation of Muller's methods of interview and recall of experience, audience focus groups, semi-structured interviews and observation of all key partners at various stages throughout the project, to identify any tensions and solutions in collaborations between artistic and commercial interests in new media.

Reflections on Values

This application was unsuccessful, and feedback was limited from the funder

'This was considered an interesting concept — game and arts commissioning together, however the proposition, to reach new audiences, was not clearly articulated. The benefit to the wider arts sector was not apparent and the idea of this type of public art commissioning was not convincing. There was no methodology to the research.'
(Private email 04/12/2013)

The partners had followed the advice from the funder and had spent time developing the collaborative relationship before and during the application process (Question 24, Final Application 1, Appendix 5b). However, this development time and work, which is so vital within collaborations was unpaid, and seen as undervalued by the lack of detailed feedback, as revealed by the response from the lead organization:

'... they have not given us detailed feedback given we have all invested so much time in developing the project and putting in the application. It's hard to believe that this is the extent of it and we'll be asking if there is any more.' (Private email 04/12/2013)

The scale of the budget reflected the level of unpaid commitment each collaborator had to invest during the application process; thus reasserting the rationality of a three-tiered funding strategy, including a lighter application process for less funding for each stage of triple helix collaborations, as described in Chapter 3 (Clay *et al.*, 2015). Alongside the benefits highlighted within the *CATH* report, a three-tiered funding approach would also reduce the amount of unpaid 'planning' time while developing the relationship *and* doing the work.

As no further feedback was forthcoming, and the feedback provided was so limited, it is difficult to excavate specific issues the funder had with different

aspects of the application. However, upon reflection, I would argue that in this first application, the project's primary focus was not to 'reach' and develop new cultural audiences using technology, rather it focused on using arts commissioning as a strategy to gain a deeper insight into audience experiences of art hosted within virtual online, immersive environments, which is reflective of the move from quantitative to qualitative evaluation methodologies that profile the individual cultural experience highlighted in Chapter 2. There is a lack of clarity around what the funders actually meant by 'new audiences', however, the 'new' indicates that qualitative data in relation to audience reach is preferred over quantitative.

Nevertheless, as the proposition of the application 'game and arts commissioning together' had been deemed 'interesting', partners decided to work up a second application, which reworked the project structure, focus and methodology.

Iteration B: Second Application

The second application to the *NESTA Digital R&D for the Arts* fund provided a second opportunity for an intense period of (unpaid) working between collaborators that was again driven and led by the arts organization.

Following the feedback received on the first application, the second application sees a shift in language and focus. The project's primary focus is no longer to explore a new 'commissioning to beta model', rather this model is articulated as a strategy for testing and developing audiences:

'... how combining gaming and AR technology with arts commissioning can develop and test new; methods for understanding audiences online experiences, strategies for developing digital arts and cultural audiences and models for combined gaming and arts commissioning.' (Appendix 5c)

This refocus becomes more explicit within the second full application. The project motivation is no longer to commission art, rather to test audience development tools. The research aim to understand online audience experience is removed completely, and replaced by an exploration of audience engagement and digital strategies for physical venues.

'*UrbanARt* tests new audience development tools which combine gaming and AR/VR technology with arts commissioning to explore new approaches to both audience engagement (young people, 16–25) and digital strategies for urban visual arts venues.' (Appendix 5d)

Roles and Working Practices

The role of the arts organization and the researcher/curator remained the much the same for the second application, apart from the joint decision to select the digital industry collaborator according to more 'fused skill set' typology (see also next section).

The introduction of an integrated skill set, which 'fuses' arts and technology expertise, extends Perry's (1992) argument for a third separate (commercial) partner within the arts/science dualism. It is the accessibility and blend of skills and experience within the 'professional creative' coupled with the readily available commercial technologies that form the bridge between triple helix collaborations and catalyse creative production in this application.

The ready availability of a commercial developer, experienced in working on cultural projects, allowed the technology company with less familiarity with artistic projects to lead on the optimization of the virtual model on the gaming platform *Unity* and make the project accessible via iOS and Android mobiles and tablets, all of which had a definite timeframe and fit more with their own existing working practices. Thus, the process of production revealed the need for a 'creative professional' that possessed integrated creative and commercial skills and experience to broker the tensions between organic and linear working practices.

Using existing, commercially available technology and expertise to research the potential for artistic production and access, a commercial, games-based market was deemed an important innovation within the application. Employing a technology mindset and approach to facilitate applied, art-based research and development strategies mirrors the geek-in-residence model of production (which was also funded by the NESTA Digital R&D pilot fund) and historical projects, such as Xerox PARC *PAIR* (Artist-in-Residence in Digital Industries) programme highlighted in Chapter 3.

Similarities and Frictions Identified in Iteration B

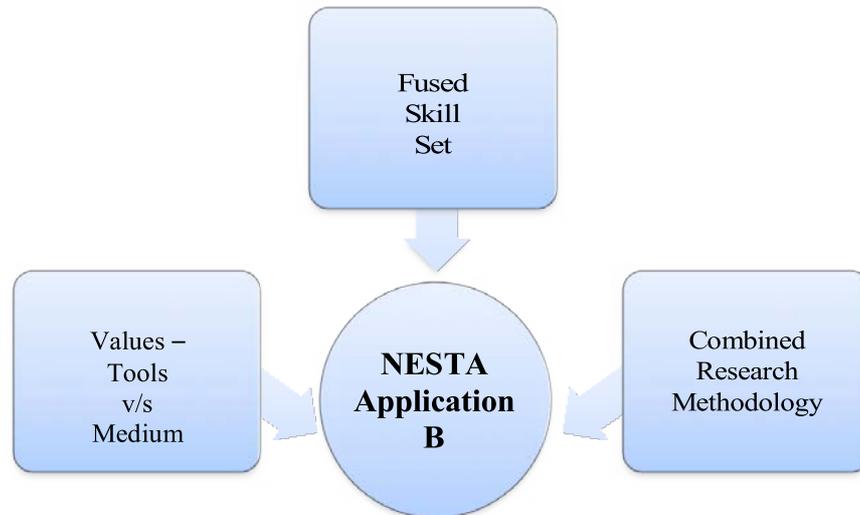


Figure 20: NESTA Digital R&D Fund for the Arts — Iteration B: UrbanARt Application Characteristics

As many of the previous frictions about money, IP, etc. experienced by cross-sector collaborators had been identified and brokered in the first application, these remained the same, and the second application provided an opportunity to reveal more nuanced frictions relating to cross-sector skills sets and roles and working practices.

Values — Tools versus Medium: The proposition of devising a new commissioning model remained a key motivation for the arts organization in the second application for *UrbanARt*. However, the new application stipulated that it would utilize gaming *processes* as well as specific technologies and named innovative technological tools they would employ (such as the Oculus Rift) to access an identified, target audience (young people aged 16–25), that are actively engaged with the gaming technologies market but are largely deemed as ‘hard to reach’ by the arts (Appendix 5d). For the commercial digital and technology business, the motivation remained the same, to develop their technical skills within the field of virtual reality within an existing virtual model of a city, in order to develop the potential for new skills, products and services that could be used in a commercial context for financial gain.

Within the second application, the research aim remained focused on assessing audience experiences of art developed using collaborative production methods, however, the gaming technology that would host the artworks became a focus of

the methodology. Both qualitative and quantitative data obtained using a range of data gathering approaches drawn from new media art and HCI audience studies were explicitly articulated.

Fused Skill Sets: The integration of creative arts with STEM skills and labour mobility between the sectors, discussed in Chapter 3, was integrated into this second application by the employment and naming of a freelance artist proficient in new media technologies (Marina Zurkow) and a freelance games designer (Jerimiah Alexander) with experience of delivering arts and culturally focused projects. The arts organization recognized the relationship being facilitated between the two as ‘a genuine collaboration between artist and creative technologist.’ (Appendix 5d).

Reflections on Values

Combined Research Methodology: The feedback for the first application had stated, ‘There was no methodology to the research.’ Thus highlighting that the methodology employed was not acknowledged as valid by the funders. The response by the lead academic investigator acknowledged the risk attached to utilising combined research methods within cross-disciplinary projects, as reflected in the lead researcher’s response to this comment:

‘There was, but I think they did not agree with the ideology of the method. Do they mean not an “HCI user method” (NESTA) or not a quantitative demographic audience method (ACE)??’ (Beryl Graham, Private Email: 09/12/2013)

The first application research focus was to analyse new models of collaborative commissioning of new media art to identify tensions between art and digital sector methods that would inform organizational policies for exhibiting and engaging audiences with digital art. In order to strengthen the application and respond to the priorities of the funder, the research was more explicit about using recognized methods drawn from HCI to test how specific gameplay methods including narrative driven, simulation or competitive approaches can be used in digital commissioning to develop target audiences. This refocus is reflected in the four research questions that were articulated in the second application:

‘RQ1: Can competitive and reward based game elements and mechanics add value to the user experience of an art exhibition at a personal and audience level?’

RQ2: What impact does awareness of the others within the audience have on an individual's personal narrative of the art, sense of presence, and in their participation and interaction with the exhibition.

RQ3: Does technology-based gamification of art lead to more focus on devices, gameplay and mechanics rather than the viewer focusing on the art itself?

RQ4: Do augmented reality and gamification permit the creation of playful art or is it rule driven and mechanistic?' (Appendix 5d)

While in the first application the methodology had stated that all stages of the project would be tracked, the second application methodology named each stage of the project. This included a full section that explicitly stated how user data would be logged via the technology and was also careful to ensure that terminology and recognized methods from HCI were articulated.

'Logged behaviour will identify patterns of use and engagement, individual and audience behaviours. Quantitative statistics (e.g. ANOVA, chi-square cross-tabulations) will be used to determine significant differences in relation to the impact of age and gender in relation to engagement and participation with the different *UrbanARt* experiences, identifying aspects of user engagement and how it could be incorporated at future exhibitions targeting the age group. Using sentiment analysis the qualitative data from the focus groups and social media will enable a deeper exploration of individuals' responses to *UrbanARt*.' (Appendix 5d)

While the second application was also unsuccessful, the feedback that followed made no mention of the research methodology, suggesting that the more recognized HCI methodology and *language* was deemed more appropriate for the fund. This indicates that new media art research methodologies were not as valued as technology-led methodologies by this particular fund.

The feedback deemed it positive to see artistic practice driving the creation of new audience experiences using technology, however, questioned 'if the proposition is art or just a game?' It also asked 'How does the project further the purposes of the art/cultural organization it is located in?' Both are valid questions, the first reflects the challenges that new media artists, curators and theorists have often faced from the contemporary art field, as discussed in Chapter 2. Is it not possible for this project to be both?

The second question relates more specifically to the instrumental objectives of this particular fund. The focus of the *UrbanARt* project was to develop new

knowledge through the production of art rather than the technological product; thus revealing a clash of motivations between the ambitions of the funder to explore the economic and institutional benefit to be gained by digital tools for arts organizations, and the motivation of the lead arts organization to explore new models of collaborative commissioning to support the production of art using existing, commercial technologies

Summary

This project highlighted the strategic landscape in which funding is made available for collaborative projects between the arts, commercial digital and technology industries and academia. It provided an opportunity to analyse the theoretical characteristics highlighted by the funder brokered production model discussed in Chapter 3 within a live application process. While the application process itself could be seen as a failure, as it was not successful in obtaining the funding it sought to deliver the *UrbanARt* project, this research shows the value inherent within analysing the process of collaboration in producing the application itself.

The first application reaffirmed the theoretical benefits and challenges of cross-sector collaborations, and saw that the advice provided by the broker funder was valid. It was important for the collaboration to engage in developing a relationship based on trust in the planning stages. The requirement to supply a partnership agreement provided an opportunity for the collaborators to consider all aspects of the relationship and make provision for conflict and the breakdown of the relationship. An informed discussion around intellectual property developed the confidence of the arts organization in this area and gave the collaborating business and university confidence that the project was being properly managed. A clear discussion around money and timescales raised issues relating to sector expectations around levels of payment and the capacity that this would buy for the project. Highlighting that different sectors use different language for working processes raised awareness between collaborators that these processes may in fact have differences. The roles within the application were predefined by the funder and had an impact for the project and the hierarchies of control within it

The second application provided a further opportunity to identify specific issues

relating to the production of art and the use of *combined art/technology methodologies* to assess audience experience of art driven projects within funder-facilitated collaborations such as the *NESTA Digital R&D* fund. The application revealed a friction between motivations of current policy that seeks to capitalise upon the instrumental *value* afforded by digital technologies and arts organizations motivations to explore intrinsic models of art production. Lab based methodologies such as ‘commissioning to beta’ were deemed ‘interesting’ and projects that saw artistic practice driving the creation of new audience experiences using technology were seen as ‘positive’ but not a priority within the context of this fund. The ready availability of a ‘fused’ skill set and experience of working across the cultural and creative industries proved to be a bridge between the arts and commercial technology industries. This method also resonated with the ‘pairing’ methods examined in Chapter 3, and led forward into the next curatorial project.

The analysis of this application process was instrumental in informing my next practice-led research project, *Thinking Digital Arts*, which explored the concept of a commercial digital and technology context as a site to produce and exhibit new media art and will be discussed in Chapter 6. This curatorial project included a new commission, which further explored the concept of a collaborative commissioning model and *Thinking Digital Arts Hack*, which investigated the co-creation model of the hackathon.

Chapter 6: Curatorial Project 3 — *Thinking Digital Arts*



Figure 21: *Thinking Digital Arts*, 2014, promotional post card design. Design by Torunn Skrogstad

Description of Project

My final curatorial project, *Thinking Digital Arts*, provided an opportunity to draw upon my understanding of how emerging policy and theory (Chapter 2) is driving interaction within a spectrum of power balance within collaborative practice (Chapter 3), and the critical learning provided by the two previous practice-led projects described in Chapters 4 and 5, and apply it to broker a series of curator-led collaborations.

My roles within this final project were primarily curator and practice led researcher. Secondary to these two primary roles was that of arts producer. My approach to developing the *Thinking Digital Arts* programme of activities were based in exploring, developing and testing those curatorial and research-based methodologies and learning to broker the development of new collaborative art commissions, R&D projects and knowledge in a variety of production contexts.

Thinking Digital Arts presents two distinct strands of active research into collaborative contexts of production emerging between the arts and commercial digital industries and reflects upon the curatorial strategies employed within each; individual 'pairing' commissioning and group collaboration, having learnt from both the industry and funder broker models reviewed in Chapter 3.

Unlike *Dear Angel*, which used art to bridge two distinct cultural festivals, through contemporary and new media artistic activity, *Thinking Digital Arts* attempted to use the festival platform to bridge two distinct sectors; namely, the arts and the commercial digital industries. Within this case study here, I analyse how the curatorial role was required to bridge (or broker) acknowledged tensions that arise in cross-sector collaborations and assess the impact of these tensions upon the production of art.

Thinking Digital Arts (TDA) was delivered as part of the Thinking Digital Conference (TDC) 19–15 May 2014. The programme of events was delivered in a range of cultural and arts venues across the cities of Newcastle and Gateshead in the North East of England. While the TD conference is now a private business, it had been initially conceived by Codeworks as one of a suite of initiatives devised to encourage growth and development within the creative media industry across the region. The conference programme is based on the TED (Technology, Entertainment and Design) Conference model and as such, provides a broad overview of speakers representing the impact of technology on all aspects of society for a predominantly professional, commercial creative digital and technology audience. *TDA* was in part seen as an opportunity to diversify the conference delegation, provide an artistic experience for current delegates that augmented the existing conference offerings and in the longer term increase ticket sales.

The research motivations for the *Thinking Digital Arts* project were to:

- Provide a platform for artists, curators and creative technologists to showcase their practice for both arts- and technology-focused audiences.
- Connect Thinking Digital Conference's current community of innovators and entrepreneurial professionals from the commercial digital industries with creative arts professional from the arts sector;
- thereby facilitating a platform for new relationships to emerge and nurture the mobility of creative labour between the two.
- Foster and investigate new models for cross-sector collaborative production, through testing and applying learning from existing strategies.

To achieve this vision I facilitated:

- One new, collaborative art commission, which tested the pairing strategy developed through the Xerox PARC *PAIR* programme discussed in the section Artist-in-Residence in Digital Industries, Chapter 3.
- An *Art Hack* event for invited artists from a range of disciplines, commercial technologists from the Thinking Digital Conference, and hacker/makers from Maker Space Newcastle, to collaborate on generating new ideas, explore new models of collaborative working and nurture future partnerships and projects, thus testing the Group Collaboration: Hackathon model identified in Chapter 3.

These two activities were part of the wider *TDA* programme which also included a series of events that engaged various partners around Newcastle and Gateshead and engaged a variety of different audiences, including a digital artist-in-residence in a secondary school based in Gateshead; a ‘live coding’ sonic/art event; a panel discussion between curators working within the intersection of art and technology, in collaboration with the *Digital Cultures* symposium aimed at a cultural heritage-based professional audience; a series of experimental, multi-disciplinary ‘Hub’ discussion events, including *Nomadic Salon* and *In Conversation*. However, these events are secondary to furthering the research of this thesis and as such are not discussed here. Further information about these secondary events can be found in the archived *Thinking Digital Arts* website in Appendix 6b.

Mode of Production

The context of the Thinking Digital Conference proved to be a positive catalyst for those invested and interested in the arts, cultural, heritage and digital technology sectors to come together to share skills and knowledge and learn from each other, through developing collaborative, creative contexts of production. The programme succeeded in highlighting the clear appetite and need for a platform that explored the potential for creative collaborations between arts and creative digital and technology infrastructure:

‘the diversity and friendly crowd and the different types of events that I joined brought a curious and fresh diversity. The fine blend of makers, thinkers students, professionals, policy-makers etc.’(Olga Mink, Director, Baltan Laboratories, Eindhoven, Netherlands (Feedback from *Thinking Digital Arts* evaluation survey 2014)

A successful grant from Arts Council England validated the value of the project for developing the arts sector, while financial sponsorship from the University of Sunderland underpinned the research impact and benefits of the practice-led project within a non-academic environment. By framing *Thinking Digital Arts* within a commercial conference, and financing it with public arts funding, outputs for the case study were required to add value to all three contexts; arts, academic and commercial.

Inherent differences between established assumptions and concepts within the arts and commercial digital industries emerged particularly within the pairing commission and the group collaboration art hack as these two projects explicitly placed professionals from the arts and commercial digital industries together. As such, these two projects are the focus of this chapter. These inherent tensions between the sectors played out in various specific ways; money and value, roles and working practices, crediting and intellectual property, payment and time and language. These headings are further analysed within this case study

Sub Project A: Collaborative 'Pairing Commissioning



Figure 22: *Thinking Digital Arts*, 2014. Front page of *The Journal* newspaper, featuring the *Binaudios* commission and Dominic Wilcox and James Rutherford, 20th May 2014

The collaborative pairing commission leads directly on from my analysis of the *Dear Angel* Commission of Participatory Artwork discussed in Chapter 4. Drawing from one-on-one pairing strategy devised by E.A.T. co-founder Billy

Kliver, which was utilised in the Xerox PARC *PAIR* artist-in-residence model and championed by Rhizome in their collaborative conference *Seven on Seven*, I developed a brief for a collaborative commission that would ‘pair’ two creative individuals drawn from the art and technology fields. Rhizome is a leading organization actively engaged in curatorial bridge building between contemporary and new media art and the commercial creative digital and technology industries.

Initiated in 2010, *Seven on Seven* pairs:

‘seven leading artists with seven game-changing technologists in teams of two, and challenges them to develop something new — be it an application, social media, artwork, product, or whatever they imagine — over the course of a single day.’ (*Seven on Seven*, 2009)

It is a high profile, public example of an arts organization both curating and facilitating collaborative dialogue between the commercial creative media and technology industry, new media and Internet art and art. The *Seven on Seven* platform creates a particular mode of production and discussion for collaborative arts practice, with each participating individual drawing from two distinct, yet merging fields. The tightly curated pairings and open brief create a site that draws from artistic practices and concerns emerging within the terrain framed by Manovich’s Turing and Duchamp art lands and the commercial creative media and technology industry (Chapter 2). Each pairing had 24 hours to ‘develop something new’ and then presented their work at a conference, generally hosted within an arts or cultural venue, to both a live and networked audience. The event is filmed, and then archived on Rhizome’s website. Like Rhizome’s *Seven on Seven* experimental discussion platform, I sought to create a productive space for the co-creation and sharing of ideas, practices and experiences between the arts and creative digital and technology fields through collaborative commissioning. There were some modifications to the *Seven on Seven* parameters, including a site responsive brief, an extended timeframe for development and a public exhibition site within a cultural venue.

As the commission was conceived as one element of a publicly funded arts festival and delivered as part of TDC, a commercially driven, creative technology conference, these two distinct sector voices framed the commission brief, and informed the development, delivery and continuing dissemination of the work.

The resulting artwork is *Binaudios* by Dominic Wilcox and James Rutherford. *Binaudios* playfully responds to the unique architecture of the Sage Gateshead, a major cultural regeneration project by the local authority, Gateshead Council, opened in 2004. The piece uses sound to explore the social, cultural and geographical context of this large- scale performance venue.

I was keen to test the one-to-one 'pairing strategy' within this commission as it provided me with an opportunity to explore and track the challenges and opportunities present, if two individuals from the arts and commercial digital sectors collaborated on a creative project. I wanted to root the new commission in the context the Sage Gateshead, as I was interested in how the creative would use technology to physically and digitally explore the site of the conference during the collaboration. I endeavoured to reflect upon the collaborative, creative process throughout the commission period. Areas that I was particularly keen to capture were:

- Assessing their individual expectations of the commission
- Identifying how they drew upon their personal, existing knowledge and experience
- Learning how they applied their own approach to the collaboration
- Ascertaining if each collaborator learnt from the other's process
- Investigating how they would deal with challenges and take opportunities as they arose
- Exploring how different working practices would impact on decisions or approaches
- Identifying the criteria they base their decisions on
- Discovering how they would come to a final decision about what work they would produce for the commission

In order to facilitate my action-led reflective process, I conducted a

- Pre-commission Interview (Appendix 6c)
- Held a meeting via Skype or face-to-face (every six weeks) to track the development of the project
- Compiled an evaluation report in which the artist and creative technologist reflected on their experience, what they had learnt, what they would change and what they would take away, and how the experience has

impacted on their practice and understanding of the other sector.

(Appendix 6d)

Roles and Working Practices

Curator

My aim was to explore the factors required for a successful collaboration between the private digital and the public art sectors. In order to find the individuals I would invite, I:

- Sought recommendations from colleagues and friends in the arts and technology sectors (face-to-face, via Twitter, email etc.)
- Researched projects and individuals based on their online presence (via individual websites, gallery websites, node websites etc.)
- Drew from my own network
- I chose the artist because his work is rooted in the everyday
- He uses technology as a tool to express his conceptual ideas
- He had experience working with a creative technologist in the past
- He had links to the region (born in Sunderland)
- He had an established, growing reputation for interesting approaches to creating work
- He had worked for commercial clients in the past in his role of designer
- He represented an artist who has a 'hybrid' practice — with a foot in both the commercial and public camp and an understanding of both

I chose the creative technologist because

- He was recommended by Herb Kim, Chief Executive of the Thinking Digital Conference
- He was actively involved in organising hack events within the commercial digital sector and attends them regularly
- He has collaborated with an arts professional on a collaborative project devised during the Culture Code cultural hack
- He was based in and works in the digital NE sector
- He was currently working with a tech-based start-up accelerator organization and represents the contemporary digital creative entrepreneur working in the private sector today

- He had a clear desire to explore other aspects of technology and saw an art commission as a way to do this

Thus the collaborators were chosen because of their shared attributes including being at similar stage in their careers, their established practices, similar levels of experience with collaborations between art and technology, a familiarity with each-others' sectors and a connection with the North East of England.

Investigations throughout the commissioning process focused on identifying the key similarities and frictions between each collaborator in relation to their roles and working methods, money and value and the crediting and intellectual property of the final artwork.

Similar to the 'casting' process described by Bilton (2012) in the *Happenstance* project, Chapter 3, both the artist and the technologist were invited individually to take part in the commission. The 'broker' of this casting process in this instance was the curator. Upon reflection, it would have potentially been more useful to 'cast' the artist and the technologist with Herb Kim, my collaborator within TDC. This decision to cast the artist and technologist alone, proved to be a point of contention throughout the project's development; thus reaffirming the importance of who is doing the choosing or casting within collaborations between different sectors (Chapter 3).

Verbally, both the commissioned creative technologist and Herb Kim raised concerns about the playful approach the artist took to devising initial ideas for the commission; particularly when the first idea of a 'game controlled by sound' was shared. They had both expected that the artist would be more 'serious' in his approach, rather than playful, which highlighted a difference in values and perspective in the role and strategies employed by artists when responding to a site.

Artist and Creative Technologist

Dominic Wilcox is an artist, designer and inventor whose creative practice produces projects that are at once artistically self-aware, playful and potentially useful in contemporary society. His practice both operates within and extends beyond the theoretical, art historical and institutional framework of contemporary

art. His artistic understanding is instead framed by the much broader context of theory and practice reflective of networked culture. As such, Wilcox regularly works to art- and design-based commissions and commercial briefs as well as realizing his own interests. James Rutherford is a technologist (working with PHP and front-end JavaScript, Node.js and Go), working in a commercial freelance capacity as a web service developer (working with a broad range of web-stack components; servers (Apache, Nginx), data stores (MySQL, Mongo, Redis), and provisioning (Vagrant, Ansible). He also works as a start-up mentor with Ignite 100 'one of Europe's premier tech accelerator programmes' (Creativenucleus.com, n.d.) within the commercial digital industries sector. He regularly organizes hack events that use co-creation strategies to open and explore local city and scientific data in creative ways.

Similar to the *NESTA R&D Fund for the Arts* funding (discussed in Chapter 5), the commission brief (Appendix 6e) provided a structure to broker the relationship between the artist and creative technologist. A conscious decision was made to establish a non-hierarchical partnership within this pairing in order to facilitate a collaborative context for co-creation. As such, while the commission brief gave each collaborator their title, i.e. 'artist' and 'creative technologist', it deliberately refrained from detailing the roles of each collaborator in this commission. Akin to Jonas Lund and Michelle You's *eeeeemail.com* project, the potential of the commission lay in the ability for the two individuals to co-create and share ideas, practices and experiences, that could satisfy both in different ways and to different ends. However, within the formal context of an art commission, the act of naming each collaborator as 'artist' and 'creative technologist' served to reinforce the sector divide and thus clarify the division of roles from the onset. I chose the term 'creative technologist' for the first time in this research, rather than the term 'digital technologist' used in the research question, because the term 'creative' resonated and helped broker a connection with both parties and their respective sectors. Thus the artist, Wilcox, came to the commission with the expectation:

'To be creative. To deliver an appropriate artwork for the event. To think up the idea, decide how it should work and look...'

While the creative technologist, Rutherford set out:

‘To develop a technical solution to realize the commission’s concept.’

Upon reflection, by framing the commission as a contemporary art commission, which demanded its key output to be an artwork that would be showcased within a cultural institution, a set of predetermined perspectives; tools, methods and language had been automatically applied to the initiative. This can clearly be seen in the responses given within the post-commission interviews found in Appendix 6d.

The research, development and working methods of the artist and the creative technologist are clearly articulated in the language broadly used by within their own sector. Responses also reflect the ready acceptance of division of labour and expertise between the sectors (Appendix 6d) and when asked if there were any tensions throughout the project, Dominic replied:

‘I don’t think so, James seemed to be happy to trust my judgment on how the object should look and work. This meant that we each had clear job descriptions of artist and technologist.’ (Dominic Wilcox)

Even though James had initially hoped for a more equal collaboration, he quickly accepted a defined role.

‘Nothing major. I think we both respected each other’s roles and experience. I had originally hoped for more involvement in ideation, but in hindsight I had some good space there, and this was my collaborator’s specialism.’ (James Rutherford)

The power balance within the project was weighted towards the arts sector’s systems and protocols from the outset, and the collaborative production context was compromised.

Within the formal context of an art commission, naming each collaborator as ‘artist’ and ‘creative technologist’ served to reinforce the sector divide and establish a creative hierarchy of roles from the onset. The desire to catalyse the potential of the commissioning process to facilitate a context in which the two individuals could co-create was only partially realized and was more akin to an ‘arranged marriage’ rather than a collaboration which fostered an authentic act of co-creation and arrested the development of a non- hierarchical partnership within this pairing. As Stephen Wright argues in his paper *Toward a Lexicon of Usership*, the naming of the roles had inadvertently utilized the established

language and terminology that

‘remain operative in the shadows cast by modernity’s expert culture.’
(Wright, 2013)

Audience

In this case, the audience were interacting with the work rather than participatory content providers or prosumers as with *Dear Angel*. However, they were particularly engaged in photographing users and tweeting the results, see below.

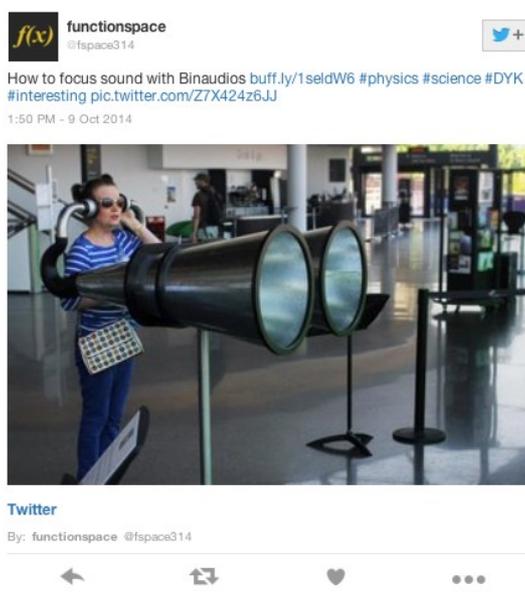


Figure 23: *Thinking Digital Arts, 2014. Sub Project A — Collaborative ‘Pairing’ Commission. Twitter comments (tweets) of audiences engaging with the Binaudios commission 2014*

Similarities and Frictions Identified in Sub Project A

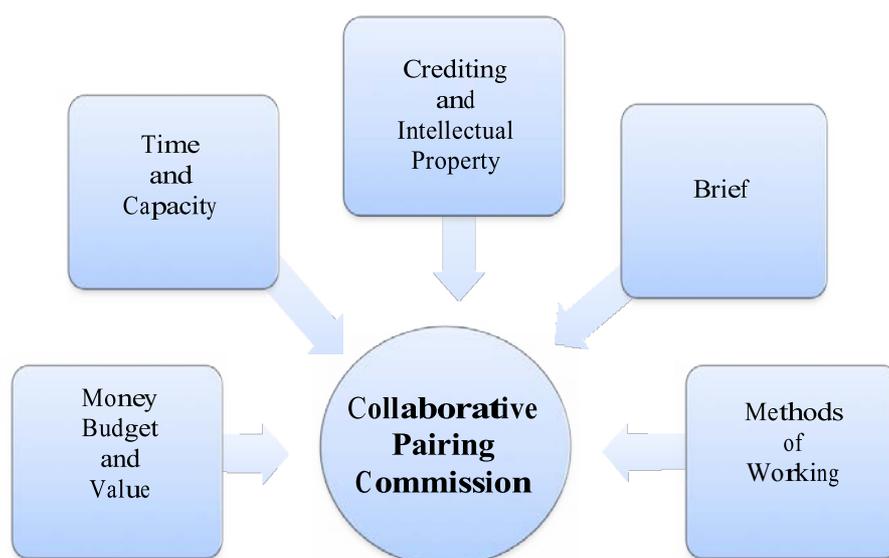


Figure 24: *Thinking Digital Arts, 2014. Sub Project A — Collaborative ‘Pairing’ Commission: Characteristics*

Money and Value: Similar discrepancies in expected daily rates and time required for the project were quickly identified between the collaborators, as described in Chapter 5 (p.186). The commission was budgeted using benchmarks provided by the arts sector and both the artist and the technologist were remunerated equally. This benchmark immediately highlighted a discrepancy in expected daily rates between the arts and the commercial media and technology sectors. The daily fee was below the regular day rate expected by the creative technologist, however, the value inherent within the opportunity to collaborate with an artist on a creative commission was acknowledged as enough to compensate for this disparity. Both the artist and the creative technologist valued the opportunity to work creatively with another skill set and learn from different working practices. The non-economic values of the project, which were mutually understood, created the bridge that connected this pairing.

Time and Capacity: The time allocated to the project by the artist differed to the technologist, who saw the project taking

‘A couple of weeks work, spread across three months.’

Whereas the artist stated that he would,

‘... allocate an amount of time that will enable the development of a successful piece of work. This distinction in process and perspective highlights a fundamental friction between the two sectors. Time, in relation to output, is valued by two separate theoretical contexts. The technologist saw this as a ‘loss leader’ project which he would allocate a defined amount of time to complete, while the artist deemed the project an opportunity to create an artwork, and would give it as much time as was needed to be realized. While the time given to the project was also viewed differently, both collaborators provided the project with sufficient time to successfully deliver it.

Intellectual Property and Crediting: The arts and commercial sectors operate on a differing set of assumptions and concepts when it comes to intellectual property and crediting. As seen in Chapter 3, while relevant to both, intellectual property is used, perceived and valued in different ways. In recent years, much debate within the new media art field has centred on establishing clear terms of engagement between commercial agencies and brands seeking to work with artists or to use existing concepts developed by artists.

Within a commercial context, however, where the key driver for working is the

possibility of a financial return, intellectual property is valued in a different way. These different perspectives were reflected in the comments of both the artist and technologist within the commission. When asked what their expectations around intellectual property were, the artist answered:

'Not sure, shared credit.'

And the technologist stated that he expected the intellectual property to be:

'Co-held by myself and the artist. Further exploitation possible by either by mutual agreement.'

The brief demanded that the work have equal and shared credit and this was realized in many contexts. The artwork made the front page of the local newspaper, *The Journal* (Figure 21), and the main image featured both the artist and the technologist, which is unusual within an art-commissioning context. However, within the profile generated mainly by the artist across online art and design platforms and publications, a distinct focus on the artist emerged in crediting the artwork. While the creative technologist was named as an equal collaborator within the main body of the content, many of the headlines and subsequent social networking activity featured only the artist's name.

The artist was generating the publicity himself and capitalizing on the profile and reputation he held within the art and design fields, which was driving interest in the work. A list of publicity generated by the project is found in the Appendices. This speaks to the skill set for self-promotion that artists in general are required to develop throughout their careers. It highlights that the artist has an understanding of how to frame the artwork in order to attract marketing and PR interest across a range of disciplines, including art, design and technology, and could potentially point to the subconscious hierarchy of self assigned roles that the artist and technologist gave themselves at the beginning of the project, which saw the artist take the lead on many fundamental aspects of the art work, including its conception, aesthetics and design.

An example of a more equal balance of power within the PR campaign is the blog post by Rachel Rayns, artist-in-residence at Raspberry Pi, who reviewed the project with a particular focus on the technologies used in the commission, i.e. a Raspberry Pi (Appendix 6g). It was clearly the artist's reputation within this field

that had caught the attention of the blogger, however, as the technology used within the commission was the point of interest in this piece, the creative technologist secured an equal weighting in the piece. Rutherford had a chance to explain the finer details of his working practice to a wider network of professional peers and engage with them on the comments section of the blog.

The commission provided an opportunity to explore further characteristics and tensions that emerged through the production of the collaborative project. Brief: The brief for the commission was left deliberately broad in scope. The final form of the artwork was left open:

‘The commissioned work may take the final form of web-based works, works that engage mobile platforms, performance, video, installation, sound or object based art. The final work can be made for the context of the gallery, the public, the web or networked devices.’
(Appendix 6e)

The commissioned artist and creative technologist were simply asked to create a new commission inspired by the conference context in the North East of England, and more specifically, the cultural, quayside quarter of NewcastleGateshead. The only specific stipulations were to confirm the exhibition dates and confirm that any final work must be credited as follows: the artist AND creative technologist. Commissioned by *Thinking Digital Art 2014* (Appendix 6e)

The aim of the open brief was to enable deep, innovative engagement within the intersection of two distinct sectors and investigate the collaborative process as a method for converting the creative possibilities inherent in the common ground that exists between each field into tangible projects. The lack of specificity demanded a creative approach to ideation, and could have been a factor contributing to production context becoming weighted towards an arts practice, rather than achieving the more balanced mode of collaboration that I had been hoping to create.

Methods of Working: Due to the language used within the brief, the roles taken, and the cultural context for production, the balance of power was weighted towards the arts, as discussed above. It was the artist’s creative inquiries that led the commission from inception, while the creative technologist facilitated his vision. The impact of the openness of the brief and lack of a specific ‘problem’ to

solve were reflected in the artist's comments early on in the process:

'Given the very open brief that can of course make it more of a challenge to find a specific way in.' (Dominic Wilcox, private email, 17/02/2014)

This meant that the process of production was led by the organic, experimental working practices of the artist, rather than the more linear, defined processes usually employed by the creative technologist. The artist felt that the commission was restricted only by the 'technologist's skills and budget' (Appendix 6c). Thus, initial discussions were framed by specific questions by the artist to determine the breadth of skills the creative technologist could bring to the commission.

'I'm interested to know what specific areas you have skills in so that I can target my thinking in areas that are potentially possible. What areas do you specialise in? Are you purely screen based? web/apps? Or do you have knowledge of physical tech like raspberry pi/arduino. If you have any examples of the type of things you have done let me know. I just tweeted about buying a starter kit to work out what I could do with it and the official raspberry pi people replied and ask to be kept up to date with what comes of it. The natural reaction is to make a sound based work. Though that can also take a physical form potentially.' (Dominic Wilcox, private email, 23/1/2014)

The artist's initial commission idea was a game controlled by sound. Wilcox responded to the context of the Sage as a performance venue for music, the technology focused conference and drew from works he had created previously:

'I am thinking it would be good, given the fact that our work will be looked at and used in the interludes between the technology talks, to do something entertaining. I.e. an amusement game, either based on a well known game of the past or a new idea. A number of years ago I did a Claw game with a human hand controlled by pressing buttons, it was fun <http://dominicwilcox.com/portfolio/remote-controlled-chopstick-claw-game/>. Maybe we could do something that combines old entertainment perhaps related in some way with the history of the area but with the abilities of modern technology.' (Dominic Wilcox, private email, 17/2/2014)

The creative technologist updated the wider group associated with the project with how this idea could be made:

'Just to give you a heads-up; the idea we're rounding on is: A game controlled by sound, taking two forms —

1) In the foyer/atrium — two stations, each with a screen and a microphone.

2) As a large-scale game — between the two halls used by TDC — projected onto the main screens, and using ambient microphones. The sound input will be transformed into player movement. This is likely to be measured by either pitch or volume — and output as

basic movement (moving a boat or bat). The atrium game can be played alone, or against the other station. The large-scale game will be competitive.’ (James Rutherford, private email, 19/03/2014)

Thus, the artist and creative technologist retained their own processes in order to successfully deliver the brief. This initial idea was eventually discounted after a period of feasibility testing.

‘Initially, I prototyped one of the candidates (an audio game) in website code, to test feasibility. It seemed feasible, but we discounted the idea.’ (Appendix 6d)

This process of (artistic) ideation and (technology) testing, set the course for how the process of research and development would play out for the realized idea, *Binaudios*.

The research and development trajectory of the project reaffirmed that the ‘open’ commission brief was not entirely successful in its aim to enable innovative engagement within the intersection of two distinct sectors.

Reflections on Values

This commission has shown that a key role for the curator is to actively determine the terms of engagement between collaborators when aiming for a balance of power. Traditional structures used within the arts, such as commissioning briefs can be used as brokering structures, if they acknowledge and respond to assumptions, concepts, practices, protocols and interests that drive the collaborators’ separate fields. A new, collaborative language that represents and reflects upon the needs of cross-sector collaborators is required, in order to nurture optimum working contexts, practices and new kinds of art, which are framed by an expanded definition and function of art. Thus, an expansion of the curatorial theoretical context and a potential revision and modification of existing practices is necessary in order to inform future curatorial, combined methodologies within this collaborative mode of production.

Sub Project B: Group Collaboration Hackathons



Figure 25: *Thinking Digital Arts Hack, 2014. Sub Project B — Group Collaboration Hackathons*

Hackathons, which are more commonly referred to as ‘hacks’, as described in Chapter 3, are a format for production of collaborative group projects. As hacks are generally unpaid, and they are perceived as a social activity, as well as spaces for production, as such, participants are traditionally supplied with generous amounts of beer and fast food as refreshments throughout the event.

More recently, this format has been appropriated by the arts and cultural sectors as a way for artists and organizations to work with the commercial digital sector skill set in an experimental, low-risk way. As Bradbury and O’Hara note in their collaborative paper *Evaluating Art Hacking Events Through Practice*, hacks have been used by cultural institutions and by artists as a strategy to generate discourse, collaboration, and as a starting point for new artworks and ideas. These hacks represent anti-disciplinary practices emerging at the intersection of arts, culture, creative digital industries, design, and engineering (Bradbury and O’Hara, 2015).

Thinking Digital Arts Hack (TDA Hack) sought to establish a context for co-creation, experimentation and risk taking by adapting and modifying the format of the hack in order to observe the needs, roles, working practices and relationships that emerge within a hack context, as identified in Chapter 3. By bringing together cross-disciplinary makers, from the arts, the creative digital and

technology sectors and 'voluntary (home-made)' makers (Holden, 2015), the hope was that *TDA Hack* would further my research aim, which was to interrogate the impact that collaborations with the commercial digital and creative media sector have on artistic and curatorial modes of practice, by applying a particular focus upon the Group Collaboration Hackathons mode of production discussed in Chapter 3.

The 'artist as cultural context provider' strategy explored in Chapter 4 informed the curatorial approach to facilitating the *TDA Hack*. The curatorial motivation was to nurture; an integration of disparate creative practices, a broadening and mobility of professional networks and trust between participants and new co-creative strategies for the production of art and creative projects. The primary aim was to facilitate a context for production that represented a balanced context of power between the arts and the commercial digital industries. In order to do this, each element of the event needed to be considered in order to achieve a balanced weighting of power. A second aim was to foster, within each participant, a sense of ownership of this space. In order to achieve this, I:

- Engaged two experienced media artists, with an expertise in hackathons, technological and artistic materials, as workshop leads to facilitate the delivery of the activity
- Ensured participants had the relevant skills, expertise and the interest to create great work
- Generated online dialogue in a dedicated web space before the event day for participants to meet and share ideas
- Provided a well-resourced studio environment to stimulate innovation and creativity
- Made available a range of technical equipment, creative materials and space to research, discuss and develop idea
- Offered plenty of non-alcoholic refreshments (rather than beer) and high quality, nutritious food (rather than fast food) to ensure energy levels were maintained to optimum levels
- Provided an exhibition space to showcase the outcomes and artworks that had been developed
- Completed the day with a public showcase and celebration event

An open call sought applications from hackers, artists, designers, programmers, thinkers and other creatives to create eclectic and interdisciplinary teams. Established and emerging artists were invited to take part, as well as delegates from the Thinking Digital Conference who were able to sign up for *TDA Hack* among other available workshops. Artists were invited via an open call and application process, while conference delegates could sign up via the conference for the *Hack* event as part of their ticket.

Collectively, the needs of cross-disciplinary participants were identified and considered in order to devise strategies that would facilitate a balanced mode of collaborative production. These elements included the open call application process, and online dialogue for participants to meet and share ideas pre event, to the development and delivery of the workshop and the public presentation of the final outputs. The breadth of professional practices in attendance responded well to the structured approach to the day, which I devised collaboratively with the two artist facilitators. Due to their previous experience, the artist facilitators, provided a strong leadership function throughout the day, pushing participants through the various, defined stages of production; conceptualisation, prototyping, implementation and exhibition. Their artistic expertise, understanding of the creative application of technologies and experience of participating or leading previous hack events afforded specific support for both the artists and commercial technologists and brokered the different languages and working practices of each.

Our chosen theme for *TDA Hack 2014* was 'Decentralisation'. This theme, alongside the technology and materials made available was primarily to provide a range of shared medium which would benefit both the artists, makers and technologists and inspire them to 'enlarge their views of the meaning and limits of their media' (Harris, 1999) highlighted in Chapter 3.

Roles and Working Practices

Curator

The curatorial strategy drew from artistic strategies identified in Chapter 4, in which the artist gave up single authorship to embrace a co-authorship. The

curatorial motivations were to nurture an integration of disparate creative practices and trust between participants and facilitate new co-creative strategies for the production of art and creative projects. In this curatorial investigation, the curatorial role endeavoured to provide a cultural context collaboratively with artists and representatives from the commercial digital industries. In so doing, a more equal balance of power between the arts and commercial digital industries was fostered.

As a direct response to the tensions experienced through the 'casting' process of the collaborative commission, participants were selected by a panel which included myself, the curator and producer, Thinking Digital Conference Director Herb Kim, artists and *TDA Hack* facilitators Lalya Gaye and Victoria Bradbury. The collaborative casting process proved useful in selecting the participants as the panel provided a variety of distinct perspectives into the potential needs of the participants coming from different sectors. The panel also provided useful insights the breadth of skills and personalities that would make up productive groupings and ensure the experience of the hack was a positive one.

Artists and Creative Technologists

In order to be productive, the context demanded that each participant suspend their own field's professional frameworks, protocols and rhetoric and engage with other perspectives and practices, freeing them to engage creatively with the shared challenges presented within a professional environment outside of their own. The feedback received showed that there was a value in participants feeling challenged to work at the level of professionals in other fields, being inspired by artists' hands-on approach to making, establishing new connections outside of existing personal networks and brokering the mind-sets of art, design and technology together to collaborate.

Five groups emerged during the workshop. Each of the groups was made up of a different range of skill sets. The weighting of skills in each group was reflected in the creative process that emerged organically, and was shaped by the group's particular dynamic. Observation of each group activity confirmed those groups that had mainly commercial and technical expertise worked in a more linear

fashion. The initial idea, presented at the completion of the conceptualisation phase was quite specific with a lot of detail decided early on. This idea was then realized literally throughout the prototyping and implementation phases. Roles were quite defined and tasks were allocated to each member of the group. Those groups who were made up mainly of artists, and non-commercial makers tended to have a more organic, open approach to initial ideas. Presenting initial concepts that were broader in scope and theme and had little detail. These groups worked as a more cohesive grouping and it was more difficult to see specific roles emerging. All groups presented a finished project by the end of the day. The feedback received post event showed that there was a value in participants feeling challenged to work at the level of professionals in other fields and brokering the mind-sets of art, design and technology together to collaborate.

Audience: The goal of the *TDA Hack* was not to create a traditional, curated exhibition, rather our aim was to create a platform for artists and technologists to come together and network and explore each other's practices and processes on a live project. The showcase was primarily designed to present the process of collaborative production that had happened during the day for two hours after the workshop ended and the event was marketed as such (Bradbury, 2015, p.138). This showcase was deliberately un-curated and informal in style, as the important aspect of the showcase was for hack participants to engage with a public audience and discuss their experience. This decision led to some criticism from audiences, who expected a more traditional exhibition, which led me to reflect that while a collaborative language may be impacting curatorial practice, it has yet to reach a wider audience. I also feel that audiences would have gained a lot from hearing the final project presentations by the group. The fact that there were curators there was important for artists particularly.

Similarities and Frictions Identified in Sub Project B

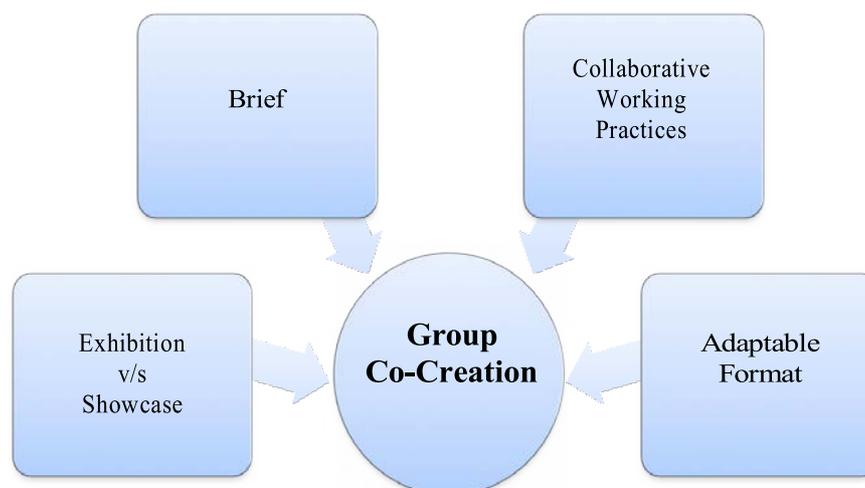


Figure 26: *Thinking Digital Arts 2014. Sub Project B — Group Co-creation Hackathon: Characteristics*

As this was an experimental site of co-production, issues relating to crediting or intellectual property can become complex, and if not managed correctly, highly contentious, as highlighted in *Transmediale, Art Hack Day* (p.84). As it was hoped that relationships would develop from this event and into the future, the hackathon lead artists and I chose to be explicit about the importance for groups to agree how they would approach crediting and intellectual property at the beginning of the event. How this was agreed was up to the group themselves, however, we stipulated that any group projects would have shared intellectual property. The decision to present a two-hour public showcase that prioritised the creative process of research and development that had occurred during the workshop, rather than a longer exhibition that prioritised the output, was also a strategy devised to minimise the risks of inadvertently capitalising upon the intellectual property of the hack participants without appropriate payment. The hack provided an opportunity to explore further characteristics and tensions that emerged within collaborative group modes of production.

Money: My curatorial and research motivations were to create a balanced cultural context which aligned to Baltan's cross-disciplinary approach to innovation that can facilitate an open-ended process, free from financial considerations or pressure from applied, market-driven concerns to nurture an 'open-minded atmosphere based on trust, empathy and mutual inspiration' as described in Chapter 3. The feedback received post event (Appendix 6h) showed that participants valued feeling challenged to work at the level of professionals in

other fields, being inspired by artists' hands-on approach to making, establishing new connections outside of existing personal networks and brokering the mind-sets of art, design and technology together to collaborate.

Time/Capacity: More artists and makers than commercial technologists attended the *TDA Hack* event, even though the event had been promoted as part of the Thinking Digital Conference. Once there, all participants seemed fully engaged with their group activities throughout the day and produced a final work for the public showcase. The feedback post event was very positive and cited a range of practical learnings that had emerged throughout the day, including, learning about 'hands-on' working methods and developing new relationships with those working outside the participants' own sectors.

However, verbal feedback at the Thinking Digital Conference networking party highlighted that many commercial technologists had been attracted to the event, but could not justify attending a 'creative art hack' to their senior management. This would suggest that the language used to promote the event was not convincing in a commercial context and thus potential participants, who may have had a personal interest in attending, could not justify giving their time to a 'skills sharing' event. Rather they chose to attend a 'skills acquiring' seminar instead. However, the event and the language used to promote it, clearly articulated a value with new media artists and makers, who seemed to understand the value in giving their time to an event such as this.

Intellectual Property and Crediting: Due to the feedback the lead hack artists had received from *Transmediale Afterglow — Art Hack Day*, discussed in Chapter 3, Group Collaboration Hackathon, the lead artists and I were explicit from the point of invitation and within the open call that intellectual property would remain with the collaborating groups. While the issue of intellectual property was not raised within the workshop, we reiterated that a conversation about intellectual property should take place and a decision reached within each group. It was stipulated that each participant must be take part and be credited in the final presentation and informal showcase.

Brief: As the format of the hackathon was modified from a commercial context

and would be hosting commercial, creative technologists, the brief created was both specific and focused on problem solving. The creative technologists responded well to this format and quickly created projects that were related to the topics provided. However, the artists' groups were inclined to be more experimental in their interpretation of the brief, sometimes not responding to the topics at all. However, the theme provided a starting point for all groups to engage in a collaborative project.

Methods of Working: There was a clear distinction between the groups that were mainly made up of technically focused makers and creative technologists and those that were made up of artists. The former progressed through the day in a defined, linear fashion, while the latter worked more organically. However, regardless of the process, all groups presented final projects for the public showcase.

Adaptable Format: The hack format facilitated a context in which artists and commercial and creative technologists could work together in an experimental, low-risk way. The *TDA Hack* had successfully modified an existing format that had been developed in the commercial sector and facilitated an *anti-disciplinary* context for the production of art and creative projects. After the *TDA Hack*, I further developed this model of group collaboration through projects such as *The City*, *The City (and The City)* and *Rewriting the Hack*.

Exhibition versus Showcase: The public 'showcase' exhibition provided a deadline for the prototype projects to be completed by. The pressure of a public audience provided a productive motivation to maintain a momentum of work throughout the hack. We were keen not to curate this showcase or keep it open longer than the evening due to criticisms of the *Art Hack Day* event at *Transmediale*. The showcase provided a happy medium, as the artists did not feel they were presenting research and development work in a formal exhibition, while the creative technologists gained an experience of a public event featuring their work. It was mainly a networking event where curators and the public could see the work and talk to the participants about their wider practice and experience of the hack post workshop.

Reflections on Values

Within the hack, the curator had significantly less control over brokering the collaborative group than in the collaborative 'pairing' commission. The evolution of the project's idea from inception to delivery seemed to depend on the ratio of artists to commercial technologists. The predominantly commercial groups seemed to be much more linear and goal oriented in their realization of the initial concept, whereas the groupings with more artists working collaboratively seemed to be much more interested in enabling a fluid evolutionary process to manifest in a work that may or may not be the initial stated concept.

The workshop approach blended a theme that framed creative explorations, a structured, facilitated format with open, self-regulated and organic activity and a public presentation of final outcomes. The hack was situated within an arts venue, which was located next door to a Maker Space. The Maker Space provided an interdisciplinary context that participants from both the arts and commercial fields felt comfortable with. While the art gallery space, in which the making happened, provided a professional arts venue that validated the creative research, discussion and development of creative ideas that emerged throughout the day. Both venues shaped the final development of outputs during the day.

While the open call exceeded expectations in terms of number and quality of applications from artists, there was less take up by the conference delegates. The value of the event was clearly understood by artists, although verbal feedback has suggested that the open-ended creative focus of the *TDA Hack* could not be justified by commercial participants to senior management, as the value of participating could not be articulated in terms that could benefit a commercial business. Nevertheless, the event highlighted that there is an obvious appetite for creative technologists working in this sphere for opportunities to collaborate in a lab style context.

We secured sponsorship from the House of Objects for a range of recycled materials that could be used to create new artworks. The breadth of sculptural and technical materials framed the activity that took place and the outcomes were predominantly object- rather than screen-based.

Feedback from the day confirms that we succeeded in creating a platform that nurtured new and existing relationships between arts and digital professionals. It is also clear that the experience informed working practices and developed the potential for future collaborations, artwork and audiences between the sectors.

Participants cited positive outcomes from the art hack experience including learning new working methods, extending new networks, gaining clarity around goals, feeling challenged, and being around artists inspired technologists to be more 'hands-on' in their work with many saying that 'This event is a great addition to the TDC programme as it brings an arts mind-set to the more commercial TD Conference.

Summary

This chapter has analysed two distinct modes of production, a Collaborative 'Pairing' Commission and a Group Collaboration Hackathon. These two formats were identified in Chapter 3 and informed by the analysis of *Dear Angel*, the commission of participatory artwork described in Chapter 4, and the interrogation of the collaborative application process *NESTA Digital R&D Fund for the Arts* discussed in Chapter 5.

The Collaborative 'Pairing' Commission analysed the one-to-one pairing strategy discussed in Chapter 3. Through my research, I have identified a range of specific similarities and frictions within this 'pairing' strategy of production; Money and Value, Time and Capacity, Fused Skills, Artistic Inquiry and Brief. These identified characteristics required curatorial brokering and thus shaped my curatorial decisions throughout. The final commission proved very successful in engaging audiences at the Sage Gateshead. As a result, the commission exhibition period was extended from one week to six months, the collaborative nature of the commissioning model reflected a desire to embed a digital mind-set into the Sage and foster innovative, creative practices within its programme, as seen in the geek-in-residence model.

Sub Project B: Group Collaboration Hackathon, analysed the hackathon format described in Chapter 3. The characteristics drawn from my contextual review of

this strategy included: Co-Creation, Anti-disciplinary Practices, Experimentation, and Transferable Format. Through the process of my practical-led research, I have also identified the following characteristics that shaped the site of production and my curatorial considerations throughout the process of development and delivery: Exhibition versus Showcase, Brief, Collaborative Working Practices and Transferable Format. Due to the collaborative selection of participants and the group nature of this event, the curator had less direct control within this event. It was necessary to move from a single authorship model to one that was collaborative. Within this collaborative context, this approach enabled a more equal balance of power to be brokered between artists and creative technologists.

In both of these sub projects, the important aspects of the curatorial role revolved around 'casting' and whether the selection was for a solo project or one that required collaboration with other people. Curatorial knowledge of Crediting and IP frameworks was found to be particularly useful in this context. In addition, care taken with the language used for press and marketing (learning from the Sponsor Commissioner mode of production in Chapter 3) proved valuable in avoiding misunderstandings across the sectors.

The value of 'seriousness', which was raised by the commissioning project and the Artist Practice and Business mode in Chapter 3 led to the selection of the artist Jennifer Lyn Malone (Appendix 6i) as a critical artist speaking at the Thinking Digital Conference in 2015, as described in the next chapter.

Chapter 7: Conclusions

Introduction: Research Question and Aim

This thesis begins in Chapter 1 with my research question:

How is the role of curator, artist and digital technologist being challenged by the differing value systems and modes of production of the two different sectors?

This question has informed the key aim of this research, which is to ‘interrogate the impact that collaborations between the arts and commercial digital industries have upon curatorial and artistic modes of practice, with a particular focus on production’. Throughout my period of research, I have sought to develop an understanding of collaborative contexts for the production of art that are shaped by both commercial and cultural demands through a critical analysis of current developments in this

In this conclusion I will trace the narrative of the research trajectory, then address elements of the research question under two headings: firstly interrogating the ‘value systems’ in the research question (including money, IP and crediting), then the ‘modes of production’. I then address the research question in relation to original knowledge, and identify areas for further research.

Research Trajectory

Chapter 1 introduced my research and my early experiences of engaging with the commercial digital sector to commission art, which shifted the relationship between the artist and commercial digital partner from a transactional, client/service provider relationship to a collaborative partnership, i.e. from commercial digital industries towards curatorial practice

In order to understand the wider factors shaping and nurturing collaborations between the arts and commercial digital industries, Chapter 2 provided a review of recent, theoretical developments surrounding the value generated by culture and engagement with the arts. This chapter revealed the long- standing tension between instrumental and economic valuation techniques that profile ‘spill over’ benefits generated by the arts for other sectors and the intrinsic, non-commercial

values and public and private benefits inherent in arts experiences. I found that the motivations of a commercially focused digital and technology sector are becoming increasingly aligned with the ambitions of an arts sector that is keen to reap the perceived dividends that the digital affords.

I found that it is those agents who hold the power to affect change, and define underlying networks of activity, that determine the landscape in which smaller actors must operate. It is these agents that shape the policy that supports the infrastructure and framework for its growth. Finally, Chapter 2 identified three emerging roles within the interface between creativity and commerce; The Creative Professional, The Broker and The Prosumer, that shape the current, creative labour market and lay the ground for a deeper relationship between two distinct, but interrelated fields.

Chapter 3 reviewed how IP and crediting frameworks are a recurring issue for the research because of digital media's position between commercial and artistic precedents. This mapping along a spectrum, signals the interrelationship between commercially focused intellectual property rights and creative attribution rights, which must be considered when brokering collaborative projects. In seeking to identify the 'ways of working' in the research question, I also researched different production models for art that locates itself, through its production and engagement with technologies, within the interface between the arts and commercial digital industries. A series of models for collaborative production (Brand Marketing Production, Artist-in-Residence in the Digital Industries, Fused Groups, Geek-in- Residence in the Arts, Sponsor Commissioner, Funder Brokered Partnerships, Group Collaboration Hackathons, Open Source Production and Artistic Practice as Business) identifies specific characteristics that impact upon the role and practices of both the curator and the artist. I identified a spectrum of power balance between the arts and commercial digital industries and chose to analyse these models in terms of their impact upon the role of the artist, technologist and curator and the final creative output. I would argue that the similarities and differences identified within each mode of production mean that many of the challenges faced are in part due to a lack of curatorial brokering. Within collaborations weighted more towards commerce, there is a shift from a clearly defined, transactional relationship to a more organic

and distinctly less defined interaction to create a product that combines the strengths of both parties, as noted by Herb Kim on page 18. This relationship has clearly faced challenges within the context of brand marketing, where no brokerage occurs between the artist and the business. Each mode presents differing, yet often overlapping characteristics, value systems, roles and working practices within both sectors.

Three curatorial projects (Chapters 4, 5 and 6) investigated and tested developing curatorial strategies emerging within collaborations between the historically 'divided' contemporary arts and new media arts (Chapter 4), and the arts and commercial digital industries (Chapters 5 and 6). Each curatorial project was informed by the spectrum of collaborative modes identified in Chapter 3, and investigated the recurring tensions that were identified through my contextual review; value and money, time and capacity, crediting and intellectual property and roles and working practices. The curatorial projects enabled me to identify further similarities and frictions inherent within collaborative modes of production, in particular funder brokered collaborations, one-to-one 'pairing' collaborations and group collaboration hackathons.

Chapter 4's *Dear Angel* project explored artistic strategies that can act as a broker or intermediary and link distinct cultural festival programmes. As there was no commercial partner, this project enabled me to explore and reflect upon modes of artistic and curatorial practice that facilitate participative, interactive and collaborative engagement, both online and off. Curating traditional practices alongside new media art practices, revealed an evolution of the role of the audience from viewer to participant. Importantly it highlighted the different role employed by the curator in participatory artworks as well as the challenges and benefits of gifting control to a collaborator and participants.

Chapter 5, *NESTA Digital R&D Fund for the Arts*, highlighted the strategic landscape, which is being driven by a policy (Chapter 2) in which funding is made available for collaborative projects between the arts, commercial digital and technology industries and academia. The process of developing the application revealed common barriers and benefits inherent in cross-sector collaborative models of production and identifies further tensions specific to developing models

of collaborative art commissioning within 'triple helix' collaborative contexts. It further identified specific issues relating to the production of art and the use of combined art/technology methodologies to develop new strategies for collaborative commissioning and for assessing audiences' experience of art.

Chapter 6, which details my final curatorial project, *Thinking Digital Arts*, provided an opportunity to draw upon my understanding of how emerging policy and theory (Chapter 2) is driving interaction within an expanded spectrum of collaborative practice (Chapter 3), and the critical learning provided by the two previous case studies described in Chapters 4 and 5. This was applied to broker a series of contexts for production in which experimental, collaborative strategies were intended to develop. Chapter 6 presents two distinct strands of curatorial practice, which operate within emerging collaborations between the arts and commercial digital industries: a one-to-one 'pairing' commissioning and group co-creation within the context of a live hackathon event.

Both curatorial projects, *Collaborative 'Pairing' Commission* and *Group Co-creation* provided further, specific areas of similarity and difference between the arts and creative digital and technology industries than those identified within my contextual review in Chapter 3. These characteristics inform a final 'curatorial site of production', which sits within the wider spectrum of collaborative production discussed in Chapter 3. The curatorial site of production reveals the impact of collaborations between the two sectors upon the modes of practices employed by the artist, curator and creative technologist.

Overall, the trajectory of the curatorial projects developed an increasing ambition to apply modes that aim for an equal balance of power between sectors, and to apply frameworks to, for example, IP and crediting, which would facilitate collaboration rather than friction. The curatorial projects were both informed by the contextual review, and identified recurring themes, which led to further contextual review research in those particular areas.

Value Systems: Money and Credits

Value and Money

Tensions between the economic and intrinsic value of collaboration between the arts and commercial digital industries were a recurring theme to emerge throughout the contextual review. These 'digital dividends' as outlined by Sir Peter Bazalgette, Chair of Arts Council England, were understood in the arts mainly in terms of global distribution of UK arts and culture; better business models for the arts, mobilising and sharing of cultural resources (such as data and archives) to make arts organizations better businesses; and increasing investment for the creation and distribution of cultural and arts content.

Historical tensions between the economic agenda to articulate culture in terms of commercial goods and services, and the intrinsic motivations of artists and audiences who engage in cultural activities, revealed a move towards developing a critical understanding of the systems of production inherent within the arts and cultural sector itself. I found there has been a refocus upon the 'use value' of an arts system to the overall quality of life for the individual citizen and their experience of wider society. This was found to conflict with the value of 'seriousness' raised by the *TDA* commissioning project (see page 116), and the Artist Practice as Business mode in Chapter 3, which led to my selection of the artist Jennifer Lyn Morone as a critical artist speaking at the Thinking Digital Conference in 2015.

In Chapter 5, the funder NESTA, through advice given to partners, brokered this tension about money in relation to value. They stipulated that the budget should be split evenly between partner organizations. The disparity in expected daily rates were highlighted through the application process for the *UrbanARt* project. I observed that the expected remuneration was based on differing business models and sector-led motivations, such as commercial viability (commercial digital industries) and full cost recovery (arts charity). The stipulation of an equal split of the budget was important for creating a balance of power in the new relationship between these partners.

Within the *Thinking Digital Arts Collaborative Commission* described in Chapter 6, similar discrepancies in expected daily rates were quickly identified between

collaborators. This commission enabled me to reflect upon the knowledge gained in Chapter 5 and further investigate the issues raised by different expectations and economic and non-economic value. Drawing upon the knowledge gained in Chapter 5, the curator used benchmarks provided by the arts sector to set the daily rate for the commission fee and both the artist and the technologist were remunerated equally. This arts-led benchmark revealed a discrepancy in expected daily rates between the arts and the commercial media and technology sectors. The daily fee was below the regular day rate expected by the creative technologist, however, the value inherent within the opportunity to collaborate with an artist on a creative commission was acknowledged as enough to compensate for this disparity. Both the artist and the creative technologist identified learning from different practices as a non-commercial value and it was these values that created the bridge that connected this pairing.

Non-economic values were also important within the *Thinking Digital Arts Group Collaboration Hack*, described in Chapter 6, where there was no financial motivation to participate. Rather than create a competitive environment in which to foster innovative, problem solving techniques with commercial developers, as is usual within hackathons, my curatorial and research motivations were to create a balanced cultural context that could facilitate an open-ended process, free from financial considerations or pressure from applied, market-driven concerns. Participants from both sectors valued the opportunity to move outside their own comfort zone and learn from other sectors' working practices through collaborative practice.

Concerning the relationship between time and money, it became clear in Chapter 5 with the NESTA application, that money was closely aligned to the amount of time each partner would dedicate to the project, which highlighted the differing working practices within each field. The commercial partner required a list of specific, billable tasks and timeframes in order to provide a quote for the application budget. While the arts organization used a more strategic overview of the stages of the project to allocate a number of days to dedicate to the project. The interconnected alignment of money and time was also seen in the *Thinking Digital Arts Collaborative Commission*. The creative technologist, who usually worked within the commercial sector, was more specific in the time he would

allocate for the project, based on the fee received; while the artist was more ambiguous with the time he would allocate, his key motivation being to give the project enough time to 'develop a successful piece of work.' This distinction in process and perspective highlights a fundamental friction between the two sectors. Time, in relation to output, is directly related to economic and non-economic values.

Crediting and Intellectual Property

Attribution, crediting and intellectual property have a distinct and evolving history within the arts, new media arts and commercial digital industries. Chapter 3 identified distinct agendas and protocols used when acknowledging, attributing and exploiting authorship of a work or a contribution of a work. This mapping revealed the relationship between commercially focused intellectual property rights and creative attribution rights for digital production, distribution and reuse. Within this framework, this research has shown the practical application of managing these separate concerns in joint projects.

Chapter 4 used a basic art commission and exhibition contract, but the inclusion of audience-generated content meant that the crediting of contributions needed to be considered, such as having 'offline' letters and postcards and online contributions signed or not by contributors of the *Dear Angel* commission. Within the *Dear Angel* exhibition, the lead artist's name led the credits in all interpretations.

Chapter 5 (NESTA) details a funder-brokered approach, where the funder requested evidence that IP was jointly agreed early on. This aspect of the application exposed the varying degrees of familiarity with intellectual property between the partners. While the commercial digital business and university partners had a full grasp of the implications of intellectual property for their interests, the arts partner had to draw upon professional advice prior to committing to any agreement.

Within Chapter 6's *Thinking Digital Arts* project, the curator-brokered collaboration, the hierarchy of arts crediting was revealed. Because of its established value, artists will push to have their name profiled within

collaborations. This brings a weight to the collaborative project — both within the art field and also the commercial digital field (depending on the calibre of artist they are working with). Artists will naturally do this due to the value attribution holds within their field. Commercial businesses are less interested in crediting and as yet do not fully appreciate the impact of hierarchy of crediting and value attached. While the arts may share similar concerns about intellectual property, they are as yet to be overly focused upon protecting it.

Hackathons are collaborative innovation events, which provide an opportunity for people to come together to share skills and ideas. A key driver is open source thinking, people sharing methods, data and ideas without obstacles. As such, many expect that any outputs will be shared using open source licensing protocols. Open Source, Copyleft and Creative Commons licenses clarify the process and production, sharing and reuse of creative work by authors and artists operating within open source and creative communities, and reflect their non-commercial motivations and values.

Smith's distinction between different levels' 'openness' and different kinds of hierarchies within production systems, including hierarchies of skill, approval, gatekeeping, and time, provides a more distributed approach to artistic attribution that is more reflective of the different actors at play within creative productive systems. Within the *Thinking Digital Arts Hack*, we advised all participating groups to agree on their approach to intellectual property at the beginning of the project in order to alleviate any issues should they choose to further develop their project post hack. Due to criticisms relating to creative intellectual property and payment, which arose during the post hack exhibition hosted by *Transmediale Art Hack Day*, a conscious decision was made to host a short 'showcase' that drew attention to the research and development process rather than the experimental outputs of the hack in order to bypass issues relating to intellectual property. Crediting and intellectual property continue to shape how the new creative economy will work together into the future. How we acknowledge each other is important. How we negotiate ownership of our collaborative outputs is fundamental to the evolution of our embryonic, collaboratively competitive, creative economy.

Understanding that the arts and commercial digital sectors operate on a differing set of assumptions and concepts when it comes to intellectual property and crediting informed my collaborative commissioning model devised in Chapter 6. All of these aspects, attribution, crediting and intellectual property, came together to help me try to establish clear terms of engagement between the artist and commercial, creative technologist. The brief demanded that the work have equal and shared credit and this was realized in many public contexts. Press generated during the festival, in which the curator had some influence, saw an equal crediting of both the artist and the technologist. The front-page image in *The Journal* newspaper (Figure 21) featured both the artist and the technologist, which is unusual within an art- commissioning context. However, within the profile generated mainly by the artist across online art and design platforms and publications, a distinct focus on the artist emerged in crediting the artwork, while the creative technologist was named as an equal collaborator within the main body of the content.

This highlighted the difference in skill sets and expertise with regard to crediting between the artist and the creative technologist. However, there were examples of online activity that featured both roles equally, such as the Raspberry Pi blog post (see page 267). The reputation and network of the artist attracted the initial attention of the writer, but the interaction from readers was focused upon the technologist and his methodology and approach to realizing the technical aspects of the commission. In order to broker equal terms of engagement within intellectual property and crediting, the curator must acknowledge the working practices and focus of both fields to redress the balance of power between the sectors and promote collaborative best practice.

Modes of Production: Roles and Working Practices

Types of Collaboration: Balances of Power

Chapter 3 investigated a range of modes of collaboration between the arts and commercial digital industries. The most useful modes of practice for my curatorial projects include Artist-in-Residence in the Digital Industries, Funder Brokered Partnerships, Sponsor Commissioner and Group Collaboration Hackathons.

Artist-in-Residence in the Digital Industries provided the basis for a pairing

strategy between individuals from both sectors which I was able to investigate further in Chapter 6: Collaborative Commissioning. Funder Brokered Partnership modes of production highlighted inherent frictions between sectors within creative projects which provided a useful starting point for both projects discussed in Chapter 6, where I took on the role of nurturing collaborations between the two sectors. The Sponsor Commissioner mode was useful for fostering a deeper understanding of the motivations and drivers behind a commercial organization such as Thinking Digital Conference's interest in supporting the *Thinking Digital Arts* initiative. Group Collaboration Hackathons provided an adaptable and scalable model to investigate a collaborative context in which to support new working practices.

Roles: Artist as Creative Professional

Artistic skills, education and organic, open-ended, experimental strategies are increasingly being recognized by other sectors as a valuable resource for outsourced innovation within the creative digital industries. Chapter 3 highlighted that artists with a technology based artistic practice (new media artists) are increasingly being sought out by commercial digital companies as they look to outsource product research and development, digital marketing and advertisement and brand development and reach into global, existing and developing markets. Digital businesses are employing a range of strategies to engage artists and align themselves with creativity; from hiring them directly to work for them to commercial advertising briefs, providing artist-in-residence programmes, or employing them within their businesses and forming strategic alliances to nurture new kinds of creative, collaborative practice. Chapter 5 and Chapter 6 have shown that the role of the artist is evolving to meet demand; however, there is work to be done around establishing terms of engagement between the two partners, in order to shift the balance of power onto a more equal footing.

The CRUMB list discussion highlighted the artist's role and remit as a 'fundamental researcher' as they inhabit new domains within wider society. Chapter 2 showed that 'open and playful experimentation and research', which forms the methodologies within artistic practice can be seen as valuable for our society and as a tool for culture in general. While operating within it, artistic

practice emerging in collaborative contexts of production often extends beyond the theoretical, art historical and institutional framework of contemporary art. Interdisciplinary and new media practice is instead framed by the much broader context of theory and practice reflective of networked digital culture and an often deeply informed media literacy. How an artist's self identify reflects a need for a wider definition of arts practice, and the shift from disciplinary to interdisciplinary to transdisciplinary to anti- disciplinary practice reflects the expanding contexts for arts production.

Many artists have developed strategies to capitalise upon the creative and commercial opportunities within both sector discourses, as seen in Chapter 3. A 'fused' set of creative skills, technology expertise and business skills, as well as a sound understanding of both arts and commercial motivations, language, systems and processes enable artists to flow between these two interconnecting fields. This was seen in the second iteration of the application described in Chapter 5, when there was a ready availability of digital media- literate artists and culturally literate technologists. If a curator can 'cast' partnerships where each has a pre-existing awareness of the values of the other sector, then there is less difference to broker. However, artists remain critically aware of the 'strings' attached to commercial briefs and the compromises they must make in order to work within a commercial agenda, as explored in Chapter 3. In Chapter 6, both the collaborative commission and the group collaboration hack endeavoured to broker a context in which the agendas of different sectors were suspended, in order to facilitate collaborative production.

Within their wider fields, however, 'creative professionals' who also self identify as 'artists' continue to delineate between commercial and artistic projects on their websites and many see commercial projects as secondary to their arts practice and use them as paid R&D and skills development opportunities. This echoes the feedback given by the participants of the commission and also the art hack event. Equally, businesses do not understand the challenges that tight briefs, defined processes, short timeframes and client-based, transactional relationships present to artists. Established linear and exploratory creative processes bring with them predetermined theories, tools, methods and language and are weighted with commercial expectations and agendas. These expectations impact the balance

of power within production processes and shape the roles and working practices within them. In order to nurture the development of more equal terms of engagement, existing expectations must be suspended within a collaborative mode of production.

Roles: Creative Technologist as Credited Collaborator

If artists are sometimes not regarded as professionals and hence not paid properly, then technologists are sometimes not regarded as being 'authors' and hence worthy of being credited in producing creative work. The motivations for technologists collaborating with artists go beyond a financial return and have much to offer the arts by way of learning. The *Thinking Digital Arts* commission, has shown that within an arts weighted context of production, commercial technologists often default to a practical, rather than critical role advising on the feasibility of a project and developing the technical aspects in their realisation of the initial concept. The *Happenstance* project highlighted that technologists ask 'how?' whereas artists ask 'why?' and the *Thinking Digital Arts Hack* confirmed that the commercial production process is largely linear and goal-oriented, rather than open and exploratory.

Within funder-brokered collaborations, technology providers have been employed by the arts to provide access to a digital community and expertise in order to develop expertise and capacity within the sector. They are deemed a valuable resource for developing institutional innovation and devising digitally focused business models for income generation. However, within curator-brokered pairings, when the opportunity for non-hierarchical, creative production within an arts context has been facilitated, commercial technologists are reticent about challenging artists' ideas and processes. The value inherent within a 'pairing' model (both individual and group) lies in the commercial technologist being exposed to an artist's 'hands-on' creative process. Exposure to a different type of working and expectation of payment, timeframes and non-commercial outcomes, which will be presented publicly, provide an opportunity for commercial technologists to revise their own approach to the often limited timescales given to creative projects and re-evaluate their expectations of what can be achieved within collaborative production contexts between the arts and commercial digital industries.

Roles: Curator as Broker

In Chapter 4, new media arts curatorial practice has tracked the evolution of the role and remit of the curator as it relates to technological development. The rise of digital technologies has amplified a growing interdependency between the arts (which includes contemporary and new media arts) and commercial digital industries, resulting in an unprecedented flow of activity and interaction between the two sectors. In Chapter 2, the role of the curator has been identified as a node, connector, cultural context provider and broker in this value chain of production. Brokers might be brokering contracts, financial transactions, or relationships in the case of marriage brokers. This research argues that the curator is well placed to help shape the 'terms of engagement' within collaborations between the arts and commercial digital industries. The factors that a curator as broker would need to consider in particular are:

- Acknowledging that tensions between collaborators are born out of differing values and modes of working, so existing practices should be open to potential revision, modification, or new ways of working.
- Establishing a mode of communication and negotiation that acknowledges the different languages of the two sectors, and to be aware of different terminologies for similar systems.
- Being aware that values relate to practical factors of money and hence to time, which needs to be clarified in contracts, frameworks and systems.
- Ensuring that the output is appropriately credited/attributed and protected within each field engaged with the creative exploration of technology as both a medium and a tool within the same creative output.

The frameworks identified in Chapter 3 are useful for assisting with this challenge, however, I found that gaining a deeper understanding of intellectual property in relation to more open frameworks were particularly useful for digital creative projects born from cross-sector collaborations. I also found it very useful to articulate the different protocols used within the contemporary arts and new media arts fields in *Thinking Digital Arts*, and to recognize that collaborators were not aware of the importance of appropriate crediting and attribution within creative projects.

- 'Casting' the parties in a collaborative relationship is a valuable curatorial

skill, which can help to forge successful projects by choosing those with awareness of the other sector, or those with 'fused' skills.

Brokering relationships between these actors requires the establishment of a site of fundamental research, development and production, in which commercial interests or an arts agenda does not dictate activity. In this way, the curator can maintain a balance of power between the sectors.

The balanced context provided by the curator as broker in Chapter 6: Group Collaboration Hackathon, identified a potential third way for artists to engage with commercial industries — one in which the balance of power is mediated and provides a context in which new practices can be realized and adhered to. This demands that the curator is aware of the characteristics inherent within the mode of curator-brokered production and acts in the best interests of *both* the artists and creative technologists working in this context.

Within collaborations, perceived curatorial expertise is deemed valuable by the commercial sector as they broker engagements with artists, as seen in Sponsor Commissioning. Curators are seen as a gateway to the established arts venues and other platforms, audiences and potential new markets. Curators are the most natural and obvious connection point for the creative digital industries, because of their proximity to artists and art institutions. While the creative digital industries understand their own area of expertise, they also understand their limitations. They come from an outside perspective to the arts and acknowledge the specific skill sets and expertise they lack, which gives the role of curator an elevated status. However, as seen in the Digital Revolutions example, discussed in Chapter 3, in areas where commercial digital companies do have expertise, such as marketing, they can be reluctant to take curatorial advice, regardless of the expertise they have access to. The tensions that arose from this strategy suggests that curators that are brokering modes of collaborative production must demand some control over the marketing language and messages delivered, in order to achieve a balanced message that will be transferable across sectors. The central, mutually valued role of the curator has demanded a broadening of established skills to bring multiple cross-sector partners together within emerging sites of production. I would suggest that within the commercial digital industries, it

is necessary for key roles within marketing departments to broaden their established skills when working in collaboration with the arts, and on the other hand, for curators to raise their own awareness of the importance of the language of digital press and marketing.

The role of research within experimental projects has been profiled as intrinsic to the generation of new knowledge within the arts and sharing this knowledge as a powerful tool to the development of digital skills and understanding within the arts sector. Research-based methodologies provide validation for the value generated within collaborative projects for public bodies and policy supporting the sustainability and growth of the arts and the creative economy. The experimental, open-ended nature of research and development projects such as the NESTA R&D Fund, the Cultural Value project and the Warwick Commission, provide opportunities for articulating the case for public funding of the arts and devising new strategies for sourcing and generating income via emerging digital channels for the sector, with seed funding catalysing the potential for the arts to broker the development of both cultural and commercial product. This curator as broker role brings an awareness of the wider political context of power in which these collaborations occur or are being facilitated and an awareness of the specific issues that are inherent within the systems, structures, roles and tools that the arts and commercial digital industries bring to these contexts, and the means of control. Echoing Georgina Voss, curators must develop a literacy that acknowledges this control and develop strategies that best address it in order to achieve a more equal balance of power between the two (Voss, 2014).

This research has identified exact areas of friction which recur in collaborations: value, roles and working practices, money, IP/crediting, plus others which are specific to the particular model that is employed within the collaboration, such as the openness and adaptability of the collaborative format (either commission brief or the hack format) and fused (often anti- disciplinary) skill sets. I have mapped the kinds of engagement that occur between the arts and commercial digital partners as they relate to the role of the curator as broker, connector and firewall for the cultural production of art, providing a spectrum of activity on which others can build.

This research supports the evolution of collaborations by specifically identifying

those similarities and frictions within two sectors, in order to seek out new ways to facilitate contexts in which they can intersect and collaborate. Highlighting specific barriers, such as money, roles and working practices and protective licensing offers an opportunity to devise strategies that can maximise opportunities inherent within collaborations. These dialogues provide a developing blueprint for further collaborations between the arts and other fields.

How Roles are challenged by Value Systems and Modes of Production

How is the role of curator, artist and digital technologist being challenged by the differing value systems and modes of production of the two different sectors?

The previous two sections of this conclusion have firstly identified the key 'value systems' relevant to this research, then a spectrum of 'modes of production', which together challenge the roles of curator, artist and digital technologist. The role of the audience has also been briefly examined in so far as it impacts the context of the research. The research has named the three roles in a way that aims to highlight the factors that are most different from previous understandings of these roles: Artist as Creative Professional; Creative Technologist as Credited Collaborator; and Curator as Broker.

As the research is curatorial-practice-led, it is the curator role that has been examined in most detail, although as a broker, there must also be awareness of the other two roles. This thesis has outlined that there is a closer alignment between the two sectors of art and commercial digital industries, thus expanding the field in which curators must operate. This research has shown that the curator must have an awareness of the architecture of power within this emerging field in order to understand the agendas that shape and develop it. The research has analysed the current landscape of collaborative production and practice emerging between the arts and commercial digital industries. Through a contextual review, I have identified specific characteristics that frame collaborative modes of production. Though the development and delivery of key curatorial projects, I investigated specific modes of production and my research

revealed further specific areas of similarity and friction within them; Artist-in-Residence in the Digital Industries, Geek-in-Residence in Art Organizations, Funder Brokered Partnerships, Sponsor Commissioners and Group Collaboration Hackathons. This investigation identified factors that a curator as broker needs to consider within collaborations between the arts and commercial digital industries.

Chapter 3 highlighted characteristics within various modes of production that facilitate pairing strategies between the arts and commercial digital industries, including; Artist-in-Residence Programmes in the Digital and Industries, and Geek-in-Residence Programmes in Art Organizations. Within the former, it was conjectured that critical engagement with a shared medium, facilitated by creative dialogue deepened understanding and broadened the perspectives of collaborators. The latter model does not broker one-to-one relationships between an external technical innovator and an internal cultural specialist to develop new ideas, rather they invite external, 'open' innovators with a digital mind-set, technical skills and connections with the creative digital and technology industries for a period of residency within a host cultural organizational structure in order to nurture innovation and instigate positive change within that organization. Both contexts highlighted the different assumptions, practices, protocols and interests that drive the two sectors and the differing terminologies that can be used for similar systems.

Chapter 6 investigated the one-to-one pairing strategy within the context of an arts commission rather than a commercial lab, and provided further insights into the needs, motivations and working practices of the collaborating, commissioned artist and creative technologist throughout the process of production. This commission used the shared medium of technology to nurture what has been called a 'fused skill set' between the artist/designer and creative technologist. The commission allowed each of the commissioned 'creative professionals' to extend the possibilities of production by combining these skills to deliver the brief. However, these possibilities were also limited by the scope of the skill set available. Key brokering tools to emerge out of this research project included the commission brief, which would benefit from capitalising upon the expertise of the curator and be informed by the commercial digital partner in order to foster a

sense of ownership within the process for both collaborators, as seen in Chapter 6, and the 'casting' method for selecting the participants, which benefits from the input of curatorial, artistic and commercial perspectives, in order to identify potential needs of participants from both sectors, and select the breadth of skills and personalities necessary to establish a productive and balanced context for collaborative production, as seen in Chapter 6, p135.

The lack of specificity within the commission brief demanded an exploratory and creative approach rather than linear skill set and practice to investigate a way into the space. This could have been a contributing factor to the production context becoming a co-operation or 'arranged marriage' rather than a true collaboration capable of achieving the more balanced mode of collaboration that I had been hoping to create. This outcome has pointed not only to the importance of the initial brief in relation to the finished output, but also to the roles taken and the working methods of research, development and production within collaborations. The final commission, though, proved to be successful in engaging the Sage Gateshead audiences (see page 119) and it also received significant attention in the local and online press. This highlights the importance of intellectual property and crediting in collaborative projects for both the artist and the creative technologist collaborators.

Within Chapter 3, key characteristics within the Group Collaboration Hackathon were identified: competitive and non-competitive working processes, anti-disciplinary practices, and adaptability all foster a context in which a balanced mode of production can be nurtured. Chapter 6 further investigated this mode of production and reaffirmed the adaptability of the format. The format was changed in a variety of different ways to suit the context in which it was hosted and the breadth of skill sets that were collaboratively 'cast' into the event. The research provided further understanding of the impact of a public event post hack on the participants' working practice, and showed that the pressure of a public showcase in some ways replaced the competitive 'prize giving' aspect that is often the culmination of more commercial hacks. The experience and expectation of the audience coming to the showcase identified how the use of language within this kind of activity is still quite new. In presenting the outputs of a research and development project, there is clear scope for the presentation of final

projects to be opened up as part of this experience.

To summarise, therefore, the research question has been primarily answered by identifying the ways in which the role of curator, artist and digital technologist have been changed by the differing value systems and modes of production of the two sectors. By identifying the value systems as specifically including money, IP and crediting, and the modes of production as a spectrum of power balances, the challenges to the roles were also specifically named, and in turn the important characteristics of those roles can be shared with other researchers and practitioners. This is in line with the objectives of the research, which were both to interrogate the context and to carry out a series of curatorial projects. The 'challenges' were therefore very productive in helping to formulate new ways of working.

Original Knowledge

The original knowledge primarily lies in the overlap and comparison between the arts and commercial digital sectors — an area with research in each sector but little research on the intersection. The original knowledge that has been most useful to me as a curator is:

1. The mapping of collaborative modes of production, that helps create a typology of practices. The examples cover the full range of balances of power, from those where the values of art are most in control to those where the systems and languages most reflect the commercial digital industry sector. This typology can be used to help curators and other cultural brokers identify examples of specific, curatorial modes of practice being developed and employed within these contexts.
2. The identification and further analysis of the differences between the sectors in terms of value and money, time and capacity, crediting and intellectual property, and roles and working practices. The growth of the commercial digital and technology industries and the development of a digital culture have enabled the funded sector to consider new ways to access the commercial benefit inherent within culture's intrinsic value, as it develops new strategies to evolve within an progressively austere economic context. Particularly through the *Thinking Digital Arts* practical case study,

the research offers new insights into curatorial strategies for other professionals in the field to broker terms of engagement that foster an equal balance of power between collaborators between the arts and commercial digital industries.

The identified role of the Curator as Broker has helped to highlight the developing importance of the brokerage role within curatorial practice in the context of cross-sector collaborations. Although the role of the curator is often undervalued, this research has reinforced that:

- The curator is well placed to connect cross-sector partners and actively facilitate modes of collaborative production and understand the assumptions, concepts, practices, and protocols and interests that drive the collaborators' fields. Drawing from practices inherent and emerging within participatory arts, new media art, open source, hacker, maker and commercial start-up culture, the *TDA* collaborative commission and the group collaboration hack provided new knowledge into the needs, motivations and processes of both sectors within collaborations.
- The curator as broker can facilitate a balanced mode of production through the use of brokering tools, such as briefs to foster collaborative practices. These tools should include an awareness of systems of crediting and IP (in particular Intellectual Property and Copyright, Creative Commons and Copyleft, Open Source Licensing and Openness, Academic Acknowledgment and Research, Open Data, Digital Public Space, New Media Arts Crediting, Contemporary Arts Crediting), sector expectations around value and money, time and capacity, and the methods and language participants bring to the collaboration. The curatorial role of broker can act as a firewall which provides a level of protection for the creative context in which both artists and creative technologies produce new collaborative art and creative projects, including the acknowledgement of the serious and critical nature of certain art practice.

Areas for Further Research

This research has obviously only covered a small number of curatorial projects over a specific period of time. There is more to be achieved through identifying the values generated within collaborations between the arts and other sectors, in

other contexts, at other times.

The starting point for the research came from my own experience in the arts, and it would be interesting to see a mirroring body of research that started from experience in the commercial digital sector. Methodologies from disciplines mentioned as being outside of the scope of this research, such as Business Studies, would also benefit from further research.

My collaborative commissioning model devised as part of my research would be another point of departure for further research. More work can be done to interrogate conditions most favourable for non-hierarchical collaborative commissioning practices.

Group collaboration formats such as hackathons provide a rich source of further research as the model evolves from a commercial to cultural method for collaborative practice. I have furthered my research through my own practice through the delivery of another two art hack events.

The role of curatorial brokerage is a significant area for further research both in practice and in determining a more equal dialogue and terms of engagement between the sectors within professional contexts that explicitly support hybridity within anti-disciplinary practices.

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Appendices

Appendix 1: Nomadic Salon



Figure 27: Screenshot of Nomadic Salon website home page with co-founders Lucy Livingstone and Suzy O'Hara. Website design by Nora O'Murchú. Photographer Karolina Maciagowska

The *Nomadic Salon* is a collaborative, student-led partnership project between the PhD communities at Northumbria University and University of Sunderland, forged through the Arts and Humanities Research Council Block Grant Partnership (BGP) Scheme. Full documentation of the project can be found at <http://www.nomadicsalon.co.uk>

Background

The *Nomadic Salon* was conceived and co-produced by Lucy Livingstone, Northumbria University and Suzy O'Hara, University of Sunderland in 2014. Both Lucy and Suzy are award holders of the AHRC BGP Scheme. The collaboration enabled research students from both universities to form a new community of researchers through peer-led activity. Historically the AHRC BGP training events provided for students have focused on bringing the two research communities together for skills development. *Nomadic Salon* provided an opportunity to fully maximise the potential of this community, through rich and critical peer-led dialogue.

Nomadic Salon worked with four external partners that represented the breadth of practice-led research approaches within the research community. These organizations included Culture Lab, University of Newcastle, Whistle Arts Stop at Featherstone Castle, Thinking Digital Arts at Newbridge Project Space and the National Glass Centre. Each organization offered a platform for focused discussion around salient contemporary themes in digital art and human computer interaction, contemporary art practice and land-based art practices, new-media curating and design. Three events were organized and delivered throughout 2014; *Nomadic Salon 1: Culture Lab*, *Nomadic Salon 2: Featherstone Castle* and *Nomadic Salon 3: Thinking Digital Arts – Betagrams*. These three events culminated in a fourth and final event, the *Nomadic Salon Symposium*.



Figure 28: Screenshot of Nomadic Salon 1: Culture Lab, held 10th April 2014 at Culture Lab, University of Newcastle. Photographer Karolina Maciagowska

Nomadic Salon 1: Culture Lab: Culture Lab is a trans-disciplinary research hub where designers, psychologists, computer scientists, artists and social scientists develop practice-based research with a focus on Human–Computer Interaction. The first *Nomadic Salon* was an opportunity to explore the different methodologies adopted to modulate the relationship between practice, data collection and theory. The event was articulated in a number of interventions, demonstrations and provocations that suggested insights and further questioning around issues of collaboration with different stakeholders, the role of the artefact in dissemination, and the tension between the modalities of knowledge production in creative digital practice and the academic canon.

The session was hosted by Gabi Arrigoni, Clara Crivellaro, Abi Durrant, Brigitta Zics and Tom Schofield.



Figure 29: Screenshot of Nomadic Salon 2: Featherstone Castle Residential, held 30 April 2014 at Featherstone Castle. Photographer Karolina Maciagowska

Nomadic Salon 2: Featherstone Castle Residential: The second *Nomadic Salon* was an overnight residential event hosted deep in the Northumbrian Countryside at the formidable Featherstone Castle and Prisoner of War Camp. This salon, which made the most of its rural context with walks and presentations throughout the castle grounds, was an opportunity to reflect on notions of practice-led research in the context of land-based fine art research.



Figure 30: Screenshot of Nomadic Salon 3: Thinking Digital Arts, held 23 May 2014 at Newbridge Project Space. Photographer Karolina Maciagowska

Nomadic Salon 3: Thinking Digital Arts: The third *Nomadic Salon* event was directly related to my own research project, *Thinking Digital Arts (TDA)*. *TDA* complements and enhances the region's largest annual event that celebrates innovation, creativity and technology, the Thinking Digital Conference with a curated programme that will investigate and celebrate the emerging area of contemporary arts where the arts, technology and digital culture collide (www.thinkingdigital.co.uk/arts). The *Nomadic Salon 3: Thinking Digital Arts* context was the *Betagrams* exhibition curated by Gabi Arrigoni. *Betagrams* is a group show investigating the notion of the prototype as a new aesthetic model. From digital fabrication to speculative design proposals, the works on show were provisional, unstable and persuasive, providing suggestions for possible futures. The discussion investigated the exhibition's central concept of the prototype with the curator and the exhibiting artists and critically explored experimental, creative art practices that are challenging the traditional status of the artwork as a unique and finished object.

Nomadic Salon Symposium in conjunction with
The Annual Block Grant Partnership Conference
Tuesday 24th and Wednesday 25th June, 2014
National Glass Centre
Liberty Way
Sunderland
Tyne and Wear
SR6 0GL

Hosted by the National Glass Centre, the fourth Nomadic Salon event will be a day long symposium in June where all the salon attendees will have the chance to reconvene and drill down further into the interesting points of synergy and departure between their practices. The symposium will be run in conjunction with the Annual Block Grant Partnership (BGP), Arts and Humanities Research Council Conference, which showcases the exciting, cutting edge research emerging from BGP students at the University of Sunderland and Northumbria University.
Save the dates and please check our website for further details in the coming weeks.



Figure 31: Screenshot of Nomadic Salon 4: Design and Symposium, held 24 June 2014 at National Glass Centre, Sunderland.

Nomadic Salon 4: Symposium: The forth and final *Nomadic Salon: Symposium* day started with a design-focused *Nomadic Salon* event. Three practice-led design PhD students, Carl Gregg, Mathew Coombes and Cally Gatehouse and designer/artist Gloria Ronchi gave short presentations on the methodologies they

use in their practice-led research. This event was followed by a conversation in the round in which we broadened the discussion out to introduce some of the learning and ideas that have been showcased through the previous three *Nomadic Salon* events. This was followed by a tour of NGC, which segued into the afternoon session that focused upon the organizations that support practice-led research. Thus far, the *Nomadic Salon* had focused on the methodologies employed by individual student practice-led researchers. For the afternoon symposium session, we invited research staff and student, and creative practitioners from across the country to join in a discussion about how different organizations are supporting practice-led research.



Figure 32: Screenshot of *Nomadic Salon* documentary video. Filmmaker Adam Green

Nomadic Salon Video features reflections from participants of the Nomadic Salon Symposium. The full video can be found here <https://www.youtube.com/watch?v=bPaOCFJ3SwE>

Appendix 2: IP and Crediting — Protective Protocols

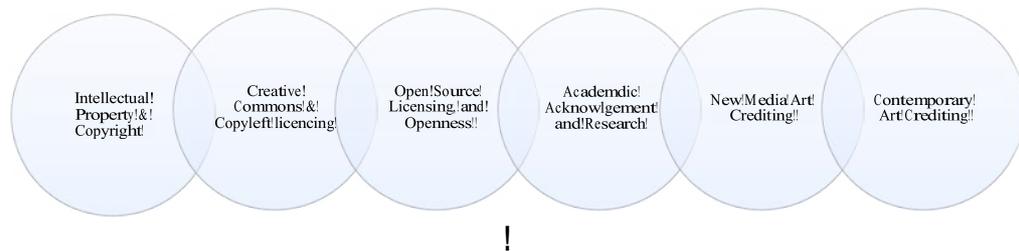


Figure 33: Protective Crediting and Intellectual Property Frameworks, p72

Introduction

This appendix is not an in-depth analysis of the complex area of IP (intellectual property), but a very brief summary of a range of IP and Crediting frameworks, which aim to be useful to curators in the context of this research. Like the analysis of the balance of power of collaborative modes of production, they move from commercially oriented frameworks of IP and copyright, to art oriented frameworks of credit.

Intellectual Property and Copyright

Existing frameworks of IP and Copyright are commercially oriented, transactional frameworks. They aim to protect the financial rewards of authorship, and the Moral Rights parts of Copyright aim to prevent misuse of works, such as poor cropping or bad reproduction of photographs. Digital works bring up many issues for existing frameworks. The Manifesto for the Creative Economy asserts that digitalisation has created 'contestable creative markets where transactions costs are low and the rewards to innovation are high' (Bakhshi *et al.*, 2013, p.15). In his previous policy report *Review of Intellectual Property and Growth* (2011), Ian Hargreaves argued that existing copyright law was failing as a framework of support for rights holders and was presenting regulatory barriers to innovation and growth within the digital UK Intellectual Property market. He asserts that rights owners within the creative industries need 'efficient, open and effective digital markets at home, where rights can be speedily licensed and effectively protected' in order 'to sell licences in their work and for others to buy them' (Hargreaves, 2011, p.3).

Bakhshi *et al.* also acknowledge that within creative businesses, IP is central to the value added in many creative industries but point to a growing number of creative businesses models that capitalize on being leaders within technological development, rather than their intellectual property rights.

Within these businesses, competitive strategies such as first mover advantage 'in which IP plays less of an obvious role' are used to gain advantage over a new market segment (https://en.wikipedia.org/wiki/First-mover_advantage). Thus, within the commercial digital landscape, innovation practices and technological development have gained importance within the IP market. Existing systems and protocols are undergoing extensive revision, in order to meet the needs and support the growth of new business models, working practices and evolving

markets. In light of this, Bakhshi *et al.* call for a modification of DCMS's original definition of the creative industries, which acknowledges but does not overstate the centrality of IP and is inclusive of a wider breadth of creative business practice.

'... those economic activities which involve the use of creative talent for commercial purposes' (Bakhshi *et al.*, 2013, p.34)

This broader definition of creative industries reflects emerging collaborative practices between the arts and commercial digital industries where 'the potential for wealth and job creation' remains intrinsic to the value created, but signals that it is not solely reliant on 'the generation and exploitation of intellectual property' within its outputs (Bakhshi *et al.*, 2013, p.26).

Creative Commons and Copyleft Licensing

Copyrights exist in order to protect authors of documentation or software from unauthorized copying or selling of their work. A copyright infers that only with the author's permission may such activities take place.

A Copyleft, on the other hand, provides a method for software or documentation to be modified, and distributed back to the community, provided it remains free. Similar to copyleft licensing, described by Hadzi (2011), Creative Commons licenses work alongside copyright licenses to provide 'A simple way for authors and artists to express the freedoms they want their creativity to carry' (<https://creativecommons.org/weblog/entry/5668> Accessed: 6th August 2015). Developed by Lawrence Lessig in 2002, Creative Commons licenses were also in part inspired by the Free Software Foundation's GNU General Public License (GNU GPL). Unlike source code, however, which at its inception was freely accessible and could be freely modified and became increasingly proprietary (meaning work protected by an exclusive right), Creative Commons recognizes that there has always been a proprietary culture within creative production, in order to protect and secure rewards for the creative community. However, copyright presented challenges when sharing creative work digitally:

'If copyright regulates "copies", then while a tiny portion of the uses of culture off the net involves making "copies", every use of culture on the net begins by making a copy.' (<https://creativecommons.org/weblog/entry/5668> Accessed: 6th August 2015)

Creative Commons licenses also seek to address the marginality of protection available within copyright law by clarifying the legality of the use of digital 'copies' of creative work and creating an infrastructure that provides

'free, easy-to-use legal tools that give everyone from individual "user generated content" creators to major companies and institutions a simple, standardized way to pre-clear usage rights to creative work they own the copyright to.'
(https://wiki.creativecommons.org/images/3/35/Creativecommons-what-is-creative-commons_eng.pdf Accessed 6th August 2015)

Creative Commons licenses are now used globally and have rapidly become a standard license used by those engaged in the production of creative work, as

exemplified by this careers advice for graduates, provided by University of the Arts, London:

‘As a creative, you should consider your work as property. There are various intellectual property systems that you can use to safeguard your work. Here you will find online advice about intellectual property, Design Right, Creative Commons, Trade Marks and patents.’

(<http://www.arts.ac.uk/student-jobs-and-careers/freelance-and-business-advice/intellectual-property-advice/> Accessed: 5th July 2015)

Open Source Licensing, and Openness

Open Source licensing is a specific framework, which is related to general values of ‘openness’, which are also dealt with in this section. Lerner and Tirole highlight that the terms ‘open source’ and ‘free software’ refer to the licensing terms associated with a piece of software and provide a way to protect collaborative work via an open source license. Open Source licenses and the broader ethos of free software was originally developed by Richard Stallman in 1984, to ensure his free operating system, the GNU system, remained freely available, was protected from appropriation and to encourage others to join him in sharing their code. Siobhan O’Mahony (2003) explains that ‘the future stream of benefits that would stem from the collective resource would be made unavailable to the community’ if a commercial vendor adds proprietary code to the open source communities’ work. Thus reinforcing the need for Open Source licensing to establish clarity around the infrastructure of collaborative, open production with free distribution, within a competitive and closed field (O’Mahony, 2003, p.1179–1198).

In his paper *FLOSS Culture* (2011), Adnan Hadzi explains how copyleft includes and extends copyright ownership and attribution to an author, which ‘protects the work from being altered by others without the author’s consent and restricts the reproduction of the work’ by ‘allowing for free re-distribution of the work and, more controversially, the right to change the work if the altered version attributes the original author and is re-distributed under the same terms.’ (Hadzi, 2011)

Dominic Smith (2011) distinguishes between different levels ‘openness’ and different kinds of hierarchies within production systems, including hierarchies of skill, approval, gatekeeping, and time.

‘Recognition of skills amongst peers can also aid in the progression through a project hierarchy into a gatekeeping role. This is a recognized status that can bring many benefits, such as the opportunity to display your work to a wider audience... Recognition goes to the “wise” leaders who take advantage of informal structures; structures that have been influenced by the nature of computing.’ (Smith, 2011, p.26)

While open source software developers follow many similar procedures followed by commercial software developers to create software, differing values and motivations keep licensing environments distinct (Smith, 2011, p.38). Smith also recognizes that within participative new media art projects, the recognition of good craftsmanship is a ‘classic incentive’ for artists to become involved in collective projects within open source communities.

Free Software and Open Source communities have shown that new ways for

protecting collaborative work can be established through licensing. O'Mahony highlights the negative impact of 'hijacking' by commercial interest to future benefits and value generated by and for collaborative, open source communities within this context. Hadzi identifies methods for extending existing licensing with new working environments and Smith articulates the value of gaining clarity around the infrastructure of production within these new environments. All are useful considerations when discussing collaborative projects between the arts and commercial digital industries.

'Open Data' is an important value associated with Open Source licensing. Like the development of the Internet itself, the Open Data movement was rooted in the scientific community where researchers first perceived the benefit of openness and of sharing of data. Conceived in 2007 in the US by a group of Internet activists mostly coming from the free software and culture movements, it included people such as Tim O'Reilly, who popularised expressions such as 'open source' and 'Web 2.0', and Lawrence Lessig, founder of the Creative Commons licences. Their aim was to create the principles that 'define and evaluate open public data.'

'The open data movement attempts a complete reversal of logic: by default, public data and information must be published online — before even being claimed by third parties.'

And is

'directly inspired by the approach and practice of open source, built on three concepts: openness, participation and collaboration.'(Chignard, S., 2013)

The first institution (supported by the UK government) mandated to 'unlock the value of open data and help catalyse open data culture' (Kimpton, 2013, p.2) is the Open Data Institute (ODI), based in Tech City Initiative, London.

'When we began working with the UK government to open up its non-personal data, we recognized that there was a great opportunity. An opportunity to enhance transparency, improve efficiency, and create social, environmental and economic value.' (Kimpton, 2013, p.2)

Founded by Sir Nigel Shadbolt and Sir Tim Berners-Lee, the ODI works in partnership with The World Bank and the Open Knowledge Foundation, leading businesses and entrepreneurs, universities and researchers, government and civil society to 'unlock enterprise and social value from the vast amount of Open Government Data now being made accessible' to support government, business and research in the field (Open Data Institute, 2012, p.1).

An important development within the arts is the fact that the ODI has championed the value of culture within its mission, by integrating an Art Associate, Julie Freeman, in its core team from its beginning.

'Data as Culture is for everyone. We want to ensure conversations about open data expand beyond specialist communities and through to the general public. Using data as a material increases awareness of what data

is, how it can be used creatively, how it can inspire, encourage play and lateral thinking, and help people share stories and experiences.’
(Open Data Institute, 2012)

Their first project, which launched the *Data as Culture* programme was an open call to commission art that would ‘challenge our understanding of and relationship with the vast amounts of data around us’ (Kimpton, 2013, p.28). Integrating arts-based expertise at the heart of an initiative such as the ODI, provides a new opportunity for the value of the arts to drive growth both economically and socially through creative practice.

Digital Public Space is another value related to this framework. *The Digital Public Space* is a collaborative project, initiated by the publicly funded cultural institutions to make publicly funded collections of media made permanently available by a growing range of public ‘memory’ institutions, such as museums, libraries and archives, via new tools for everyone to access, use, explore, share and create online. Led by the British Broadcasting Corporation (BBC), which has been working alongside a growing number of partners that include the British Film Institute, British Library, Tate, Arts Council England, JISC (formerly the Joint Information Systems Committee), *Digital Public Space* provides a space for access and freedom for the creation of an online environment that hosts ‘an ever growing library of permanently available media and data held on behalf of the public’ (Ageh, 2015, p.3–4). This cultural call to arms reflects the ambitions of Stallman for open source communities that have been established since his manifesto of 1985.

‘It is our right to have this access, and it should be freely available to all. The Digital Public Space must — by definition — be equally accessible by everyone, universally equivalent and unconditional. It must be dialogic, open and protective of the rights of all participants and contributors. It must be available at all times and in all locations, it must expect contributions from every member of our society and it must respect privacy. It must operate only in the best interests of the people that it serves; absent of overtly political or commercial interests. And it must endure.’ (Ageh, 2015, p.3–4)

The *Digital Public Space* is a public application of web technologies and represents a developing infrastructure that supports those organizations and individuals ‘that want to share their digitised assets in a structured way’ within our emerging digital landscape. Ageh stipulates that *Digital Public Space* is not a commercial ‘product or service’

‘but an arrangement of shared technologies, standards and processes that will be collaboratively developed and commonly applied, to deliver a set of principles, objectives and purpose against which collective enterprise can be evaluated...’

(Hemment *et al.*, 2012, p.6–8)

Academic and Director of the Future Everything Conference, Drew Hemment, identifies that the *Digital Public Space* has been ‘colonised by artists and makers as well as curators and technologists’ from the inception and maintains that the resulting fusion is a key demonstrator of the impact that a creative approach can have on technology and culture. The *Digital Public Space* will, says Hemment,

'enable digital content to be made as freely available as possible for anyone from anywhere, doing for the whole range of digitised cultural content what the Open Data campaign is doing for publicly- funded datasets' (Hemment *et al.*, 2012, p.4).

In their co-authored paper, *Taxonomy of the Digital Public Space* (Hemment *et al.*, 2012) Naomi Jacobs, Bill Thomsson, Jeremy Myerson and Kasia Molga highlight the changing nature of traditional, public, connected spaces. They provide a useful taxonomy of emerging language that reflects the new paradigms inherent within the *Digital Public Space* and compares them to traditional terms; Created rather than Private; Encrypted rather than Social; Indexable rather than Public, and Sharable rather than Social. (Hemment *et al.*, 2012, p.22). For Neville Brody, in his article *Modelling the Digital Public Space: The New Renaissance*, a direct consequence of the *Digital Public Space* multidisciplinary, networked protocol and universal language that will see '... the dissolution of disciplines. Not anti-discipline, but post-discipline... No longer will be limited by a socio industrial model requiring us to adhere to a particular restricted skill or craft' (Hemment *et al.*, 2012, p.10). Through the development of a new set of terms of engagement, *Digital Public Space* can address some of the challenges brought about by the Internet, in relation to Privacy, Memory, Identity, Governance, Democracy and Access, Control, Ownership, Commercialisation and Copyright, and seek to realize the potential to develop new networked tools for accessing of public collections. The impact of which reflects the new forms of

'... governance and community to new methods for learning and teaching; new trading mechanisms and economic models; new forms of culture; new dynamics of audience participation, new narratives, new ways to solve problems...'
(Hemment *et al.*, 2012, p.11)

Acknowledgement in Academia and Research

The fields of academia and research have also been influenced by values of openness, which in turn relates to the Research and Development modes of collaboration discussed in this thesis. Blaise Cronin, Debora Shaw, and Kathryn La Barre provide a useful investigation into acknowledgement processes within the social sciences in their co-authored journal article *A Cast of Thousands: Co-authorship and Sub-authorship Collaboration in the Twentieth Century*. Acknowledgement practices within academic 'inter- institutional, interdisciplinary, and inter-sectoral scientific collaboration' are integrated (Cronin, Shaw and La Barre, 2003). The complexity of classifying academic acknowledgments reflect the hierarchies of crediting within the arts and Cronin *et al.* give the following useful six categories: moral support, financial support, editorial support, presentational support, instrumental/technical support, conceptual support, or peer interactive communication.

Cross-sector interdependency evolving between the funded, voluntary and commercial arts and the creative digital industries, has, much like academia, become a fact of life. Cronin *et al.* note that within academia, collaboration and co-authorship has supplanted 'the privatized monastic rules of research' (Cronin, Shaw and La Barre, 2003, p.857), while within the arts, collaboration and co-

creation is dismantling the cult of the sole authority of the artist. Given the rise of 'triple helix' collaborations, as highlighted by the *CATH* project (Chapter 3) that includes an academic partner, an awareness of these categories is important.

Crediting in New Media Arts

The challenges inherent within the process of historicization of new media art has been widely acknowledged and theorized, and developed by curators within the new media art field. There is a growing awareness within our core cultural institutions of the importance of including 'the art of their own time' in public collections of art. Walsh, Dewdney, and Pringle have acknowledged that

'In what is now referred to by many as the "post digital age" (in respect of the naturalisation and ubiquity of digital culture), there is an even more urgent need to selectively capture historical examples of new media art production in collections.' (Walsh, Dewdney and Pringle, 2014, p.11)

However, if work is to be collected, then the labelling, crediting, attribution and the authorship of the work is of key importance, especially where multiple or cross-disciplinary authorship is concerned (Graham, 2008, p.197). New media art has been particularly influenced by open source values in relation to crediting. In his comparison of production processes of open source software production and participative new media art projects, Smith (2011) has provided useful insights relating to the different stages and working practices for crediting and licensing.

'A key difference is the order in which stages are considered: the licensing and crediting of new media art projects might not be considered until this distribution stage, whereas in open source software, they are a key part of the process, often considered at instigation of the initial idea.' (Smith, 2011, p.95)

Tensions have flared between new media artists who are also members of the free software communities and commercial advertising industries, when intellectual property and appropriate recognition has not been adhered to. In a talk to ad agencies, artist Golan Levin explains the currency the value that recognition holds within the arts or within open source creative communities, where financial return is not the key driver or motivation for creating work in Chapter 3 (p.34) of this thesis.

Attribution plays a central role within the developing dialogue between contemporary art, new media art and open source protocols. It could be argued that the value of appropriate attribution and crediting is not as yet fully understood by those working within commercial digital industries.

Crediting in Contemporary Arts

Within contemporary art practice, attribution and crediting an artist's intellectual property is fundamental for its historicisation and inclusion in art historical discourse and its importance cannot be overstated. Artists build their reputation and develop their career through the production, exhibition, critique, collection and sale of their art. Like intellectual property in the commercial creative industries, crediting an artist's work is central to the value added within the contemporary arts field. Recognition and acknowledgement reflect evolved hierarchies of crediting within the arts, artistic research and creative industries.

‘Attribution is often considered as the most basic requirements made by a license, as it prevents others from claiming fraudulently to own the work and allows a copyright holder to accumulate a positive reputation that partially repays their losses... it is regarded as a sign of decency and respect to acknowledge the creator by giving him/her credit for the work.’
(Wikipedia, 2015)

Within contemporary art, credits and acknowledgement are presented in a sliding scale from those who are deemed most important for the conception and latterly the production of the artwork. While there is often a complex infrastructure of professional expertise that underpins the financing, production, distribution, engagement, accession and sale of an artwork, it is the artist who is generally deemed most important in terms of crediting. Beryl Graham and Sarah Cook who have explored the power relationships within participatory arts practices between the artist and audience provide useful definitions of the different levels engagement involved within interaction, participation and collaboration, and relate these factors to issues of art authorship (Graham and Cook, 2010, p.31–2 and 112–114). While sole authorship remains the norm with the arts and humanities (Cronin, Shaw and La Barre, 2003, p.2), within participatory and cross-sector partnerships, this hierarchy is challenged and new, co-creative acknowledgment practices must develop to reflect the levels of engagement within models of collaborative production.

Appendix 3: CRUMB Discussion List

The CRUMB Discussion List “**How collaborations between the Arts and Creative Digital Industry sectors are shaping models of curatorial production, distribution and reception**” is available online at: <http://www.jiscmail.ac.uk/NEW-MEDIA-CURATING>

Introduction Text with List of Participants

Dear list,

How collaborations between the Arts and Creative Digital Industry sectors are shaping models of curatorial production, distribution and reception

This month’s theme is hosted by CRUMB team member: doctoral researcher and curator Suzy O’Hara. Suzy’s research investigates collaborative practices emerging between the arts and commercial creative industries.

There is currently a lot of interest in inter-disciplinary, cross-sector collaborations between the arts and commercial digital industries. This is exemplified, by the emergence of: strategic funding alliances such as the NESTA R&D Fund for the Arts (UK); technologist in residence programmes within UK arts organisations (Happenstance, Geeks in Residence) and in the US, artist in residence programmes within commercial digital industries (Facebook and Autodesk); collaborative incubator style, co-working hubs such as Fish Island Labs, Pervasive Media Studio (UK) and New INC, New Museum (US); temporary art hack events that engage with the field of production of digital, interactive and new media art, such as Hack The Space at Tate Modern and Culture Hack Scotland; collaborative exhibition contexts that merge traditional and new media curatorial strategies such as Digital Revolutions, with commercial competition based commissioning strategies of Google’s Dev Art,; commercial gaming and social networking platforms being used as part of museums and gallery curatorial and engagement strategies (HullCraft (Minecraft), The Photographers’ Gallery Instagram Take – over) and conferences such as Digital Utopias Conference delivered last month by AND Festival, supported by both ACE and Google UK.

My research reflects upon the differences in values, systems and working methods at play within these new curatorial contexts, and seeks to articulate an evolving curatorial role.

We are very pleased to introduce a variety of practitioners to our conversation this month. You are artists, designers, curators, technologists and researchers. We look forward to learning of your experiences and seeing where your insight, along with the voices of all of the list participants, will take this conversation over the course of the month.

To start our discussion, I would like to draw upon the invited respondents to reflect upon their own artistic and curatorial case studies and practices and share their personal experiences and thoughts on their own collaborations between arts the creative digital industries. I would like respondents to consider

the ways in which we are negotiating areas of commonality and difference between these two distinct sectors, including: Values and Motivations, Money and Cultural Value, IP and Crediting, Licensing, Roles and Working Methods, Marketing, and Public engagement.

We are looking for thoughtful comments and opinions from direct personal experience rather than 'essays' – in general, things which will be of most use to other curators, producers and artists in their work.

Participants:

Memo Atkin: Memo is an artist based in London, originally from Istanbul. His work investigates the collisions between man and machine; between science, technology, nature and society.

Victoria Bradbury: Victoria's research considers the performativity of code as it relates to participatory new media artworks. She is interested in ways that performativity exists in interactive systems that may or may not be labeled as "performances". Victoria delivered the Thinking Digital Art Hack in May 2014 and has participated in high profile art hack events including Hack The Space at Tate Modern and at Digital Utopias conference.

Dave Lynch: Davelynch.net works internationally with moving image, technology, installation & performance across the art, science, maker cultures in an arts/commercial context.

Jonus Lund: Jonas creates paintings, sculpture, photography, websites and performances that incorporate data from his studies of art world trends and behavior. He has had work exhibited at Eyebeam, New York; New Museum, New York, Xpo Gallery, Paris; Van Abbemuseum, Eindhoven, De Hallen, Haarlem and the Moving Museum, Istanbul. His work has been written about on Rhizome, Huffington Post, Furtherfield and Wired. He lives and works in Amsterdam.

Irini Papadimitriou: Irini is Digital Programmes Manager at the V&A, programming activities and events for visitors of all ages, from electronics workshops, drop-in interactives to hackathons, tinkering and digital design. Irini is also Head of New Media Arts Development at Watermans, an arts organisation presenting innovative work and supporting artists working with technology, where she is curating the exhibition programme.

Olga Mink: Olga is artistic director of Baltan Laboratories, a collaborative platform for future thinking that places art and design research at the core of its activities. <http://baltanlaboratories.org>

Danny Birchall: Danny is Digital Manager at Wellcome Collection, a role that includes commissioning games and digital art. He's @dannybirchall on twitter.

Emma Quinn: Emma is the senior programme manager of the Digital R&D Fund for the Arts at Nesta. She has over 16 years' experience working in the commercial digital media sector, the public arts sector and arts funding.

Simon Bowen: Simon is a researcher and designer with particular interests in

human-centred design, participatory design and critical design, and how they might contribute to a form of participatory innovation. He is a Knowledge Exchange Associate for the Newcastle University hub of the Creative Exchange, based within the Digital Interaction research group of Culture Lab.

Liam Jefferies: Liam is a designer, curator, researcher and educator who is currently undertaking at PhD at CRUMB. Liam's current practice and research revolves around the emerging creative and curatorial opportunities provided by Augmented Reality.

Appendix 4: Curatorial Project 1 — *Dear Angel*

4a: *Dear Angel*: Ideas Packs



Figure 34: Stevie Ronnie, *Dear Angel* 2013, website screenshot of dearangel.org. Website and Ideas Packs designed by Stevie Ronnie

All Dear Angel Ideas Packs are available to download at <http://dearangel.org/ideas-packs/>

4b: *Dear Angel*: Exhibition Essay

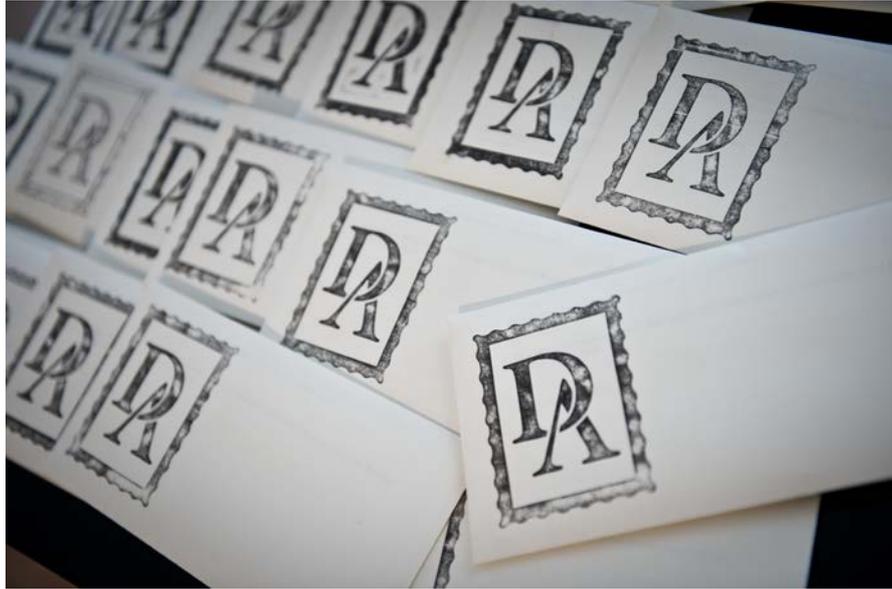


Figure 35: Stevie Ronnie, *Dear Angel*, 2013, exhibition essay in branded envelopes. Photography Colin Davison

Inspired by the Lindisfarne Gospels, an illuminated manuscript hailed as ‘one of the greatest landmarks of human cultural achievement.’¹ *Dear Angel* is an artwork that considers simultaneously the ancient art of letter writing and cutting edge technologies. The project celebrates, investigates and challenges contemporary methods of communication against an ancient benchmark that they have all but replaced.

The Gospels represent one of the earliest examples of sharing of human knowledge. For centuries, writing books, sending letters, and subsequently, printing and distributing newspapers enabled us to communicate in a way that was tangible, accessible and archival.

Contemporary digital technologies, the evolution of the World Wide Web and internet have heralded a ‘digital renaissance’ that has dramatically developed our capacity to communicate and spread, share and access knowledge. We now have at our disposal, previously inconceivable opportunities to connect and communicate with each other, regardless of boundaries, physical or intellectual.²

Dear Angel is an artwork that bridges the gap between the written letter as a physical, tactile object and communication technology in the digital age, and explores what the future holds for technology and literature in the wider framework of our evolving digital society.

¹ <http://www.lindisfarnegospels.com/lindisfarne-gospels-durham-exhibition>

² Emma Mulqueeny Reverberations of the Digital Renaissance



Figure 36: Stevie Ronnie, *Dear Angel* artwork, 2013. Installation shot at the Globe Gallery, 1–30 June 2013. Photography Colin Davison

***Dear Angel* Exhibition**

The *Dear Angel* exhibition is an opportunity to critically engage in a deeper conversation with some of the key concepts *Dear Angel* touches upon, including; online and offline communication tools and platforms, contemporary engagement with ‘place’, its histories, present and future, the impact and affect of regeneration and development on place and its communities, and how artists are using opportunities for mass, global audience participation afforded by digital technologies in the production and experience of art.

Communication

During the past century, we have witnessed technology fundamentally alter the way in which we communicate and interact. From the fax machine to the tweet, we have seen the compression, shortening and speeding up of communication³. Driven by an evolving global digital ecology, the internet has enabled our communications to be immediate and accessible to us anywhere, at any time. Within this context of ‘an always – connected, always – on, multi platform digital world’⁴, *Dear Angel* reflects upon an almost outdated form of communication, the handwritten letter, to explore the options we now have to share and exchange individual and collective thoughts, messages, or information.

³ Jonathan Harris ‘Rethinking social networking’

⁴ Jill Cousins *Creating the Backbone, Digital Public Space*, FutureEverything Publications 2013



Figure 37: Stevie Ronnie, *Dear Angel*, 2013. Installation shot at the Globe Gallery, participants engaging with the *Dear Angel* commission, 1–30 June 2013. Photography Colin Davison

The thought of hand writing a letter has seemed to resonate deeply with participants. Many choose to download and print out the *Dear Angel* headed paper or pick up a postcard and handwrite their thoughts. Having taken the time to compose and commit their thoughts to paper, their preferred delivery option is 'snail mail' (the postal system), a process that comes with both time and cost implications. Once received, we are reminded by artist and creator of *Dear Angel*, that the experience of opening and reading a letter is quite unique. 'it's a powerful thing to read a letter. I'd forgotten just how wonderful it can be. (Stevie Ronnie, 17 April 2013)

Through the work of two artists, Theresa Easton and Tom Schofield, the *Dear Angel* exhibition explores both the distinct differences and merging of on and offline communications.



Figure 38: Theresa Easton, *Broadsides and Broadsheets*, 2013. Installation shot at the *Dear Angel* exhibition at the Globe Gallery, 1–30 June 2013. Photography Colin Davison

Theresa Easton

Print maker Theresa Easton incites a direct, handwritten response from audiences with her emotive exploration of historical, social and politically driven forms of printed material. *Broadsides* and *Broadsheets* historically were single sheets of paper printed on one side with either ballads, announcing events, proclamations or advertisements, often pinned in taverns and cottages.

For *Dear Angel*, Easton's broadsides and broadsheets respond to the growing discontent in the North East to the national austerity measures imposed on sections of the community by our current government. Quotes and paraphrase's, rants and reminiscence by members of the public will be captured and reformed into hard copies and printed using tradition wooden type.



Figure 39: Tom Schofield, *Optimism Skywards* 2013. Installation shot at the Dear Angel Exhibition at Globe Gallery, 1 – 30 June 2013. Photography Colin Davison

Tom Schofield

Easton's explorations around communication remain firmly rooted in the practical issues connected with printmaking and produces objects that are both tangible and very much of the material world. In contrast, artist, researcher and interaction designer, Tom Schofield, considers the immateriality and perceived impermanent nature of communications created on the digital social platform twitter.

Optimism Skywards, a newly commissioned work, is an installation artwork which intervenes in participants' twitter messages to the *Angel of the North* by giving them physical form and firing them skywards in an optimistic attempt to get them closer to the angels.

A computer programme checks for new twitter messages (@ mentions and direct messages) to the @_dearangel twitter account. When a new message is received, the tweet is automatically printed on to a small piece of paper, dropped into the barrel of an 'air cannon' and fired skywards. It is hoped that the combined impact of the deluge of tweets directed at @_dearangel will cause the ceiling of the bank vault in which the installation is located to be eroded, finally allowing access to the sky.

Optimism Skywards explores the relationship between physical space and the social space of twitter. Physical metaphors underscore the structure and language of twitter (following, direct messaging) and the @_dearangel twitter account has become a destination point for correspondence. *Optimism Skywards* attempts to fulfil Dear Angel's function by redirecting tweets a step further towards the angels.

Place

Dear Angel is a widely participatory artwork exploring and exposing contemporary engagement with 'place' in the context of a rapidly transforming ancient, physical landscape and an evolving digitally pervasive society. *The*

Angel of the North is an art piece by internationally renowned artist Anthony Gormley. For Gormley, 'the significance of an angel was three-fold: first, to signify that beneath the site of its construction, coal miners worked for two centuries; second, to grasp the transition from an industrial to information age, and third, to serve as a focus for our evolving hopes and fears'⁵.

Initially causing wide spread nationally controversy, with the adverse reaction from local politicians and residents resulting in a 'Gateshead stop the statue campaign'⁶, it now is widely regarded as a cultural icon that encompasses the entire region in its embrace. Today, a powerful North East brand, the Angel's image represents the billions of pounds invested to drive the region's economic and physical regeneration from the vestiges of its industrial past. Projected to the world, the sculpture is used as a symbol to welcome visitors to experience our rich culture, world class food, and 'passionate people, passionate places'⁷.

'Dear Angel' explores the realities behind these messages, from a 'grass roots' perspective. In a world where we are constantly curating, constructing and presenting our individual thoughts and everyday experiences to others online through social networks, 'Dear Angel' asks us to take the time to reflect on our realities collectively. It looks for us to express a depth of feeling and be part of something bigger than just ourselves. In participating, contributors have created a multi formatted narrative of a North East that reflects a twenty first century community.

⁵ http://en.wikipedia.org/wiki/Angel_of_the_North accessed 2 May 2013

⁶ http://en.wikipedia.org/wiki/Angel_of_the_North accessed 2 May 2013

⁷ <http://www.onenortheastlegacy.co.uk/file.aspx?id=94> accessed 3 May 2013



Figure 40: Colin Davison, Angel of the North, 2013. Installation shot at the Dear Angel Exhibition at Globe Gallery, 1 – 30 June 2013. Photography Colin Davison

Colin Davison

Photographer Colin Davison, draws on over 30 years working as a commercial cultural photographer to create a new body of digital images exploring the Angel of the North sculpture. Through close and patient observation, he exposes the activity that surrounds the sculpture, using long exposure shots to reflect upon on the stark dynamic between the longevity and permanence of steel against the fleeting transience of life.

Taking one of the most photographed and recognisable cultural landmarks in the region as a subject, only someone with Davison's expert skill with the lens could capture and present a different view to what we have seen before. Far from the welcoming messages of a North East brand, here, the Angel is exposed as a raw reality; an imposing, immovable, impenetrable steel object, located on an isolated piece of land by the side of a motorway in Gateshead.



Figure 41: Victoria Bradbury, *Witch Pricker*, 2013. Installation shot at the Dear Angel Exhibition at Globe Gallery, 1 – 30 June 2013. Photography Colin Davison

Victoria Bradbury

While Davison presents an alternate present day view of the sculpture, digital artist Victoria Bradbury's new work *Witch Pricker*, investigates a more sinister aspect of North East history. Drawing upon her own family's history as a way to forge a connection with her new North East home, Bradbury traces Newcastle's witch histories back to 1649, where 30 accused women were brought forward and pricked with a pin under their petticoats. Bleeding meant innocence and reprieve; no bleeding revealed guilt:

```
void isSheAWitch() {  
  if (bleedsWhenPrickedWithPin){  
    notAWitch;  
  }  
  else if(doesNotBleedWhenPrickedWithPin){  
    isAWitch;  
  }  
};
```

An expert witch pricker was brought in for the examinations and was paid by the witch he found. Unsurprisingly, the majority of these pricked were discovered to be guilty and sentenced to death on the town moor. Using Arduino based electronics, Bradbury recreates this chilling narrative as an interactive experience where participants are invited to prick metaphorical "witches" while sorting out guilt and innocence. A disjunction between technology and flesh is established while mediated responsibility is questioned. Bradbury's work is a timely example of how access to the 'mass digitization' of cultural artifacts and collections, presents entirely new possibilities for the sharing and accessing of human knowledge.



Figure 42: Russell Maurice, *Untitled*, 2013. Installation shot at the *Dear Angel* Exhibition at Globe Gallery, 1 – 30 June 2013. Photography Colin Davison

Russell Maurice

Moving beyond both the physical and digital realms, Russell Maurice newly commissioned wall painting connects the physicality of the gallery wall with the metaphysical aspects of the spirit world, concepts of ghosting and theories on the after-life. Inspired by ruins found near where he grew up at Colt Crag Reservoir in Northumberland, his indexical, abstract images explore ways in which he can re-enchant or mythologize contemporary reality.

Participation

The desire to move viewers out of the role of passive observers and into the role of producers is one of the hallmarks of 20th century art. By harnessing the mass participatory opportunities afforded by both physical and online contemporary networks, *Dear Angel* explores the 'collective dimension of social experience'⁸ and both captures and portrays a collective narrative through the sharing of personal experiences.

Presiding over the North East region on its hill that signifies the loss of over two hundred years of industrial history and activity, the *Angel of the North* represents the impact and affect of regeneration and development on place and its communities, a recurring narrative explored by contributors in this project.

⁸ Bishop, Clare, 2006, *Participation: Documents of Contemporary Art*, Whitechapel Art Gallery



Figure 43: Revue, *Invisible Constellation*, 2013. Installation shot at the *Dear Angel* Exhibition at Globe Gallery, 1 – 30 June 2013. Photography Colin Davison

Revue

'*Invisible Constellation*', by Indian artist collective Revue (Sreejata Roy and Mrityunjay Chatterjee), is an artwork that extends the dialogue around the impact of urban transformation on communities to a global audience. They open the conversation with their personal story that details their experiences in Khirki Village, Delhi, a place that has seen radical urban change in last few years, since the city hosted the Common Wealth Game in 2010. They highlight the issues that come with the expansion and development of urban spaces including, displacements and gentrifications – which sees new waves of people move into regenerated areas, and dynamically changing the demography and social and cultural make up of communities. *Invisible Constellations* recognises that this is not a new or isolated event, and this phenomenon is happening globally.

The work invites others to contribute their stories or information on similar experiences and add to the constellation of urban narratives, which together, make up a repository that can surprise us through its linkages from one part of the world to another.

Dear Angel was made possible by the kind support of Arts Council England, Festival of the North East and New Writing North

Appendix 5: Curatorial Project 2 — *NESTA Digital R&D Fund for the Arts Application*

5a: Selected Pages NESTA: Expression of Interest 1

Question 4

Is your project...

- Expanding audience reach
- and/or
- Developing new business models

Question 5

What theme(s) does your project fall under? Please tick all the relevant boxes that apply to your project.

- User generated content and social media
- Mobile, location and games
- Data and archives
- Distribution and exhibition
- Resources
- Education and learning

Question 6

Does your project add value to the public?

There will be an opportunity to expand on public value in the next section of the form.

Yes, my project adds public value.

Proposition

Question 7

Please provide a summary of your R&D project.

Max 100 words

ISIS and Vector76 will explore and make use of a virtual reality model of Newcastle and Gateshead developed by Northumbria University, to engage new audiences in visual and media arts projects via an online 3D immersive environment. Four artists will undertake research residencies to develop artworks to occupy the online space; one pilot project will be taken forward and realised. The content and services will be available to a range of connected devices from smartphones, tablets and PC's. ISIS will work with regional organisations to explore ways the model can display their content to extend audience reach.

Question 8

In one sentence please tell us what it is your project is testing that is beneficial to the wider arts sector. i.e What is your research proposition?

Max 50 words

The project will explore opportunities for interactive and participative art and its audience experience through an interactive virtual reality urban model of Newcastle and Gateshead.

Question 9

Please briefly tell us how your approach to audience engagement and/or business model development is innovative:

Max 100 words

The model will provide a virtual space to experience artworks. Audiences will engage remotely and locally with the model through online and mobile platforms, designed specifically for mobile/web users. Becoming a limitless playground for artists and audiences; audiences will be able to interact, participate and influence the virtual artworks, allowing them to re-imagine their cityscape and the nature of contemporary art. The model will contain real-time information feeds and audiences can contribute content. This will be the first augmented city model of its kind, allowing audiences to engage and interact with real and virtual artworks and events.

Question 10

Specifically, how does your project add value to the public?

Max 50 words

The model will provide audiences with a new online virtual experience of Newcastle/Gateshead and contemporary art through immersive gaming technologies. It will enhance user knowledge of artworks and cultural activities (actual and virtual), acting as a real-time application for live cultural information and user generated content and interaction.

Learning/Wider Impact

Question 11

What data, evidence and research findings will your project deliver that will be valuable to the arts sector?

Max 100 words

This is a valuable opportunity to research how audiences respond to, consume and engage with virtual, interactive, participative arts experiences. Using a combined approach, software built-in to the model will track quantitative data on numbers/patterns of audience use, evidence will be gathered on qualities of audience experience. Revealing processes of production and patterns of reception concerning breadth and levels of engagement, the kinds of engagement and also impact of online engagement to wider non-digital engagement with the arts. The information will extend knowledge the sector has on audience engagement with virtual, immersive, augmented-reality arts experiences.

Question 12

Does your project develop new products/services that can be shared by other organisations?

Yes

If you answered yes to the question above, what are these? Briefly list them.

Max 50 words

- Virtual tool to experience and exhibit contemporary art
- Platform for live cultural information/content
- Research will be shared by publication
- Artists may produce software/apps which might be usable by others (difficult to say prior to production)

Question 13

How do you plan to share the learning from the project with the rest of the arts sector? (Research, data and learning)

Max 100 words

Research will form part of Suzy O'Hara's PhD at CRUMB (Curatorial Resource for Upstart Media Bliss). CRUMB have experience of sharing/discussing research with public, professional and academic sectors via website, discussion list, professional development masterclasses, symposia and publication. A project website will be live throughout its lifecycle, remaining as legacy, linked to ISIS/CRUMB sites. A CRUMB discussion list would discuss findings and O'Hara would present papers at academic events. ISIS would organise a sharing event to provide opportunities for the sector to engage in the research and how they can utilise it as a tool.

Collaboration

Question 14

What organisations are you working with on this project? Please list the name of the organisation and their role in the project

In order to add text to the table you need to click on the button 'Add Row' below. You can add more than one organisation by clicking on the button again.

Name of organisation	Role
Department for the Built Environment, Northumbria University	Technology Provider
Gateshead Council	Creative Partner
Newcastle Arts Team, Newcastle City Council	Creative Partner
Newcastle Gateshead Initiative (NGI)	Creative Partner
Baltic Centre for Contemporary Art	Creative Partner

Question 15

Please give details of your experience/track record in the arts:

Max 200 words

ISIS Arts is a visual and media arts organisation, working in the UK and internationally with artists to produce and present contemporary art, film and new media.

For over twenty years ISIS Arts' has run a programme of residencies, commissions, projects and events. ISIS is particularly interested in taking artworks to audiences that would be less likely to experience contemporary art and in engaging artists whose work explores our societal and environmental relationships.

ISIS works with high quality artist from the UK and all over the world, providing them with research time, training and critical support in their city centre studios and media training space. ISIS work in partnership with organisations and festivals to showcase artworks, previous collaborations include; AV Festival, AND festival, Göteborg Culture Festival (Sweden), Berwick Film &Media Arts Festival, the International Digital Art Festival (Bulgaria) as well as Local authorities, schools, museums, universities and communities.

The Big M, is an inflatable, mobile exhibition venue for the presentation of video/digital media developed and run by ISIS Arts. ISIS has toured artworks by over 100 international artists to rural and urban settings in the UK and internationally.

Question 16

How do the skills and experience of your technology provider(s) specifically relate to the project?

Max 100 words

Vector76 specialise in the development of applications and events, combining 3D virtual worlds and augmented reality technologies to deliver unique virtual projects that interface with the real world. Vector76 have vast experience in the creative digital sector including videogame design, animation and music production. Their Augmented Reality Apps are published on iPhones, iPads, Android smartphones and tablet devices.
The Department for the Built Environment, Northumbria University have worked with Newcastle City Council and Gateshead Council to develop Virtual NewcastleGateshead (VNG), a 3D digital model of core urban areas. VNG has previously been used as an urban planning and visualisation tool.

Question 17

What experience does your researcher/research team have of working with arts organisations and/or technology providers?

Max 100 words

Suzy O'Hara is researcher with CRUMB University of Sunderland. O'Hara has held posts at Durham City Art, Durham City Vision and National Glass Centre. She specialised in arts development, commissioning and production. O'Hara has engaged with technologists including mobile platform designers, video production, website designers and app developers.
CRUMB (Professor Beryl Graham, Dr Sarah Cook) have worked with Contemporary Arts Society, BALTIC, National Gallery of Canada, Banff Centre Canada, Eyebeam New York and Tyneside Cinema on joint research events and exhibitions, and have been invited speakers at Tate Modern, Tate Liverpool, V&A, and FACT.

Project Delivery

Question 18

Briefly outline how you will deliver the project:

Max 100 words

ISIS will manage the project research and delivery, working closely with the artists to manage the residencies and select the pilot project alongside an external panel. ISIS will monitor the technology providers and researchers, hosting regular steering groups to ensure timeframes, aims and objectives are met by all partners. The technology providers will provide technical support and professional development to the artists to ensure they realise their projects. The research team will work closely with the artists, technology providers and ISIS to evaluate the entire project, feeding back relevant learning to the arts sector, academics, digital developers and artists.

Question 19

What are the risks associated with your project?

Please list them in the table below and explain how you will mitigate the risk.

In order to add text to the table you need to click on the button 'Add Row' below. You can add more than one risk by clicking on the button again.

Risk	How will you mitigate this risk?
Ownership of Intellectual property (IP) of artworks in online virtual model	ISIS has an IP specialist lawyer on the board of directors and we will consult with technology providers, artists and solicitor to establish where IP lies for artworks and model. Researchers will share this learning to the sector.

Question 20

Does your senior management support this project? At final application stage you will be asked to supply a letter of support.

Yes, senior management in my organisation supports the project.

Research

Question 21

Please briefly explain the research methodology and how it meets the project.

Max 200 words

Much existing research in the field concerns only quantitative or demographic audience studies, or commercially-oriented HCI research. The review will include sources such as: *Arts Audiences: Insights* (ACE 2010); *Consuming digital arts* (Synovate, 2009). This project aims to build upon this research to address missing areas of audience experience of art, and processes of collaboration, adapting methods from Muller, Mounajjed, and Gaver (Graham and Cook 2010: 187)

A combined research methodology will include all stages of the lifecycle:

- Inbuilt data systems: Using the software's own tracking systems to provide data including: audience demographic; patterns of engagement; access devices; social networking response.
- Audience studies: Adapting Muller's methods of interview and recall of experience, a cross section of audience members would be studied in depth. Muller's methods include involvement from the artists in the design of the method, concerning experiential 'intent'.
- Process analysis: Semi-structured interviews and observation of all key partners within the project at various stages throughout the project, to identify any tensions and solutions in collaborations between artistic and commercial interests in new media.
- Discursive sharing: Hosting Discussion Lists to engage peers in a critical dialogue developing key issues.

Question 22

How will the research benefit the wider arts sector?

Max 100 words

As the project will be gathering data from the technology, audiences and partners pre, during and post project, it will be possible to establish a clear picture of the impact that digital arts commissions have on audience experience, engagement and development throughout the project life cycle. Others will be able to use this research/data in their own programme planning, when they are developing their arts activity and for audience development purposes.

Monitoring

You will need to provide information about the number of people within your senior management, and on your management committee, board, governing body or council below.

We may use this information to report to the Government or to monitor the different backgrounds of people who receive grants.

We will not use this information to assess your application.

If you do not know some of the information or you would prefer not to provide it, you can fill in the 'Not known/Prefer not to answer' box.

How many members are there in senior management and on your management committee, board, governing body or council?

Total number:

6

5b: Selected Pages NESTA: Application 1

Question 7

What is the primary theme that your project falls under?

Distribution and exhibition

(Optional) If your project also has a secondary theme, please select from the following options.

Mobile, location and games

Proposition

Question 8

What is the name of your project?

Urban ART

Please provide a summary of your R&D project.

This should be written in plain English that is easy to understand by people outside of your sector.

This is your opportunity to market your project and this description will be used to publicise your project should your application be successful.

Max 200 words

Urban **ART** is a platform to access new arts commissions within a 3D city model of Virtual NewcastleGateshead (VNG). Whilst we have seen a growth in location-based smartphone Apps aimed at uncovering cities and their dynamics, Urban **ART** will be designed not on a map but on a gaming platform integrating a 3D city model.

3D city models are digital representations of urban areas often used for future planning or tourism to reveal the history of the city. Through gaming technologies, Urban **ART** will innovatively commission 3 contemporary artists to interact with the model, finding a new place for art in our cities and questioning the role of art in our public realm. These will be accessed by audiences via desktop/mobile devices using GPS where appropriate.

Urban **ART** partners- ISIS Arts, Vector76, Northumbria University and CRUMB, University of Sunderland will work closely with the artists at the point of creation, to consider audiences from the outset, challenging preconceptions of what an arts experience is and where it happens.

Urban **ART** will explore new ways for artists to engage their audiences and develop prototypes for future platforms in this and other cities.

Question 9

In one sentence please tell us what it is your project is testing that is beneficial to the wider arts sector. i.e What is your research proposition?

Max 50 words

Augmenting the Reality of a 3D city model we will test methods for understanding audiences' experience of the arts through commissioning works which explore live experiences, the virtual landscape and mixed reality art, producing research the arts sector can utilise to inform their future digital programming and audience development.

Question 10

Please explain using specific examples why this is important for other arts organisations.

Max 100 words

Urban **ARt** will test new platforms to commission and exhibit artworks, by:

- using a commercial gaming platform with a 3D city model to facilitate the production, distribution and exhibition of contemporary art experiences for a broad, networked audience sector learning.
- exploring models of collaboration between the 'public' arts sector and 'private' technology sector to produce media arts for wide audience consumption.
- capitalising on the platforms capacity to access real-time information feeds and for audiences to contribute content we will develop new methods for the study of audience experience which will be useful for artists, technologists and arts organisations.

Question 11

Please describe how your approach to audience engagement and/or business model development is innovative:

Max 200 words

Urban **ARt** will explore and increase audience engagement in the arts by:

- utilising an existing, commercially available gaming platform to provide a new virtual space to experience contemporary artworks where audiences will engage remotely and locally with the model through on-line and mobile platforms, designed specifically for mobile/web users.
- Increasing access to digital tools and platforms enabling arts organisations to widen the exhibition and distribution of their work, using the technology to deepen and increase audience engagement and understanding.
- challenging preconceptions around how and where audiences can engage with art experiences
- making available real world 3D city models to view and engage with artworks, thereby creating a new public realm for public art.

At this stage Urban **ARt** is not about promoting or increasing audiences for existing art works, but will uniquely bring together technologists and academic researchers to work closely with the artists at the point of creation in order to consider audience engagement from the outset.

Question 12

Specifically, how does your project create public benefit?

Max 50 words

Urban **ARt** will provide unique access to the urban landscape of our public realm providing new opportunities to interact with our cities and its neighbourhoods. Through the work of artists and technologists our cities can be reimagined creating a place for the voices of our citizens to be heard.

Project Research and Learning/Wider Impact

Question 13

Specifically what data, evidence and research findings do you anticipate your project delivering? What impact could this have on other arts organisations digital strategies?

Max 300 words

Many arts organisations do not have a strategy for digital or new media *art*, and only some have a strategy for using digital media for collections, education, marketing or participation. Because there is often confusion between the areas, this project therefore aims to clearly target strategies for digital art.

The artwork itself, including the modification of an existing commercial gaming platform for art, will evidence the critical and aesthetic possibilities of the media via exhibition, and hence impact upon strategies of production, commissioning and exhibition.

The research on collaborative production methods aims to evidence useful methods, including the 'commission to beta' mode, and to identify the tensions between art and digital sector methods such as IP, Time/Capacity and Budget in order to propose possible solutions to organisations, including production labs.

The research on audiences will produce quantitative data that can be tracked utilising a modified, inbuilt system - expected quantitative data sets include; numbers of participants and patterns of audience use. Qualitative data sets would reveal patterns of reception concerning; the breadth and levels of on-line audience engagement, the kinds of experiences audiences can have in virtual, augmented-reality arts experiences, the impact of on-line engagement to wider non -digital engagement with the arts. The findings would aim to inform the strategies for exhibition of, and audience engagement with, new media art, especially to identify new audiences in different locations.

Altogether, the project aims to Inform and encourage strategic commissioning, exhibition and audience digital art policies by providing a practical case study with clear research based outputs throughout the project life cycle.

Question 14

Does your project develop new products/services that can be shared by other organisations?

Yes

If you answered yes to the question above, what are these? Briefly list them.

Max 50 words

Urban **ARt** provides a new model for commissioning artwork with artists and technology partners.

Urban **ARt** is a digital framework for collaboration between the arts and technology sectors fusing 3D city models with creative artistic processes that are both transferable and applicable to other urban settings.

Question 15

What measures have you put in place to ensure that the 'project' and its outputs or products are accessible to disabled audiences, peers and arts organisations?

Max 100 words

The project website and App will be fully accessible and adhere to The World Wide Web Consortium (W3C) guidelines to include web content accessibility guidelines. The CRUMB web site is also W3C compliant.

As lead organisation ISIS has rigorous Equal Opportunities and Safeguarding policies in line with The Equality Act 2010 and the selection, commissioning of artists; delivering of commission related workshops; selection and delivering of focus group sessions; artist talks will adhere to these to ensure we meet the expected standards.

Public venues for any artist workshops; focus groups, public presentations and sharing event will be fully accessible.

Question 16

How do you plan to disseminate the research, data and learning from the project more broadly across the arts sector?

Complete the table below.

In order to add text to the table you need to click on the button 'Add Row' below. You can add more than one row by clicking on the button again.

Question 17

Specifically how will the research be disseminated within the research community i.e. what are the benefits to the researchers own work and research discipline?

Max 200 words

An Urban **ARt** website will be live throughout its lifecycle, as legacy, linked to ISIS/CRUMB sites. The CRUMB website gains 300 visits per day, and the discussion list has over 1,300 international members.

Publications including 1 report (available free as PDF) and references to this in further publications. Publications such as Rethinking Curating and SFOMA 010101 research report have been widely cited - see CRUMB web site for outputs including research conference papers.

CRUMB and ISIS travel to many international events, and have presented at conferences at V&A London and ISEA in Sydney –this is likely to continue in the longer term as a means of dissemination. CRUMB conference presentations planned during the project period include both digital sector and art sector:

CHI in Toronto
ISEA in Dubai
SIGGRAPH in Vancouver
MuseumsNext in Gateshead
Thinking Digital in Gateshead
CRUMB professional development workshop in London

CRUMB Professional Development Courses such as Commissioning and Collecting Variable Media, and Open Source and Curatorial Practice have proved very effective in disseminating research.

New knowledge generated throughout this project will add to the body of research in this field generated by CRUMB and more recently by ISIS and their audience research work.

Question 18

What measures have you put into place to ensure that the learning and dissemination are made accessible to disabled audiences, peers and arts organisations?

Max 100 words

As lead organisation ISIS Arts has rigorous Equal Opportunities and Safeguarding policies in line with The Equality Act 2010. The universities also adhere to such policies. The selection, commissioning of artists; delivering of commission related workshops; selection and delivering of focus group sessions; artist talks will adhere to these to ensure we meet the expected standards.

Public venues for any artist workshops; focus groups, public presentations and sharing event will be fully accessible.

For sharing and dissemination the CRUMB website has been built to AHRC standards to ensure equality

Question 20

Please give details of your organisation's experience/track record in the arts:

Max 200 words

ISIS Arts www.isisarts.org.uk is an experienced visual and media arts organisation, working in the UK and internationally with artists to produce and present contemporary art, film and new media.

For over twenty years ISIS Arts' has produced a programme of residencies, commissions, projects and events in cities and local communities. ISIS is particularly interested in taking artworks to audiences that would be less likely to experience contemporary art and in engaging artists whose work explores our societal and environmental relationships. We primarily present work within public settings to realize this ambition.

ISIS works with excellent artists from the UK and all over the world, providing them with research time, training and critical support in our city centre studios. ISIS work in partnership with organisations and festivals to produce and showcase artworks, including; AV Festival, AND festival, Göteborg Culture Festival (Sweden), the International Digital Art Festival (Bulgaria) as well as Local Authorities, schools, museums, universities and communities.

ISIS has toured artworks by over 100 artists to rural and urban settings in the UK and internationally.

Urban **ARt** builds on our experience working with UK and international partners to commission artists for our urban environments.

Question 21

Describe the technical solution you will be using to deliver the project. Please be as specific as possible.

Max 200 words

VNG is a 3D city model developed by Northumbria University. Working with the team at the university Vector76 will be converting the model data from the existing virtual NewcastleGateshead model, optimising its readiness to deploy on-line via Unity 3D platform.

Unity 3D ensures that we can output to a range of connected on-line devices along with integrating directly with our chosen augmented reality platform from Qualcomm. The Qualcomm AR platform enables us to output to both iOS and Android, covering most of the mobile/tablet market.

The fully immersive 3D virtual version of Urban **ARt** will be delivered via Unifier, a bespoke on-line virtual world platform and self contained three dimensional on-line space that integrates well with Unity 3D. This allows us to transfer 3D model assets and other content directly into the virtual space. In addition Unifier has a built-in administration facility to aid in managing the space.

The Urban **ARt** App will be produced to deliver the augmented-reality version of the project. The core AR content will be developed via Unity 3D and Vuforia and delivered via iOS & Android for mobile/tablet users.

Question 22

How do the skills and experience of the technology provider specifically match the technology solution?

Max 200 words

Northumbria University's Virtual Reality and Visualisation group (VRV), has worked with Newcastle City and Gateshead councils to develop Virtual NewcastleGateshead (VNG), a 3D digital model of urban areas within the city. Developed as part of the urban planning process to aid greater accuracy and efficiency for all parties, VNG provides an innovative communication tool, with proven scope beyond the planning process. Experienced in their field the VRV group has specialised in architectural visualization and documentation for over 10 years.

Vector76 is experienced in 3D virtual and augment reality solutions collaborating on mixed-reality events produced, for example, via Second Life and OpenSim for clients including Tyneside Cinema, Evolution Festival, ~Flow, Bedes World and ISIS Arts on Tyneside, and Go North Festival Inverness, European Youth Festival Nykobing, Denmark.

Vector76 transforms real world locations and buildings adapting them to life size immersive environments with 3D/2D Triple AAA videogame production skills and traditional design disciplines that lend themselves to this type of specialist work.

Vector76 uses a range of technology platforms including the Unity 3D game engine, iOS (Apple) and Android (Google) along with the Qualcomm and Metaio Augmented Reality Software. Max and Maya 3D are used for modeling and animation.

Question 23

Describe the main areas of research expertise / interests for the research partner, including any previous research relating to the Fund's thematic areas?

Max 200 words

CRUMB's research concerns curating new media arts, and all of the thematic areas within this fund are covered, with particular interest in critical audience research, commissioning new work, and communications technologies.

Professor Beryl Graham's PhD concerned audience interaction with new media art, including audience research on her curated exhibition *Serious Games* for Laing and Barbican art galleries. She has published books and chapters on the subject with MIT Press, Heinemann, and University of California Press, curated professional development events with Contemporary Arts Society and BALTIC, and been invited to lecture at Banff Centre Canada, Tate Liverpool, V&A, and FACT. Her book with Sarah Cook, *Rethinking Curating*, includes chapters on audience, collaboration, and lab models of new media art production.

Suzy O'Hara is a researcher on art/digital sector collaborations with CRUMB, previously working with Durham City Art, Durham City Vision and National Glass Centre, specialising in production and commissioning. O'Hara has used new media for publicity and audience engagement, and has produced works where artists have collaborated with technologists including mobile platform designers, website designers and app developers, eg Tim Brennan's locative media work on a bus route <http://dimplecms.com/case-studies/#campustrails>

Question 24

Describe what experience the three partners have of similar collaborations? What is the capacity for R&D within the group/individual organisations?

Max 200 words

ISIS works in partnership with many organisations and agencies, recently developing an App with Vector76 for our Arts Council Strategic Touring Programme and, with Culture Lab, Newcastle University, creating audience development tools and joint artist research residencies.

Vector76 have worked on a range of virtual and mixed-reality projects including:- Tyneside Cinema 'Carter is 40' -a mixed-reality event to celebrate the film anniversary using a 3D virtual world, live video streaming and for Evolution Festival, live streaming the band Littleboots in a 3D environment, attended by international avatars.

CRUMB with Research Partner Eyebeam, a US new media art production lab, collaborated on a three year AHRC Research Grant, researching collaborative art/digital production models including curating exhibitions of newly produced beta version products, and developing a curatorial masterclass on Open Source methods. CRUMB has also commissioned new works from art/technologist collaborations.

Northumbria University and VNG have a proven R&D background. The VNG project works collaboratively with many European partners furthering the scope of the model, including; integration of live data sets, creation of virtual and augmented environments (a medieval version of VNG) and 3D print models (recently to communicate the design of Northumberlandia by Charles Jencks).

Project Delivery

Question 25

Please outline how you will deliver the project including:

- Individuals responsible for managing the project day to day
- How will the partners work together
- Service level agreements in place with technology providers/researchers
- IP arrangements
- Key project milestones

Max 250 words

The overall project will be managed by ISIS Arts, with each partner taking responsibility for their elements to ensure that milestones are met. At ISIS Arts this will be Sharon Bailey and Clymene Christoforou, at CRUMB Professor Beryl Graham with day to day support from phd researcher Suzy O'Hara, at Vector76 Shaun Allan and at Northumbria University Dr. James Charlton.

Regular management meetings will be set up to monitor and evaluate the project. For during the project, researcher Suzy O'Hara, will carry out research from a base at ISIS Arts.

A **Collaborative agreement** will be drafted by Sunderland University, with subsequent support from Muckles Solicitors which the partners help shape and sign. It will identify:

- all parties and their responsibilities
- what they are not doing
- project duration
- project management roles
- payment details
- how often we will meet and where
- rules for termination of the project
- withdrawal process and intellectual property
- the licensing and ownership of the IP
- publicity control
- confidentiality statement
- academic paper control

ISIS will issue separate **contracts to the artists**

Northumbria University will issue their license for permission to use selected areas of the model. For the elements of the model agreed this license will be perpetual.

The partners have already met with Alex Craig, Partner and IP specialist at Muckles solicitors in Newcastle to examine and address issues of IP. The conditions of which will be addressed through the collaboration agreement above.

Key milestones include 3 artist commissions, completion of user interfaces and dissemination of research findings.

Question 27

Please provide a marketing plan by filling out boxes below.

Introduction: What is your proposition?

Max 200 words

Our project will expand audiences to the arts by commissioning artists to contribute to the public realm of a virtual urban environment. Artists will be supported to develop creative interventions and art experiences using gaming technologies that are not usually available to them.

This new platform Urban **ARt** will be fully available on-line and through a dedicated AR App, which will be played/viewed using smart phones and tablets.

The three artist commissions will work in distinct ways to target three different user groups to ensure that a wide, and potentially diverse, audiences are developed for the platform and App. Artists will be selected by open call and we will commission to explore these areas:

- Commission 1 will be a fully immersive, on-line project utilizing features inherent in the gaming technology.
- Commission 2 will be an exploration within the public realm that will mix physical and on-line audience interaction with the potential for users to shape the on-line content.
- Commission 3 will support a one-off live performance and on-line event, linked to a regional festival, that maximises the potential of social networking for audience engagement.

Gap analysis: What are the key trends in the market? Who are your competitors?

Max 200 words

Mobiles/tablets currently out sell desktop computers 2 to 1. By 2016 this will have risen to 6 to 1, making mobile THE dominant platform for years to come. AR/VR is a niche market and expected to grow hugely as global companies such as Intel, Google, Samsung, Ericsson, Sony, LG and Apple launch products.

While applications from companies such as LayAR, Aurasma, Google could be viewed as "competitors" they have a more generalised market objective primarily targeting retail customers rather than cultural producers and audiences.

There are some notable festivals (AR4Basel and Amsterdam virtual festival) and organisations (Moma) who have used AR arts based projects innovatively within urban settings and created apps: <http://popupcity.net/technology/top-5-apps-for-exploring-the-city/>).

3D city models have increased steadily, primarily because of significant advancements in capturing and reconstructing the data. There are 1,000 city models in existence, with Europe and North America leading the trend. Primarily developed for urban and architectural analysis, recent applications of 3D city models include utilisation for tourism (interactive environments for navigation, integration of live data and communication of urban histories), but these appear to not be engaged in commissioning and exhibiting contemporary art.

Prospect users: Who are you targeting?

Max 200 words

ISIS's programme of work is often presented within the public arena and our audience strategy feeds this project. Our projects are varied and take place in city centre locations, festivals or are linked to specific communities within public settings.

Our recent Strategic Touring Programme project, using our inflatable space The Big M to present media work, targeted young people 14-19 years. For

- Commission 1 we will continue to work with this demographic extending the work we have already started. There is a significant gap in the engagement of young people, who already have an interest and familiarity towards technology and digital media, accessing cultural opportunities.
- Commission 2 will target a broader 'incidental' audience with no previous media or art knowledge. Our project will be sited within a busy, city centre location to ensure a broad cross section of people.
- Commission 3 will connect to a regional festival and will primarily be targeting an already culturally aware audience.

The on-line platform and resulting App will be attractive to already tech savvy users but through the commissioned artworks we aim to entice the less technological.

Product, Price, Place: How will the launch be supported? Do you have pricing objectives? What are your distribution channels?

Max 200 words

The Urban **ARt** framework/methodology used to manage and produce the project/events, which could be applied to other urban areas with access to virtual 3D city asset(s) and the relevant developer resources.

Additionally the resultant App and web-based application produced, though available free, could be developed to include a revenue channel. We plan to approach Newcastle Business School to consider how our 'products' may be monetized.

The launch of the app and web based platform will be hosted by Northumbria University with support from NewcastleGateshead Initiative. As part of our PR marketing campaign key figures from the arts and technology world will be invited to preview the work and meet the team behind the product.

We will capitalise on the range of sector knowledge within our team to create a distribution strategy based on partner's expertise, contacts and extensive networks.

Partners will seek opportunities for Interface and project sponsorship from the business sector.

Partners will hold meetings with cultural venues to explore potential for Urban **ARt** to include art within their buildings.

Promotion: What are your communication plans? i.e. promotions, PR, publicity, advertising, digital plan, personal, etc.

Max 200 words

ISIS will contract an experienced Audience Development and Marketing Coordinator for 20 days over the project period. They will have a wide experience of promoting and marketing projects and events, and will devise distinct strategies for each commission and overall promotion of the platform and App.

They will:

- Oversee the production of promotional literature and branding
- Support the coordination of ISIS Arts' and partners' audience development aims
- Develop and implement social media campaigns in relation to each area
- Ensure all activity is documented and monitored
- Maintain on-line presence for Urban **ARt**
- Prepare press releases
- Contact local and national press to cover each event, including those related to commissions, artist talks, dissemination events and final launch.
- Circulate information through ISIS Arts' and partners' networks.

The branding for Urban **ARt** will be devised in February 2014.

Each artist commission will have specific marketing aims targeting appropriate audiences, for example Commission 1 will make expansive use of social networking.

ISIS Arts has a monthly e-newsletter and this project will be featured regularly and each partner will assist in the promotion of the project using their own websites and networks. NGI will support the final live and launch event.

Budget: What is your budget for marketing?

Max 200 words

The overall marketing budget is £8,100

It includes fees for a marketing person, a project website, graphic design and documentation costs. The Audience Development and Marketing Coordinator fee is £3,500, for 20 days @ 175 per day.

The website will be built by Vector76, for a cost of £2,000 (4 days @ 500 per day) working alongside our graphic designer.

We have earmarked £750 the design and branding of Urban **ARt**, as well as a simple flyer and sticker design. The cost of printing flyers and stickers is £750.

There is £450 to cover three artist talks events.

The launch event will take place at the University of Northumbria and there is £150 towards hospitality costs.

Implementation: List the key requirements for implementing this plan? Who is responsible for what?

Max 200 words

ISIS Arts will have overall management of the marketing plan.

A person will be appointed to carry out the duties of audience development and marketing outlined above (in Promotion). ISIS has worked with a number of people with considerable marketing experience and will be responsible for the appointment, providing of a brief and management of their work throughout the project.

We acknowledge that we need to make the most of marketing expertise available and ISIS's Projects Coordinator Charlotte Gregory will provide additional support for this aspect. She will particularly take responsibility for support with social media activity via Facebook and Twitter, ISIS monthly e-letter, advertising for artist talks and exhibition related events and to ensure the project is documented.

Communications between all partners will be vital. The first partner meeting will include a detailed discussion about our marketing aims and plans and partner roles. At the start a marketing and communications schedule will be produced that will be circulated to all parties. Regular partner meetings will ensure our plan is on track.

The project will make maximise the resources available to ensure that the promotion and marketing ties into partner websites and communications.

Question 28

What is the start date of your project?

10/03/2014 00:00

Question 29

What date will your project go live to market? i.e When will your product/service/performance etc first launch?

12/02/2014 00:00

Question 30

When will the research be completed?

Your project should be no longer than a year from receipt of funding to the end of the research.

07/03/2015 00:00

Question 31

Describe the key risks for the project and how you will mitigate them. Please include in your risks **ALL** of the following:

- partnership breakdown
- slippages in the timeframe for the technology development and research
- insufficient funding
- key members of staff leaving from yours/partner organisations.

In order to add text to the table you need to click on the button 'Add Row' below. You can add more than one row by clicking on the button again.

Risk	How will you mitigate this risk?
Partnership breakdown	There has been a thorough collaborative development period leading to this application, and project partners have a clear understanding of their roles and responsibilities. At the start of the project a collaboration agreement will be devised, written and signed. During the project regular meetings will be held with all partners to monitor and evaluate the progress of the project
Slippages in time frame	We have carefully and thoroughly considered the time to deliver the project. We have built in extra time in case of slippages
Insufficient funding	The partners are fully committed to delivering this project. We have included a contingency in case of overspend. Each partner believes they can deliver the project in budget and each is will to give additional support if needed.
Key members of staff leave	The partners are all delivering the project as part of teams within their own organisations. Each lead has a fellow colleague who could take over.
Artists leave the project	All efforts will be made to ensure that the artists complete their contracts. In the event of an artist leaving the project before completion, and the artist has not drawn down their funds these will be reallocated to a new artist, or efforts will be made through the academic routes to broaden the content development.
Issues develop around tracking audience for quantitative data	Adequate provision will be made to ensure that the researchers and technology partners work closely to define and establish the data needed to track audience behaviours.
Data not being in a format that is readable.	Clear definitions of the formats needed will be provided by the researchers at the start of the project.
Accessing audiences for interview	ISIS will draw on extensive experience, contacts and networks to build audiences for this project.
The chosen methodology is not appropriate for the context of this project.	Research methodology will be reviewed and refined during the lifespan of the project
Things may go wrong technically or take more time than originally planned /pushing boundaries of tech/newness has its problems	Throughout we will need to ensure we are doing what is realistically feasible within the time-scale and budget and that any serious technical problems are dealt with sensitively and swiftly. All partners have contacts and colleagues with wide technical expertise and these will be drawn on if necessary
Conflict between artists aspiration and what is technically possible may arise	Artists will need to be selected carefully and unrealistic expectation capped at an early stage whilst not putting a cap on the creativity. The artist contracts and briefs will provide guidelines and limit unrealistic expectation. Meeting with the providers and artists will take place regularly.

Research

Question 32

Please briefly explain the research methodology and how it meets the project.

Max 400 words

Much research in the field concerns only quantitative or demographic audience studies, or commercially-oriented Human-Computer Interaction (HCI) research. This research will focus on qualitative research methods concerning production methods, and audience experience of contemporary art through immersive technologies.

the Urban **Art** research is informed by existing research on cultural audiences and how on-line content can encourage physical attendance/participation (Synovate 2009), and some HCI approaches which address art and design artefacts, including Sarah Pink's sensory ethnographic methodology for researching non-verbal audience experiences, and Larissa Hjorth's research on gaming cultures, technologies and experiences, and some previous NESTA/ACE project methods including *Scratchr*, *Happenstance*, and *Knowle West Media Centre* (Native 2013; NESTA 2013; Pink, 2009; Hjorth, 2011).

Urban **Art** will build upon these research fields to address missing areas of research concerning audiences' experience of art and processes of collaboration, drawing on art-specific audience research methods from Muller, Mounajjed's research on Rafael Lozano Hemmer artworks, and Gaver's 'Cultural Probe' method (in Graham and Cook 2010: 187).

The research methodology will include all stages of the project:

- Inbuilt data systems: Using the software's own tracking systems to provide data including: audience demographic; patterns of engagement; access devices; social networking response.
- Audience studies: Adapting Muller's methods of interview and recall of experience, a cross section of audience members would be studied in depth. Muller's methods include involvement from the artists in the design of the method, concerning experiential 'intent' (Muller 2008). Audience focus groups will investigate how audiences are experiencing the technology.
- Process analysis: Semi-structured interviews and observation of all key partners at various stages throughout the project, to identify any tensions and solutions in collaborations between artistic and commercial interests in new media.

References:

- Graham, Beryl, and Cook, Sarah (2010). *Rethinking Curating: Art After New Media*. Cambridge: MIT Press.
- Hjorth, Larissa (2011) *Games and Gaming: An Introduction to New Media*. London. Berg Publishers.
- Muller, Elizabeth (2008) *The Experience of Interactive Art: A Curatorial Study*. Unpublished PhD Thesis, University of Technology, Sydney.
- Native, (2013) *Knowle West Media Centre | Native*.
<http://native.artsdigitalrnd.org.uk/projects/knowle-west-media-centre/>.
- NESTA, (2013) *Case Studies | The Digital R&D Fund for the Arts*.
<http://www.artsdigitalrnd.org.uk/content/case-studies-0>.
- Pink, Sarah (2009) *Doing Sensory Ethnography*, Sage Publications Ltd, London.
- Synovate (2009) *Consuming digital arts* London: Arts Council England.

Question 33

How will the research outcomes benefit the wider arts sector?

Max 200 words

CRUMB and ISIS Arts have extensive experience of reaching arts sector audiences in an accessible way via exhibitions, presentations, events, publishing and workshops.

The commissioned artworks will illustrate the critical and aesthetic possibilities of the Urban **ARt** platform, presenting new ways for the arts sector including artists, designers and curators to engage a wider audience.

The research on the collaborative production processes aims to make visible useful models and to identify the tensions between the arts and digital sectors proposing new ways of working together

The research on audiences will provide useful information concerning some quantitative information about those audiences, which would be of use to funders, marketers and arts organisations.

However, it more specifically aims to address a gap in the research concerning the in-depth detail of the audience *experience* (related to artist intent), benefitting artists, designers, producers, curators, educators and exhibitors as well as arts organisations and funders.

Altogether, the project aims to establish a clear picture of the impact that new collaborative platforms for digital arts commissions can have on audience experience, engagement and development.

Senior management support

Please upload a letter of support from your senior management.

Submit

You must read a hard copy of your application prior to submission. Please print a pdf, read the document, and then tick the box below to indicate that you have read it. Once you have done this you will be able to submit the form.

I have printed and read
through my application

5c:Selected Pages NESTA: Expression of Interest 2

Proposition

Question 7

Please provide a summary of your R&D project.

This should be written in plain English that is easy to understand by people outside of your sector.

This is your opportunity to market your project and this description will be used to publicise your project should your application be successful.

Max 200 words

ISIS, Vector76, CRUMB Sunderland University and the Dept of the Built Environment at Northumbria University will explore and make use of a virtual reality model of Newcastle and Gateshead (developed and built by Northumbria University), to engage new audiences in visual and media arts projects via an online 3D immersive environment.

Whilst we have seen a growth in location-based smartphone Apps aimed at uncovering cities and their dynamics, our project will be designed not on a map but on a gaming platform integrating the 3D city model.

Three artists –Marina Zurkow, USA; GH Hovagimyan, USA; Brigitte Zieger, France - will work with key cultural institutions and organisations in the city- Newcastle Gateshead Initiative, Great North Museum and Shipley Art Gallery, Tyne and Wear Museums - to develop artworks which occupy the online space.

ISIS will work with these regional organisations to explore ways the model can display their new and existing content/data/collections/archives in order to extend and deepen audience engagement and their experience of contemporary art. We will appoint a dedicated Audience Development person to work strategically with project partners.

The project will be realised through a range of connected devices from smartphones, tablets and PC's.

Question 8

In one sentence please tell us what it is your project is testing that is beneficial to the wider arts sector. i.e What is your research proposition?

Max 50 words

The purpose of this project is to consider how combining gaming and AR technology with arts commissioning can develop and test new; methods for understanding audiences online experiences, strategies for developing digital arts and cultural audiences and models for combined gaming and arts commissioning.

Question 9

Please briefly tell us how your approach to audience engagement and/or business model development is innovative:

Max 100 words

The model will provide a virtual space to experience through artworks the culture of the city. Audiences will engage remotely and locally with the model through online and mobile platforms, designed specifically for mobile/web users. Audiences will interact, participate and influence the virtual artworks, allowing them to re-imagine their cityscape and the nature of contemporary art. The model will contain real-time information feeds and audiences can contribute content.

This will be the first time cultural organisations and artists have interacted with the augmented city model allowing audiences to engage with real and virtual artworks and events.

Question 10

Specifically, how does your project add value to the public?

Max 50 words

The project reveals the cultural life of the city through creation of artworks utilising unseen artefacts, archives and data, to enhance user knowledge of collections, artworks and cultural activities both actual and virtual. It acts as a real-time application for live cultural information and user generated content and interaction.

Learning/Wider Impact

Question 11

What data, evidence and research findings will your project deliver that will be valuable to the arts sector?

Max 100 words

The project will develop and test new methods for understanding how audiences respond to, consume and engage with interactive, participative arts experiences on a gaming platform. Using a combined approach, focus audience groups, inbuilt data systems to track quantitative/ locative data on numbers/patterns of audience use, multi-sensory evidence will be gathered on qualities of experience. It will reveal processes of production, patterns of reception concerning breadth and levels of engagement, the kinds of engagement (access, learning, experience, sharing, creating) to explore new processes for developing collaborative digital audience development strategies and models for combined gaming and arts commissioning.

Question 12

Does your project develop new products/services that can be shared by other organisations?

Yes

If you answered yes to the question above, what are these? Briefly list them.

Max 50 words

Virtual tool to experience and exhibit contemporary art to reveal a city's cultural life
- Platform for live cultural information/content
- Research will be shared by publication
- Artists may produce software/apps which might be usable by others
- New models of art commissioning using gaming technologies

Question 13

How do you plan to share the learning from the project with the rest of the arts sector? (Research, data and learning)

Max 100 words

CRUMB and ISIS Arts have extensive experience of reaching arts sector audiences in an accessible way via exhibitions, presentations, events, publishing and workshops. The project will benefit from a bespoke programme of sharing events both live and online for the sector to engage in the research and see how they can utilise it as a tool. A website detailing the project will be live throughout the project's lifecycle, remaining as legacy, linked to ISIS/CRUMB sites. A CRUMB discussion list will discuss findings and CRUMB will present papers at arts and academic events.

Question 14

What measures have you put in place to ensure that the 'project' and its outputs or products are accessible to disabled audiences?

Max 100 words

The project website and App will be fully accessible and adhere to The World Wide Web Consortium (W3C) guidelines to include web content accessibility guidelines. The CRUMB web site is also W3C compliant.
As lead organisation ISIS has rigorous Equal Opportunities and Safeguarding policies in line with The Equality Act 2010 and the selection, commissioning of artists; delivering of commission related workshops; selection and delivering of focus group sessions; all events will adhere to these to ensure we meet the expected standards.
Public venues for any artist workshops; focus groups, public presentations and sharing event will be fully accessible.

Collaboration

Question 15

What organisations are you working with on this project? Please list the name of the organisation and their role in the project

In order to add text to the table you need to click on the button 'Add Row' below. You can add more than one organisation by clicking on the button again.

Question 16

Please give details of your experience/track record in the arts:

Max 200 words

ISIS Arts is a visual and media arts organisation, working in the UK and internationally with artists to produce and present contemporary art, film and new media.

For over twenty years ISIS Arts' has run a programme of residencies, commissions, projects and events. ISIS is particularly interested in taking artworks to audiences that would be less likely to experience contemporary art and in engaging artists whose work explores our societal and environmental relationships.

ISIS works with high quality artist from the UK and all over the world, providing them with research time, training and critical support in their city centre studios and media training space. ISIS work in partnership with organisations and festivals to showcase artworks, previous collaborations include; AV Festival, AND festival, Göteborg Culture Festival (Sweden), Berwick Film &Media Arts Festival, the International Digital Art Festival (Bulgaria) as well as Local authorities, schools, museums, universities and communities.

The Big M, is an inflatable, mobile exhibition venue for the presentation of video/digital media developed and run by ISIS Arts. ISIS has toured artworks by over100 international artists to rural and urban settings in the UK and internationally.

Question 17

How do the skills and experience of your technology provider(s) specifically relate to the project?

Max 100 words

Vector76 specialise in the development of applications and events, combining 3D virtual worlds and augmented reality technologies to deliver unique virtual projects that interface with the real world. Vector76 have vast experience in the creative digital sector including videogame design, animation and music production. Their Augmented Reality Apps are published on iPhones, iPads, Android smartphones and tablet devices.

The Department for the Built Environment, Northumbria University have worked with Newcastle City Council and Gateshead Council to develop Virtual NewcastleGateshead (VNG), a 3D digital model of core urban areas. VNG has previously been used as an urban planning and visualisation tool.

Question 18

What experience does your researcher/research team have of working with arts organisations and/or technology providers?

Max 100 words

Suzy O'Hara is researcher with CRUMB University of Sunderland. O'Hara has worked at Durham City Art, Durham City Vision and National Glass Centre. She specialised in arts development, commissioning and production. O'Hara has engaged with technologists including mobile platform designers, video production, website designers and app developers.

CRUMB (Professor Beryl Graham) have worked with Contemporary Arts Society, BALTIC Centre for Contemporary Art, National Gallery of Canada, Banff Centre Canada, Eyebeam New York, Tyneside Cinema and AV festival on joint research events and exhibitions, and have been invited speakers at Tate Modern, Tate Liverpool, V&A, and FACT.

Project Delivery

Question 19

Briefly outline how you will deliver the project:

Max 100 words

ISIS will manage the project research, including development and running of the focus groups and work closely with the artists to manage the residencies. ISIS will monitor the technology providers and researchers, hosting regular steering groups to ensure timeframes, aims and objectives are met by all partners. The technology providers will provide technical support and professional development to the artists to ensure they realise their project. The research team will work closely with the artists, technology providers and ISIS to evaluate the entire project, feeding back relevant learning to the arts sector, academics, digital developers and artists.

Question 20

What are the risks associated with your project?

Please list them in the table below and explain how you will mitigate the risk.

In order to add text to the table you need to click on the button 'Add Row' below. You can add more than one risk by clicking on the button again.

Risk	How will you mitigate this risk?
Ownership of Intellectual property (IP) of artworks in online virtual model	ISIS has an IP specialist lawyer on the board of directors and we have already held an initial meeting with the research and technology providers to establish where IP lies for artworks and model. A partnership agreement will be drawn up by Sunderland University with support from Muckles Solicitors.
Things may go wrong technically or take more time than originally planned	Throughout we will ensure we are doing what is realistically feasible within the time-scale and budget and that any serious technical problems are dealt with sensitively and swiftly. All partners have contacts and colleagues with wide technical expertise and these will be drawn on if necessary
Conflict between artists aspiration and what is technically possible may arise	The artist contracts and briefs will provide clear guidelines about technical capabilities in order to limit unrealistic expectation. Meeting with the technology providers and artists will take place regularly.

Question 21

Does your senior management support this project? At final application stage you will be asked to supply a letter of support.

Yes, senior management in my organisation supports the project.

Research

Question 22

Please briefly explain the research methodology and how it meets the project.

Max 200 words

Quantitative or demographic audience studies, or commercially-oriented HCI research makes up much existing research. Our method is informed by resources such as *Consuming digital arts* (Synovate 2009), *Games and Gaming* (Hjorth 2011), *Happenstance* (NESTA 2013). Adding to this research specifically concerning audiences' experience of art, and processes of collaboration, drawing on art-specific audience research methods from Muller, Mounajjed and Graham (Graham and Cook 2010).

Combined research methodology will include 3 stages

Pre-production

- Establish 3 focus groups from existing partner audiences.
- Use existing:

Audience demographic research to formulate segmentation models of target audiences.

Explore existing commissioning models to develop new ways of commissioning.

Production

- Inbuilt data systems: Using the software's own tracking systems to provide audience demographic data, patterns of engagement.

- Audience studies: Regular focus groups will examine design; capturing of multi-sensory audience evaluation (pre visit expectation, active user engagement, post experience interview and experience recall).

- Process analysis: Semi-structured interviews, and comparative observations, to identify problems and solutions in collaborations between artistic and commercial sectors.

- Discursive sharing: Using online, sharing platforms (EverNote, Discussion Lists), emerging findings discussed to peer-develop findings.

Post Production

- Identify new processes and models for digital audience engagement, development and commissioning.

Question 23

How will the research benefit the wider arts sector?

Max 100 words

As the project will be gathering data from the technology, audiences and partners pre, during and post project, it will establish a clear picture of the impact that digital arts commissions have on audience experience, engagement and development throughout the project. Other similar organisations will be able to expand their audiences and deepen the experience and understanding for their current audiences by offering new digital ways of revealing their collections and data. They will be able to use the resulting research, tools and App development in their programme planning, for developing their arts and engagement activities and for new commissioning.

Previous Contact

Please note, the information gathered from the following questions are for data references and will not affect the outcome of your application.

5d: Selected Pages NESTA: Application 2

Please provide a summary of the organisation making the application.

ISIS Arts www.isisarts.org.uk is a visual and media arts organisation working nationally and internationally with artists.

We are producers of art and that art might be a film, an installation or a new media intervention. To produce this work we invite artists to research ideas with people and about environments, then to make art which is shared in public.

To make our work happen we enter into partnership with agencies and institutions including local authorities, arts organisations, universities and community groups.

Based in the centre of Newcastle we have a media arts studio and residency spaces for visiting artists.

At the Expression of Interest stage which group did you apply under?

Please select one or the other.

Group A (Already have a Technology provider and Research partner)

Expression of Interest application number.

10416

Eligibility Criteria

Question 1

Where will your project be delivered?

Please note, your project must be delivered in England.

North East

Please provide the postcode for where your project will be delivered.

VARIOUS IN NEWCASTLE AND GATESHEAD

Question 2

Who is your technology partner?

Please list only the main one. If there is more than one please include these in the Collaboration section.

Vector 76

Question 7

What is the primary theme that your project falls under?

Mobile, location and games

(Optional) If your project also has a secondary theme, please select from the following options.

Distribution and exhibition

Proposition

Question 8

What is the name of your project?

UrbanART

Please provide a summary of your R&D project.

This should be written in plain English that is easy to understand by people outside of your sector.

This is your opportunity to market your project and this description will be used to publicise your project should your application be successful.

Max 200 words

UrbanART is an experimental audience development tool bringing together visual artists and technologists to create a mobile game with Virtual Reality (VR) installations for 3 galleries in NewcastleGateshead to attract young audiences (16-25), identified by all galleries as a hard to reach group.

Working with digital artist, Marina Zurkow (USA) and creative technologist, Jeremiah Alexander (UK) ISIS, Vector76, researchers CRUMB, Sunderland University and the Dept of the Built Environment at Northumbria University UrbanART explores and makes use of a virtual reality model of NewcastleGateshead (VNG).

Marina produces visually opulent critiques of our environments, projected as flash animations in galleries/public settings. Working with Jeremiah UrbanART is a genuine collaboration between artist and creative technologist.

The game will be developed with young focus groups, using Augmented Reality (AR)/VR to reveal venues and their contents within the cityscape.

Vector76 will optimize and render areas of the VNG . A VR/Oculus Rift installation will invite gallery audiences to curate user generated content from the collections to be explored in the mobile game.

CRUMB will track the value of the process and the game as a tool for increasing audiences, and the research will be shared across the sector.

Question 9

In one sentence please tell us what it is your project is testing that is beneficial to the wider arts sector. i.e What is your research proposition?

Max 50 words

UrbanARt tests new audience development tools which combine gaming and AR/VR technology with arts commissioning to explore new approaches to both audience engagement (young people, 16 –25) and digital strategies for urban visual arts venues.

Question 10

Please explain using specific examples why this is important for other arts organisations.

Max 100 words

UrbanARt creates a new model of working, combining gaming and arts commissioning to encourage new audiences for cultural venues/artworks, which could be adapted by other organisations. The game will incorporate remote (mobile app) and venue based (VR installation) elements targetting the harder to reach young adult audience.

It will enable gallery partners to extend their exhibition and distribution platforms, bringing new audiences to the live VR installations to curate content for the game as a model for on going engagement.

The project will measure the impact of gaming experiences on audience engagement, helping inform digital and audience development strategy.

Question 11

Please describe how your approach to audience engagement and/or business model development is innovative:

Max 200 words

UrbanARt will explore and increase audience engagement in the arts by:

1. Utilising existing, commercially available gaming platform (Unity3D) to provide a new virtual space for audiences to engage remotely and locally through a mobile App and gallery-based interactive VR installations.
2. Enabling user-generated content development for gallery-based users to control and change the game. Incentivizing users to not just consume the game via mobile app but curate it, in the gallery venue.
3. Using cutting edge technology, Oculus Rift headsets, UrbanARt explores new ways to attract and engage gallery audiences. There is currently no industry standard for using Oculus Rift, which are not due for public release till late 2014.
4. Challenging preconceptions around how and where audiences can engage with art experiences;
5. Placing audiences at the centre of the development process, uniquely bring together technologists, researchers and artist at the beginning of the design process to collaboratively devise a game with a focus group from each venue, made up of the target audience.
6. Enabling audiences for the first time to interact and engage with artworks/venues in the VNG which provides actual 3D data of the city, unlike previous illusionary 3D environments.

Question 12

Specifically, how does your project create public benefit?

Max 50 words

UrbanARt proposes a new way for the public to engage with artworks and galleries, which will widen access to the arts via a mobile gaming App, and a VR Installation, allowing audiences to explore and reimagine the virtual public realms of their city, (including important digitised public art collections).

Project Research and Learning/Wider Impact

Question 13

Specifically what data, evidence and research findings do you anticipate your project delivering? What impact could this have on other arts organisations digital strategies?

Max 300 words

The research will develop and test new methods for understanding how audiences respond to, consume and engage with interactive, participative arts experiences, on a gaming platform.

It will test how specific gameplay methods including, narrative driven, simulation or competitive approaches - can be used in digital commissioning to develop target audiences.

UrbanART will be evaluated in small and large-scale studies with 16-25 year olds around the following questions:

RQ1: Can competitive and reward based game elements and mechanics add value to the user experience of an art exhibition at a personal and audience level?

RQ2: What impact does awareness of the others within the audience have on an individual's personal narrative of the art, sense of presence, and in their participation and interaction with the exhibition.

RQ3: Does technology-based gamification of art lead to more focus on devices, gameplay and mechanics rather than the viewer focusing on the art itself.

RQ4: Do augmented reality and gamification permit the creation of playful art or is it rule driven and mechanistic?

The research findings drawn from the research approach detailed in section 32 will reveal processes of production, patterns of reception concerning breadth and levels of engagement to explore new processes for developing collaborative digital development strategies specifically for younger audiences and models for combined gaming and arts commissioning.

UrbanART aims to inform and encourage strategic commissioning, exhibition and audience digital art strategies by providing a practical case study with clear research based outputs throughout the project life cycle.

Question 14

Does your project develop new products/services that can be shared by other organisations?

Yes

If you answered yes to the question above, what are these? Briefly list them.

Max 50 words

UrbanART will provide a model for audience engagement tools, combining industry standard gaming platforms and emerging (and accessible) technologies to creative interconnected live VR installations and a mobile game.

Question 15

What measures have you put in place to ensure that the 'project' and its outputs or products are accessible to disabled audiences, peers and arts organisations?

Max 100 words

As lead organisation ISIS has rigorous Equal Opportunities and Safeguarding policies in line with The Equality Act 2010 and these standards will be met in the commissioning of the products by the artist and creative technologist and partners; including the delivery of focus group sessions, public exhibition of work and public events. The same consideration will be given to the final user experience of the game.

The 3 galleries (hosting the VR installations, focus group sessions and launch event) are fully accessible and comply with the Disability Discrimination Act of 2005 and building regulations 2005.

Question 16

How do you plan to disseminate the research, data and learning from the project more broadly across the arts sector?

Complete the table below.

In order to add text to the table you need to click on the button 'Add Row' below. You can add more than one row by clicking on the button again.

Activities	Target groups	How are you targeting them?	Reach (size of group targeting)
Academic dissemination: Publications/academic paper CRUMB sharing event CRUMB On-line sharing Northumbria University	Students and staff from University of Sunderland Art, Design and Media Dept. Academics, artists, arts organisations, students and staff of Northumbria, architecture and arts depts.	Internal communication networks and website, through CRUMB Discussion list and web site	2500

Question 17

Specifically how will the research be disseminated within the research community i.e. what are the benefits to the researchers own work and research discipline?

Max 200 words

A wordpress website detailing the project will be live throughout its life cycle, remaining as a legacy, linked to the ISIS/CRUMB websites. The CRUMB website gains 300 visits per day. ISIS website gains 1000 visits per month.

A CRUMB discussion list (which has over 1300 international members) will be used as a platform to discuss emerging findings and peer –develop findings.

CRUMB has extensive experience publishing widely cited research outputs (<http://www.crumbweb.org/>) including research conference papers. The final UrbanARt research report will be made available online via free PDF.

CRUMB regularly present papers and findings at national and international conferences, labs and workshops. CRUMB will present the research findings, during the project period at a minimum of two conferences including:

- CHI, Toronto
- ISEA, Dubai
- SIGGRAPH, Vancouver
- Thinking Digital, Gateshead

CRUMB Professional Development Courses such as 'Commissioning and Collecting Variable Media', and 'Open Source and Curatorial Practice' have proved very effective in disseminating research. CRUMB will present the outputs of UrbanARt at CRUMB professional development workshop London 2015.

New knowledge generated throughout this project will add to the body of research in this field generated by CRUMB and more recently ISIS and their audience development research work.

Question 18

What measures have you put into place to ensure that the learning and dissemination are made accessible to disabled audiences, peers and arts organisations?

Max 100 words

Research will be disseminated via the CRUMB website, which has been built to AHRC standards to ensure accessibility to all users. Learning will be shared on a website that adheres to World Wide Web Consortium (W3C) Web Content Accessibility Guidelines (WCAG).

Research papers will be produced using cascading style sheets (CSS) to control page layout and design to enable accessibility. This will be monitored by automated software and by manually checking content addressing accessibility when preparing content.

Public venues for the dissemination events are all fully accessible including, Sage Gateshead (Thinking Digital Conference) and Northumbria University (Sector Sharing event).

Collaboration

Question 19

What organisations are you working with on this project? Please list the name of the organisation and their role in the project

Please make sure you list ALL of the organisations involved in the delivery of this project.

In order to add text to the table you need to click on the button 'Add Row' below. You can add more than one row by clicking on the button again.

Question 20

Please give details of your organisation's experience/track record in the arts:

Max 200 words

ISIS Arts is a visual and media arts organisation, working in the UK and internationally with artists to produce and present contemporary art, film and new media.

For over twenty years ISIS Arts' has run a programme of residencies, commissions, projects and events. ISIS is particularly interested in taking artworks to audiences that would be less likely to experience contemporary art and in engaging artists whose work responds to people and place.

ISIS works with high quality artists from the UK and across the world, providing studio space, research time, training and critical support to produce artworks in partnership with organisations and festivals. Previous collaborations include; AV Festival and Tyne and Wear Museums (with Marina Zurkow), AND festival, Göteborg Culture Festival (Sweden), Berwick Film &Media Arts Festival, the International Digital Art Festival (Bulgaria) and Local authorities, schools, museums, universities and communities.

ISIS' work is often presented in The Big M, an inflatable, mobile exhibition venue for video/digital art developed and run by ISIS Arts. ISIS has toured the work of over 100 international artists to rural and urban settings in the UK and internationally and the research field for UrbanART follows a recent Arts Council Strategic Touring Programme.

Question 21

Describe the technical solution you will be using to deliver the project. Please be as specific as possible.

Max 200 words

UrbanART will be an interconnected VR installation and mobile game, built on an accurate virtual model of Newcastle Gateshead.

A subsection of the high fidelity VNG model forms the backdrop for the game. This will be converted by Vector76 into an optimised version capable of being explored in Real-time within a 3D game built in the Unity3D Engine. Within this environment, animator Marina Zurkow and creative technologist Jeremiah Alexander will collaboratively devise and implement an artistic gaming experience, developed in close consultation with groups of young people.

The game will have two parts. The first, the installation, will use cutting edge Oculus Rift headsets to allow a single player to 'play god' within the gaming environment, reshaping it within the parameters the artists define. Through an online database, these manipulations then update the environment within which the second, a location-aware mobile game, is based where players take on the role of explorers making sense of their constantly changing world.

The game is thus played in two roles, as curator/god and as interpreter/explorer. A selection of images from the host galleries are included in the installation as materials that the player can use in their world curation.

Question 22

How do the skills and experience of the technology provider specifically match the technology solution?

Max 200 words

Northumbria University's Virtual Reality and Visualisation group (VRV), working with Newcastle City and Gateshead councils has developed the VNG, to aid accuracy in planning. VRV has specialised in architectural visualization and documentation for over 10 years providing innovative communication tools with scope beyond the planning process.

Vector76 is experienced in 3D virtual and AR solutions via Second Life and OpenSim for clients including Tyneside Cinema, Evolution Festival, Bedes World, ISIS Arts, Go North Festival Inverness, European Youth Festival, Denmark. Vector76 adapts real world locations and buildings to life size immersive environments with 3D/2D Triple AAA videogame production skills and technology platforms including the Unity 3D game engine, iOS (Apple) and Android (Google) along with the Qualcomm and Metaio Augmented Reality Software. Max and Maya 3D are used for modeling and animation.

Jeremiah Alexander (Ideonic) is an experienced digital entrepreneur and indie games developer. Ideonic, has led, designed and developed a wealth of innovative digital content, with a major focus on Arts and Culture, and a preference for co-design with the target audience through focus groups and workshops, including with the Tate to develop Art Lab, a game that teaches children about the process of Art Restoration.

Question 23

Describe the main areas of research expertise / interests for the research partner, including any previous research relating to the Fund's thematic areas?

Max 200 words

CRUMB's research concerns include curating new media arts, focusing on audience, commissioning new works, and communications technologies:

Professor Beryl Graham's PhD concerned audience interaction with new media art, including research on her curated exhibition Serious Games for Laing and Barbican art galleries. She has published with MIT Press, Heinemann, and University of California Press, curated professional development events with Contemporary Arts Society, BALTIC and lectured at Banff Centre Canada, Tate Modern, Tate Liverpool, V&A and FACT. Her book with Sarah Cook, 'Rethinking Curating' includes chapters on audience, collaboration, and lab models of new media art production.

Suzy O'Hara is a researcher on art/digital sector collaborations with CRUMB, previously working in arts commissioning and production. O'Hara is currently curating Thinking Digital Arts 2014, nurturing collaborations between the creative technology and arts sectors.

Dr. Lynne Hall is a Reader in User Experience with over 90 peer-reviewed publications. She led the evaluation work package of EU FP7 eCUTE project (2010-2013), embedding evaluation into the user experience and conducting small to large scale (1500) evaluations with Serious Games. She co-developed DIMPLE, an environment for location enhancement applications winning the University Blueprint Knowledge Transfer Award 2011.

Question 24

Describe what experience the three partners have of similar collaborations? What is the capacity for R&D within the group/individual organisations?

Max 200 words

ISIS regularly works in partnership with organisations and agencies here and abroad, developing an App with Vector76 for our ACE Strategic Touring Programme and creating audience development tools and joint artist research residencies with Culture Lab (Newcastle University).

Vector76 have worked on a range of virtual and mixed-reality projects including: Tyneside Cinema 'Carter is 40', a mixed-reality event to celebrate the film anniversary using a 3D virtual world, live video streaming and for Evolution Festival, live streaming the band Littleboots in a 3D environment, attended by international avatars.

CRUMB with Research Partner Eyebeam, a US new media art production lab, collaborated on a three year AHRC Research Grant, researching collaborative art/digital production models including curating exhibitions of newly produced beta version products, and developing a curatorial masterclass on Open Source methods. CRUMB has also commissioned new works from art/technologist collaborations.

Northumbria University and VNG have a proven R&D background. The VNG project works collaboratively with many European partners furthering the scope of the model, including; integration of live data sets, creation of virtual and augmented environments (a medieval version of VNG) and 3D print models (recently to communicate the design of Northumberlandia by Charles Jencks).

Project Delivery

Question 25

Please outline how you will deliver the project including:

- Individuals responsible for managing the project day to day
- How will the partners work together
- Service level agreements in place with technology providers/researchers
- IP arrangements
- Key project milestones

Max 250 words

The overall project will be managed by ISIS, with each partner taking responsibility for their elements to ensure milestones are met, led by co-directors Sharon Bailey and Clymene Christoforou, with CRUMB's Professor Beryl Graham, Vector76's Shaun Allan and at Northumbria University Dr. James Charlton.

ISIS will contract Marina Zurkow and Jeremiah Alexander and provide day to day workspace for them and PhD researcher Suzy O'Hara. ISIS will monitor the technology providers, researchers, creative and venue partners, hosting regular steering groups to ensure timeframes and objectives are met.

Technology providers will provide technical support to the creative team, the creative technologist will provide additional technical advice to the artist.

The research team will work closely with partners and participants to evaluate the project, feeding relevant learning back to the sector.

A Collaboration agreement will be drafted by Sunderland University, with support from Muckles Solicitors which will identify:

- all parties and their responsibilities
- what they are not doing
- project duration/management roles
- payment details
- rules for termination of the project/withdrawal process
- the licensing and ownership of the IP
- publicity control
- confidentiality
- academic paper control

Northumbria University will issue a license to use areas of the model. For the elements of the model agreed this license will be perpetual.

Partners have already met with ISIS Board member, Alex Craig, (Partner and IP specialist, Muckles Solicitors Newcastle) to examine and address IP issues. The conditions of which will be addressed through the collaboration agreement.

Question 27

Please provide a marketing plan by filling out boxes below.

Introduction: What is your proposition?

Max 200 words

UrbanARt aims to engage young people (16-25) with galleries/artworks by commissioning an artist and creative technologist to create content for a 3D virtual environment using a gaming platform.

The game will be publically available via a mobile game and VR Installation in 3 galleries. Using Oculus Rift headsets, users will be able to shape and control content for the mobile game through the gallery-based installation, encouraging consumers of the app to visit galleries to curate the outcome. The app will be free to download and available to be played/viewed using smart phones/tablets.

The installations will be on display in each venue for 2 weeks, a launch event will be held at Laing Art Gallery. Each event will be promoted through all partner networks.

The game will be devised with 3 focus groups, who will act as brand ambassadors, helping to market the product to their network of peers. We will invite existing youth groups from schools, colleges, universities to visit the gallery installations.

Research will be conducted on the use of gaming platforms to increase young audiences for galleries. This will be disseminated amongst the academic community and cultural sector, feeding into digital strategy.

Gap analysis: What are the key trends in the market? Who are your competitors?

Max 200 words

Mobiles/tablets currently outsell PCs 2 to 1. By 2016 this will have risen to 6 to 1, making mobile the dominant platform. AR/VR is a niche market and expected to grow with Google, Samsung, Sony and Apple launching new products.

Oculus Rift headsets are currently only available to game developers (including Vector76). With their full release in late 2014, UrbanARt will be one of the first UK artistic applications to use the technology, following on from Worcester Art Museum's (USA) creation of a VR version of their gallery for OR use.

Tate, Smithsonian Institute and others have developed games/Apps to engage younger audiences and festivals (AR4Basel and Amsterdam virtual festival) and organisations (Moma) have used AR arts based projects innovatively within urban settings and created apps. However interconnecting VR installations and mobile games, enabling users to be both curators and explorers is we believe innovative.

3D city models have increased with over 1,000 city models in existence globally, primarily for urban analysis, but adapted for tourism incorporating navigation and live feeds. The VNG model, unlike Google maps and other similar models contains three-dimensional data, apposed to flat fixed images with 3D illusion.

Prospect users: Who are you targeting?

Max 200 words

Tyne & Wear Museums TWAM (which the 3 galleries are members of) have identified a significant gap in the engagement of young people within their 3 art galleries. Siting their core existing audience as aged 45+, predominantly white and middle class, aligning with the audience segments; 'mature explorers', 'traditional culture vultures' 'mid-life hobbyists' and 'retired arts and crafts'.

UrbanART targets young people (aged 16-25) who already have an interest and familiarity towards technology, but have low engagement with the venues, mainly 'Bedroom DJs', 'FT/PT Students' and 'Urban Arts Eclectics', complementing the audience development strategy of each venue.

Along with artist and creative technologist, focus groups will co-develop game experiences utilising the galleries' collections to engage the target demographic. ISIS' recent Strategic Touring Programme project used 'The Big M' (inflatable gallery) to target young people (14-19) and developed digital tools to capture audience experience and feedback. This will inform the audience development strategy for this project.

Focus Groups:

- Laing Art Gallery, Newcastle City centre, 'Link' - existing group of young programmers (16-25years)
- Hatton Gallery, Northumbria University Fine Art students (18-25 years)
- Shipley Art Gallery, young people from Gateshead College and existing Gateshead youth groups

Product, Price, Place: How will the launch be supported? Do you have pricing objectives? What are your distribution channels?

Max 200 words

The mobile game will be available for free download from Apple Store and Google Play Store. Market research shows the majority of galleries/museums provide free Apps. We have considered our target audience, who have little disposable income and are more likely to engage with a free product.

The VR installations will be based in each gallery for 2 weeks with free public access.

The launch of the product will be at Laing Art Gallery, as part of our marketing campaign key figures from the arts and technology world will be invited to preview the work.

We will capitalise on the range of knowledge within our team to create a distribution strategy based on partner's expertise, contacts and networks. Distribution will be target young people, advertising through focus groups, existing youth groups, colleges, schools, Universities, online platforms accessed by young people and gaming forums, this will be developed and outlined in our marketing schedule. Wider distribution will take place through displays in venues.

The resultant App, could be developed to include a revenue channel. We will approach Newcastle Business School to consider how our product may be monetized. Partners will seek opportunities for sponsorship from the business/technology sector.

Promotion: What are your communication plans? i.e. promotions, PR, publicity, advertising, digital plan, personal, etc.

Max 200 words

ISIS will contract Crowdweaver (specialists in digital/mobile marketing) to provide Audience Development (AD) and Marketing support. Crowdweaver will deliver a strategic AD and digital plan aligned with Tyne & Wear Museums' (TWAM) objectives. Crowdweaver will promote the project, events, product and dissemination, to the arts sector, existing venue audiences, technology and research communities.

Crowdweaver will:

- Support ISIS Arts' and partners' audience development aims
- Develop and implement social media campaigns in relation to each venue
- Ensure all activity is documented and monitored
- Maintain online presence for Urban ART
- Prepare media releases and liaise with press
- Circulate information through ISIS Arts' and partners' networks.  

TWAM will provide support through their dedicated marketing team and provide access to T&W's extensive regional networks. We will utilize other partner networks eg. Newcastle/Gateshead Council, Newcastle/Sunderland University.

A brand identity will be developed and used across printed and online promotional material. Online promotions will be deployed via e-newsletters, social media and all partner websites. An Ident/trailer will be created for the product to be shared online.

The focus groups will help market the game amongst their peers, acting as product ambassadors with the aim of reaching new audiences.

Budget: What is your budget for marketing?

Max 200 words

The budget for marketing is £10,650.

This includes a freelance audience development and marketing fee of £3500 for Caroline Greener of Crowdweaver, representing 20 days at £175 per day. Marketing materials to promote the project include fees for a designer, costs for printing and an animated digital invitation/trailer.

We include a budget for photographic documentation of the process and final launch.

There will be a number of sharing events with small budgets attached for hospitality:

An artist and creative technologist talk, 9 focus groups including budgets for transportation where needed, a sector sharing event at Northumbria University and finally a Launch at the Laing with subsequent events at both the Hatton and Shipley.

There is a small budget for transportation to invite existing youth groups, schools, colleges and universities (young people aged 16-25) to visit the galleries and experience the VR installation and mobile game.

Within the marketing budget there is also an amount for website development for partners to access useable 3D data on the project.

Implementation: List the key requirements for implementing this plan? Who is responsible for what?

Max 200 words

ISIS Arts will manage the implementation of the audience development and marketing plan. Crowdweaver will be appointed to develop and deliver a strategic AD strategy, marketing and promotions. Crowdweaver will be appointed in a freelance capacity, based at and managed by ISIS.

ISIS will provide further marketing support through ISIS Projects Coordinator, Charlotte Gregory. Taking responsibility for implementing social media campaigns, and project communications, ensuring brand identity is clear.

Tyne & Wear Museums will provide support and capacity through their dedicated marketing team, including their Digital Coordinator, John Coburn and Head of Marketing, Sheryl McGregor, providing access to T&W's extensive regional networks and marketing expertise, as well as to their existing audience data. Emma Pybus, TWAM Corporate Marketing, will support the product launch.

Communications between all partners will be vital. The first partner meeting will outline AD and marketing aims to inform the strategy, all partner roles and expectations will be defined.

A marketing and communications schedule will be produced and circulated to all partners. Regular partner meetings will ensure partners are adhering to the agreed schedule.

The project will maximise the resources available to ensure that the promotion and marketing ties into partner websites and communications.

Question 28

What is the start date of your project?

18/08/2014 00:00

Question 29

What date will your project go live to market? i.e When will your product/service/performance etc first launch?

25/06/2015 00:00

Question 30

When will the research be completed?

Your project should be no longer than a year from receipt of funding to the end of the research.

14/08/2015 00:00

Question 31

Describe the key risks for the project and how you will mitigate them. Please include in your risks **ALL** of the following:

- partnership breakdown
- slippages in the timeframe for the technology development and research
- insufficient funding
- key members of staff leaving from yours/partner organisations.

In order to add text to the table you need to click on the button 'Add Row' below. You can add more than one row by clicking on the button again.

Risk	How will you mitigate this risk?
Partnership breakdown	There has been a thorough collaborative development period leading to this application, and project partners have a clear understanding of their roles and responsibilities. At the start of the project a collaboration agreement will be devised, written and signed. Regular partner meetings will be held throughout the project with all partners to monitor and evaluate the progress of the project
Slippages in time frame	We have carefully and thoroughly considered the time to deliver the project in and devised key milestones with the technology providers, the creative team, partner venues and researchers. We have built in extra time in case of slippages
Insufficient funding	The partners are fully committed to delivering this project. We have included a contingency in case of overspend. Each partner believes they can deliver the project within budget and each is willing to give additional support if necessary.
Issues develop around tracking audience for quantitative data	Adequate provision will be made to ensure that the researchers and technology partners work closely to define and establish the data needed to track audience behaviours.
Sample size not large enough to validate research	We will work with defined focus groups throughout the process and invite groups from schools, college, Universities, youth groups to each venue to interact with the finished product to ensure the target sample size of 200 young people per venue is reached.
Data not being in a format that is readable.	Clear definitions of the formats needed will be agreed between researcher and technology provider at the start of the project.
Things may go wrong technically or take more time than originally planned /pushing boundaries of tech/newness has its problems	Throughout we will need to ensure we are doing what is realistically feasible within the time-scale and budget and that any serious technical problems are dealt with sensitively and swiftly. All partners have contacts and colleagues with wide technical expertise and these will be drawn on if necessary.
Conflict between the artist aspiration and what is technically possible may arise	The artist has extensive experience of using interactive technologies in the creation of artworks. A clear brief will be included in the artist contract to outline realistic expectations at the beginning of the project. The creative technologist will work closely with the artist to advise on the limitations of the model and technology, they will collaboratively develop a design that is realistic and achievable within timeframe and budget. Meetings between technology providers and the creative team will take place regularly.
Ownership of Intellectual property (IP) of artworks in virtual model	ISIS has an IP specialist lawyer on the board of directors and we have already held initial meetings with the research and technology providers to establish where IP lies for artworks and model. A partnership agreement will be drawn up by Sunderland University with support from Muckles Solicitors.
Key members of staff leave the partner organisations	The project runs for one year. During this time regular staff meetings will ensure that the project is understood and owned by the teams in all partner organisations, so that another member of staff, supported by the wider proeject team, can take over.

Research

Question 32

Please briefly explain the research methodology and how it meets the project.

Max 400 words

This research focuses on qualitative and quantitative data obtained using a range of data gathering approaches to consider production methods, and audience experience of contemporary art through immersive and gaming technologies.

It will build upon; existing research on cultural audiences and how digital content can encourage physical attendance/participation (Synovate 2009), sensory audience experience based HCI approaches addressing art and design artefacts, (Pink 2009) and research on gaming cultures, technologies and experiences (Hijorth 2011) to address missing areas of research specifically concerning audiences' experience of art, and processes of collaboration, drawing on art-specific research methods from Muller, Mounajjed's research on Rafael Lozano Hemmer artworks and Gaver's 'Cultural Probe' method (Graham and Cook 2010: 187).

The combined research methodology will include all stages of the project and can be seen in 4 distinct stages:

Pre –production

- Establish a focus groups for each venue, working with the galleries, schools, local authorities and Northumbria University
- Use existing; audience demographic data to formulate segmentation models of target audiences; explore existing commissioning models used by each venue
- Literary review

Production

- Large Scale Evaluation Study
- Users engagement at 3 different locations over a 6 week period.
- Sample size: 200 16-25 year old users at each location and online (800 in total) from local schools, colleges, universities, youth groups.

User data will be gathered through:

- logging of user behaviour (e.g. GPS data, VNG tracking, game participation, content generation) using inbuilt data systems to track quantitative/location data on numbers/patterns of audience use
- Pre-test questionnaire to obtain expectations of engaging with digital art
- Post-test questionnaire to gain responses, reactions and views to UrbanARt
- Focus groups meetings with 3 at each venue of approximately 8-12 users, one of which will use Oculus Rift
- Social media (e.g. facebook, asynchronous approaches) to discuss experiences of UrbanARt on-line

Post Production / Evaluation

Logged behaviour will identify patterns of use and engagement, individual and audience behaviours. Quantitative statistics (e.g. ANOVA, chi-square cross-tabulations) will be used to determine significant differences in relation to the impact of age and gender in relation to engagement and participation with the different UrbanARt experiences, identifying aspects of user engagement and how it could be incorporated at future exhibitions targeting the age group. Using sentiment analysis the qualitative data from the focus groups and social media will enable a deeper exploration of individuals' responses to UrbanARt.

Question 33

How will the research outcomes benefit the wider arts sector?

Max 200 words

The commissioned artworks will illustrate the critical and aesthetic possibilities of combining gaming technologies and methods presenting new ways for the arts sector including artists, designers and curators to engage an audience.

The research on the collaborative production processes aims to make visible useful models and to identify the tensions between the arts and digital sectors proposing new ways of working together.

The research on audiences will provide useful information concerning some quantitative information about those audiences, which would be of use to funders, marketers and arts organisations.

However, it more specifically aims to address a gap in research concerning the in –depth detail of audience experience (related to artist/game developer intent), benefitting artists, designers, developers, curators, educators and exhibitors as well as arts organisations and funders.

As the project will be gathering data from the technology, audiences and partners pre, during and post project, Altogether, the project will establish a clear picture of the impact that digital arts/gaming commissioning can have on audience experience, engagement and development.

Senior management support

Please upload a letter of support from your senior management.

Submit

You must read a hard copy of your application prior to submission. Please print a pdf, read the document, and then tick the box below to indicate that you have read it. Once you have done this you will be able to submit the form.

I have printed and read through my application

Appendix 6: Curatorial Project 3 — *Thinking Digital Arts*

6a: Selected Pages *Thinking Digital Arts*: Arts Council Application

Phone

- Spoke to a member of the Enquiries team over the phone
- Spoke to a staff member in an area office over the phone

Written contact

- By post or email

Other

- Advice from a member of staff in an area office

Name

Office

Advice from Local Authorities

We work with local authorities and consult them about some applications. You should discuss your activity with any relevant local authorities before you apply.

Please tell us the name and the local authority of the staff that you spoke to:

Name 1	<input type="text" value="Karolynne Hart"/>	Local authority	<input type="text" value="Gateshead"/>
Name 2	<input type="text"/>	Local authority	<input type="text"/>
Name 3	<input type="text"/>	Local authority	<input type="text"/>
Name 4	<input type="text"/>	Local authority	<input type="text"/>
Name 5	<input type="text"/>	Local authority	<input type="text"/>

Advice from other sources

Please give details in no more than 10 words:

Basic details

Project information

What is the name or working title of the activity you are applying to do?

 (No more than 50 characters)

Please give us a concise description of the activity you are asking us to support (no more than 100 words). Refer to the How to apply guidance here.

The first edition of Thinking Digital Art takes place as part of the Thinking Digital Conference - the NE largest annual event that celebrates innovation, creativity and technology. The curated, public programme is committed to nurturing the development of contemporary arts created within the intersection of art, technology and digital culture. The programme will extend Thinking Digital's regional, creative legacy and aims to nurture new relationships between the private digital and public arts sectors of the NE.
 Our objectives: To engage and encourage a diverse audiences to participation in, learn, understand and enjoy art made from this emerging field.

What is your proposed artistic activity, and what do you want to achieve by doing it? (250 words)

My vision for the Thinking Digital_Art public programme is to:

- Provide a platform for innovative, critically engaged artists, curators and creative technologists to showcase their practice
- Demonstrate the scope and depth of experimental creative arts practice emerging within the art and technology field.
- Provide a forum where both leading critical thinkers and a public audience can participate in a forward thinking debate on the position of technology in art.
- Connect Thinking Digital's current community of innovators, entrepreneurial individuals with pioneers from world of arts and culture
- Foster and investigate new models for transformational cross sector collaborations.
- Provide a platform to nurture new and existing relationships between the arts and digital that will engage, inform and develop future art work and audiences.
- Realise Thinking Digital's ambitious, future orientated vision and embed it into the wider landscape of NE cultural venues to reach a broad, diverse audience

I will do this by facilitating:

- One new, collaborative art commission, created by an artist and creative technologist.
- An Art Hack event for artists, technologists and hacker/makers to collaborate on generating new ideas, explore new models of collaborative working and nurture future partnerships and projects.
- A Mini Art Hack, in a Secondary School based in Gateshead
- A 'live coding' sonic/art event.
- A panel discussion between creatives working within the intersection of art and technology, in collaboration with Bits 2 Blogs symposium.
- Coordinate and user
- Coordinate a series of experimental, multi disciplinary 'Hub' events, delivered by regional arts partners.

Why is this activity important for your artistic development? (250 words)

This project is important for my artistic development as it provides me with a unique opportunity to

- Develop new and existing relationships with regional, national and international artists working in my field.
- Establish working relationships with creative media sector and deepen my knowledge of this field.
- Foster strategic alliances with regional and national organisations working across my field.
- Curate a multi disciplinary programme of live events, discussion and new commissions accessing a range of new spaces, audiences and partners.
- Examine the current nature of collaboration in art and technology and the role of each in contemporary digital culture.
- Explore innovative models of art that push existing, formal and conceptual boundaries and will resonate with contemporary culture into the future.
- Investigate new approaches and contexts to encourage audiences to participate, learn and enjoy contemporary art using digital technologies.
- Consider collaborative practice as a method for converting the creative possibilities inherent in the common ground that exists between two distinct sectors into tangible art projects.
- Generate, through grass roots, curatorial practice, deeper understanding and conversations that lead to new working relationships between the digital and cultural sectors.
- Showcase and profile future talent to a broad and informed audience.
- Enable me to develop my curatorial critical research and writing skills.

Who's involved

Artists

Please list the main additional artists involved in your activity using the table, up to a maximum of 10 artists. Do not include yourself if you are the main artist. If you are working with any individuals or organisations who are helping to deliver or manage your activity, please tell us about them in the Management section of the application form.

See the Artistic Quality section of the How to apply guidance for more information on what we expect to see in your answers to these questions. [Click here.](#)

Click 'Add name' to begin.

People benefiting from your activity

What are the age ranges of the people who will benefit from your activity?

All age ranges

Is the activity you are planning directed at, or particularly relevant to, any of the following groups of people?

Ethnicity of beneficiaries

- Asian or British Asian
- Black or British Black
- Chinese
- Other
- Not directed at any of these groups

Disability status of beneficiaries

Not disability specific

Social exclusion status of beneficiaries

Not specific to social exclusion

Public engagement

See the Public Engagement section of the How to apply guidance for more information on what we expect to see in your answers to these questions. [Click here.](#)

Who will engage with this activity? Tell us about the target audiences or people taking part, and how they will engage with the activity. If the activity will not engage people immediately, eg some research and development activities, please tell us about who you anticipate will engage with your work in the longer term. (250 words)

The NewBridge Project (NB) gallery will be:

- The central Hub of the Thinking Digital Art programme and host an experimental, successive series of events, engaging cultural and incidental audiences, NP community of 65 of studio artists and wider professional networks across the NE.

- A physical point for information about the wider programme of public art events happening in other venues around the city. Its location opposite Newcastle's main shopping street, will profile the programme with a bold, visual presence in the city centre.

Bits2Blogs is a keystone event in TWAM strategy to develop innovative, interdisciplinary, public, digital engagement projects. To maximise this opportunity, John Coburn, Digital Coordinator and I will co curate and reschedule the annual event from March to May 2014, and include a Thinking Digital Art:Panel. Bits 2 Blogs attracts over 100 national cultural heritage sector professionals who are passionate about using new ideas and new technologies to engage diverse online and live audiences.

Sage Gateshead will host Thinking Digital Art:Commission in their concourse space to engage broad cultural, family and younger audiences.

Karolynne Hart, Head Gateshead Arts Team will lead on Thinking Digital Art: Mini Art Hack project in beginning in March 2014, to engage art and technology students during a six week programme. The exhibition at St Mary's venue will focus on future talent to engage families, young people and schools.

Thinking Digital Conference delegates are a key audience.

In the longer term, I would like to engage regional, national and international audiences.

Please describe how you will reach your target audience or participants, in the short or long term, and give details of your proposed marketing activities where appropriate. (250 words)

I will work with each strategic partner to activate and develop existing networks and platforms to devise and deliver a robust marketing and PR strategy specific for the programme to maximise my ability reach each target audience:

Thinking Digital Art will be:

- Integrated into the wider online and offline marketing/pr campaign for Thinking Digital Conference. We will have a dedicated page on the Thinking Digital website which will host an online open forum for discussion and feedback and link to social media channels.
- Profiled on the Tyne and Wear Museums website in the Museum Development and What's On sections (1.2 million visits a year). Bits2Blogs will be distributed via Museums Newsletter and Museums Computer group (over 1,500 museums professionals) and through social media channels (multiple thousand recipients).
- Marketed via New Bridge Project website, internal studio bulletin boards and social media channels.
- Profiled by Gateshead Council on Gateshead Live website and be distributed to professionals via The Northern Cultural Ambassadors Network (500 educators) and cultural partners database (over 200 professionals)
- Supported by Wunderbar Festival via social media and online channels (over 6000 audience)
- Profiled on the Sage Gateshead website (approx. 70 000 unique visits per month)
- Featured on our main sponsor (University of Sunderland) website.
- Feature in Local, regional, national press and art/tech specific publications (online and off line)
- 5000 printed programmes will be distributed via regional partner organisations.
- Branded window vinyls on Newbridge Project window will profile Thinking Digital Art for an incidental 'shopping' audience.

Income for your activity

The Finance section will ask you to complete a budget for your activity, and to answer some questions about how you will manage your budget. Please read the Finance section of the How to apply guidance carefully before you begin. [Click here.](#)

Key things to remember about Grants for the arts budgets

1. Your budget has to balance (your income needs to be the same as your expenditure)
2. We expect you to find at least 10% of the total cost of your activity from other sources
3. We need to be able to see how you have worked your figures out, so please break them down clearly
4. This should be for the total cost of the activity you are applying to do

It is important to remember that the spending (expenditure) and income for your activity should match.

Please use full pounds only and no pence (for example, '£1,167'). Please check your figures carefully. If you do not fill in this section correctly, we cannot process your application.

Amount you are requesting:

£15,000

Please tick this box if you are applying for 100% funding.

You should only enter cash income on this screen. Please enter any support in kind on the Support in kind screen, which is on a later page.

For more information about completing the budget table, read the Finance section of the How to apply guidance. [Click here.](#)

Please click on the button 'Add income line' to add an item of income to the budget.

Income from other sources

Income heading	Description	Expected or confirmed	Amount £
Earned income			
Local authority funding	Gateshead	Confirmed	£1,000
Other public funding			
Private income	Sponsorship University of Sunderland	Confirmed	£5,000
Private income	Sponsorship CRUMB	Confirmed	£600
Private income	Ticket Sales (Live Performance £5 x 40, Panel Discussion x £10 x 15, Hub Event Programme £5 x 30)	Expected	£500
Income total			£22,100

Please describe your approach to raising as much money as you can from other sources. Identify which other sources of funding you have applied to, and the progress of any other applications you have made (including the date you will know the outcome). (250 words)

I approached my research faculty CRUMB to support my programme as the knowledge I will gain from delivering Thinking Digital Art directly relates to my own research and furthers the wider aims of the faculty.

University of Sunderland are the main sponsor for this event. The programme offers the University a unique opportunity to:

- Align their brand and support one of the most innovative and respected technology conferences in the UK.
- Provide tangible ways for staff and students across Media, PR, Art and Design to gain access to valuable experiences and networks from the digital media and art fields.
- Enhance student learning from a structured series of mentoring sessions by high profile Thinking Digital Art artists, curators and creative technologists.
- Profile University of Sunderland to new regional, national and international audiences.

Gateshead Council have committed to fund our young persons, school strand Thinking Digital Art: Mini Art Hack. This enables them to:

- Embed an experimental, aspirational art and technology project within their existing wider schools programme.
- Develop and deliver their family and schools arts engagement strategy across Gateshead.
- Explore how technology can be used in a meaningful way for arts development in Gateshead.

All live performances, discussions and talks will have a ticket price which will provide a sustainable income stream and feed into the wider programme. As the programme grows, so too will this source of income.

Expenditure for your activity

You should only enter cash expenditure on this screen. Please enter any support in kind on the Support in kind screen, which is on the following page.

If your budget includes personal access costs that you need to manage the activity, please enter them under the last budget heading. Further information can be found in the Finance section of the How to apply guidance. Click [here](#).

Total income (for information)

For more information about completing the budget table, read the Finance section of the How to apply guidance. Click [here](#).

Please click on the button 'Add spending line' to add an item of expenditure to the budget.

Briefly tell us about your experience in managing budgets, and describe how you will manage the budget. (250 words)

I will personally manage the budget for Thinking Digital_Art. As I will be reporting within the framework of Thinking Digital Ltd, I will adhere to companies financial protocols and robust finance systems.

I have extensive experience of managing complex budgets for arts projects over the past ten years, including the Durham Book Festival budget of in £75K 2009 & £87K 2010. In my capacity as Director for Durham City Arts and as a freelance curator, I have successfully managed a variety of successful artist's (digital) commissions working with a range of partners, stakeholders and audiences worth over £80k.

I currently delivering the sharing schedule from my professional development ACE grant. This will not affect delivery of this programme.

Please describe how any fees, rates and purchases have been calculated. (250 words)

Artist Fee (Commission, Lead Artists for Art Hack) The fee (£250) has been calculated using AN toolkit for artist fees plus the artist experience in their field.

Performance fee (£300) was obtained from the artists.

Speaker Fee (£150) has been calculated based on comparable fees paid by other arts festivals, conferences and symposiums.

Transport Costs have been researched using online resources to calculate average ticket fares for trains and planes. Accommodation costs have been researched online resources for average hotel room price in budget city based hotel.

Curator Fee (5 days) The fee (£300) has been calculated using AN toolkit for artist fees plus specialist experience and years working in the field. It covers actual salary plus all on costs relating to Tax, NI and Expenses. The remaining 10 days (£3000) is covered by in kind support from CRUMB.

Producer Fee (9 days). The fee (£250) is calculated using AN toolkit and relevant experience and covers actual salary plus all on costs relating to Tax, NI and Expenses. The remaining 20 days will be covered by in kind support from CRUMB. Administration costs have been calculated using AN Toolkit and comparable hourly rate used by ISIS Arts

I will work with TDC designers to design branding, print costs are based on my knowledge of previous project and quotes from local printers.

Insurance cost was calculated from previous policy for recent Dear Angel exhibition at Globe Gallery.

Equipment Hire costs were calculated from a quote from a local hire company.

6b: *Thinking Digital Arts*: Archived Website

The Thinking Digital Arts 2014 website is archived and can be viewed at

<http://web.archive.org/web/20140808035217/http://www.thinkingdigital.co.uk/arts/>

6c: *Thinking Digital Arts*: Pre-commission Questionnaire

Artist: Dominic Wilcox

Pre Commission Questionnaire

Q: What do you feel your role is in this commission?

A: My skills are in ideas and James' is in digital development. So I feel my role is mainly in the concept side which will be grow from discussions with James and his thoughts and ideas on the brief.

Q: What do you feel the curator's role is in this commission?

A: To set a creative brief, organise a timetable of progress and provide an exhibit space and associated publicity.

Q: What are your expectations of this commission in relation to: Q:
Collaboration

A: To find a way to collaborate with James so that both feel satisfied with the outcome and our contributions. To take a 'what if' approach and see what develops.

Q: Context

A: The context of the cultural and historical quayside quarter of Newcastle Gateshead and the Sage and it's associated history and function.

Q: Aesthetics

A: No aesthetic expectations initially. The aesthetics will hopefully develop naturally out of the idea created.

Q: Time

A: To allocate an amount of time that will enable the development of a successful piece of work.

Q: Money

A: Mentioned on telephone, not sure of payment structure.

Q: IP

A: Not sure, shared credit.

Q: Practice

A: To experience an alternative way of working by collaborating with a technologist in order to develop a work that otherwise wouldn't be possible by working in isolation.

Q: Content

A: Content can relate to the history of the surrounding area, the everyday use of the Sage (sound and performance) or life in the area.

Q: Audience Experience

A: That the audience experiences something that they haven't before experienced either visually or sonically. That the audience feels included or at least unintimidated by the work. Potential for interaction and participation.

Q: What are the key aspects of the opportunity that interest you?

A: Working in the North East, where I was born, working with a technology expert who knows how to turn ideas into digital reality. I'm interested to find out what will come out of this collaboration in terms of connecting my creative approach with the 'magic' potential of technology.

Q: How will you approach the research and development of this commission?

A: To research the surrounding area as it is now and as it was in the past. To hear what areas James is knowledgeable in and interested in. To think up ideas that make use of the opportunity to show at the Sage within the historical location of the Quayside. To make the most of James' skills.

Q: What are your expectations of the process of development?

A: That James and I will discuss thoughts via skype and visit the site for further inspiration.

Q: What are your expectations of the process of exhibition?

A: The work will be shown during the Thinking Digital Conference 2014 at the Sage.

Q: What are the tensions you expect to come across?

A: I don't expect any tensions as long as everyone understands their roles clearly and the Sage is helpful in allowing the final work to be carried out in the way envisioned.

Q: What new knowledge do you feel you will get from this commission process?

A: Experiencing working in collaboration with another person of a different skill set. Understanding what elements of the process are each person's responsibility. Making something that is greater than the individual parts of the collaboration.

Creative Technologist:

James Rutherford

Pre Commission Questionnaire

Q: What do you feel your role is in this commission?

A: To generate an idea in collaboration with the artist, to advise on technical feasibility, to build and to bring the artwork to exhibition.

Q: What do you feel the curator's role is in this commission?

A: To introduce collaborators in a form that will best help us work together, to support with administration (liaison with conference and venue), to help contextualise direction for the installation, to reign in if the project goes awry, and to arbitrate if there's any fundamental disagreement on process.

Q: What are your expectations of this commission in relation to:

Q: Collaboration

A: An equal split of input. Remote discussion for ideas phase, periodic in-person chat. In the latter stage, I'd expect to be building technical platform, and the artist to be working on experiential content.

Q: Context

A: Mandated themes: North East, Quayside/Sage locality
Additional expectations: Tech, Industry, Sound, Historical vs modern day.

Q: Aesthetics

A: No idea, really)

Q: Time

A: A Couple of weeks work, spread across three months.

Q: Money

A: Below regular day rate, paid in stages – due on commission and successful exhibition.

Q: IP

A: Co-held by myself and the artist. Further exploitation possible by either by mutual agreement.

Q: Practice

- A: Unsure. Separate, distance collaboration. Regular check-ins to discuss. Formal agreement of idea, division of labour and installation duties.
- Q: Content
- A: Unsure, beyond the things mentioned for 'Context'. Given our respective fields, I think it could likely employ a small computer with interface devices (NFC/mini printer/audio) hooked together with a web-connection for the platform; leaving a lot of potential for content.
- Q: Audience Experience
- A: Hopefully different enough to be engaging, with something longer-lasting to consider. Maybe a physical or digital memento too.
- Q: What are the key aspects of the opportunity that interest you?
- A: The chance to play, and build something beyond my capabilities alone. The profile of the conference, which is one I've personally enjoyed in subsequent years. To be able to leave audience with something surprising and memorable.
- Q: How will you approach the research and development of this commission?
- A: I expect I'll aim to provide ideas and support, but take lead from the artist on artistic worth. I expect to lead on platform development, and be lead on content.
- Q: What are your expectations of the process of development? I anticipate this being a digital project with split between platform and content. Once the commission idea is agreed, I'll be scrambling to make chosen hardware/software work together, and the artist will be researching/collating the content of the experience.
- Q: What are your expectations of the process of exhibition?
- A: Installation and supply of supplementary contextual details. Hands-off from there, but available to fix anything that breaks!
- Q: What are the tensions you expect to come across?
- A: We'll need to consciously ensure there's an equal division of input. I'm have experience of, and enjoy, generating prototype ideas. I'll may need to hold back input, since this should probably be lead by the artist, but I also wish to be more than a mechanic for the installation.
- Q: What new knowledge do you feel you will get from this commission process?
- A: Some understanding of a formal arts-tech collaboration – personal relationships and process. Specific understanding gained from piecing

together the hardware/software that constitutes the platform (I expect to stretch myself here). Some insight into the chosen commission topic, which may or may not be inspiring in and of itself.

6d: *Thinking Digital Arts*: Post-commission Questionnaire

Artist: Dominic Wilcox

Post Commission Questionnaire

Q: What did you feel your role was in this commission?

A: To be creative. To deliver an appropriate artwork for the event. To think up the idea, decide how it should work and look and gather any sound material I thought useful.

Q: How did your role evolve throughout the commission?

A: We quickly settled into our natural roles as artist and technologist.

Q: What do you feel the curator's role is in this commission?

A: To organise the exhibition and help with logistics and to be a detached person to talk to about the project.

Q: How were your expectations of this commission met in relation to:

Q: Collaboration

A: I didn't know how it would work out, but it ended working in the way I would have expected. The distance between James and I may have slowed things a little. I was unsure how James was doing near the end of the project regarding making the tech work.

Q: Context

A: The Sage, river Tyne and Newcastle were great locations full of history to work with.

Q: Aesthetics

A: The Binaudios looked very similar to my sketches. Probably would alter some aspects next time but only small things.

Q: Time

A: All worked out ok.

Q: Money

A: The fee was fine for this project. The budget for materials and manufacture was a little small. I think it was more suitable just for materials perhaps with the assumption that the making would be done in house. Having to pay VAT out of it to Raskl also ate 20%.

Q: IP

- A: In previous projects I own copyright on the 'art' work as the artist and the manufacturer or technologist is paid for their work, and they can claim IP on any technical elements if they wish, in this case it is shared. I don't know how that will work out in the future if the idea develops.
- Q: Practice
- A: The making of the work went relatively smoothly due to having Raskl take on the manufacturing and engineering.
- Q: Content
- A: The historic location gave lots of material and content to work with
- Q: Audience Experience
- A: The audience seemed interested to know what the Binaudios were. And it was great to see lots of interaction with the piece.
- Q: What were the most interesting aspects of the commissioning experience?
- A: Working with other people with different skills to create something interesting. Seeing how the public interacted with the object.
- Q: How did you approach the research and development of this commission?
- A: I learned what type of work James did and what he could do before thinking of ideas. The work would only be limited by the technologist's skills and the budget. The work developed by taking the subject of sound from the Sage and looking over the river to Newcastle combined with my previous work such as Sounds of Making in East London and Future viewing Binoculars.
- Q: Were your expectations of the process of development met? If so, not, please tell me why?
- A: I had no expectations, but after an initial wrong path taken in terms of the idea chosen, once the decision was made to switch to the Binaudios all seemed to go quite smoothly.
- Q: Were your expectations of the process of exhibition met? If so, not, please tell me why?
- A: Yes the work was to be shown in the Sage public area.
- Q: Were there any tensions? If so, how were they resolved? If so, not, please tell me why?
- A: I don't think so, James seemed to be happy to trust my judgment on how the object should look and work. This meant that we each had clear job

descriptions of artist and technologist.

Q: What new knowledge do you feel you got from this commission process?

A: I learned about working with a manufacturer to make an unusual object in the way I wanted it. I gained better experience in the process of collaboration and how it can work well. I furthered my interest in integrating technology into physical objects. I made my first public interactive work.

Q: What do you feel the key learning outcomes of the commission process?

A: As above

Q: Would you like this commission to evolve moving forward? If so, how?

A: Yes, it is an idea that can be placed in new locations and with new sound content for example.

Q: Has this commission inspired you to work in a new way? If so, not, please tell me why?

A: It has given me confidence that I can work with people from other areas in order to make something interesting. It is something I will look to do more of in future.

Q: Has this commission informed your current work? If so, not, please tell me why?

A: Each project I do adds more experience to my future creative approach.

Creative Technologist: James Rutherford

Post Commission Questionnaire

Q: What did you feel your role was in this commission?

A: To develop a technical solution to realise the commission's concept

Q: How did your role evolve throughout the commission?

A: From evaluating the collaboration's ideas for technical feasibility, to creating prototypes, to sourcing components, building and testing.

Q: What do you feel the curator's role is in this commission?

A: To facilitate the relationship between collaborators; to support the production of the commission piece (similar to a 'producer' role in theatre); to liaise with the venue and manufacturer; to keep the purse.

Q: How were your expectations of this commission met in relation to:

Q: Collaboration

A: Broadly yes, though I hadn't appreciated that there would be quite a division between concept/manufacture and the digital side. The integration came late on- I only understood what the piece would look like shortly before installation.

Q: Context

A: Yes, I think we had clear starting-point objectives, and met them.

Q: Aesthetics

A: The end piece was very different to my expectations, and pleasantly so it's commanding, inviting and screams its utility. I'd expected something futuristic- looking, or steam-punk style.

Q: Time

A: Took slightly longer than commissioned time, but not unreasonably so. My time was heavily stacked towards the end of the schedule. Partly due to my holiday commitments (expected) and partly because the gadgetry needed to be situated after the main build.
Co-ordination was a little difficult with our respective commitments.

Q: Money

A: Close to expectations. We went over-budget, and were happy to contribute from our personal fees since we decided it would help us achieve a good piece.
I was a bit surprised that we jointly became owners of the piece. I'd expected them to become an asset of Thinking Digital. This was a pleasant surprise, but it bestows a requirement to plan some more/store!

I was a bit disappointed we were offered discount tickets rather than complementary ones. I already had a ticket, but I think this put Dominic off attending (seemed a bit churlish for the sake of £99).

Q: IP

A: I think we both readily accepted shared IP, and this was presented respectfully around the commission and supporting materials.
There have been a good number of web articles written about the piece. I was a bit disappointed that many of them (and Twitter mentions) only featured Dominic's name. I think this was partly because he did a promotional push on his site (hisname.com), but mostly because his is the name with the reputation in innovation/design [though it's true that even some of the technical articles also focused on him].

His promotional article did include my name as an equal collaborator. It was certainly nice to see it promoted around the world and in a number of different languages. I'll get over it ;)

Q: Practice

A: Roles were relatively well defined. The vision came relatively late in the project, so I found myself as a critical cog right up to the point of installation. This was quite stressful. Partly due to how timings worked out with my own holidays, partly due to the nature of the project, partly because I have a tendency to place myself in that position (common with other projects). The stress was mainly due to working on something unfamiliar (and probably globally untested) – there wasn't really anyone/anywhere to ask for help.

Q: Content

A: I was impressed with the audio content Dominic selected and captured. I think it made the experience shine.

Q: Audience Experience

A: I aim to produce something high-end when I work on a project – I'm not usually satisfied with 'acceptable standard'. This feeds into ambition in the concept. This can be a good trait; sometimes it's not – when ambition is too high, or speed is preferred to quality. I expected to produce something that was experientially rewarding, and informal feedback suggested we achieved that. I was impressed by the audience response to aesthetics – something I wouldn't typically have put much weight on; Dominic and Raskl did well with this.

Although I was expecting audience reception to be positive, it was extremely rewarding when we first set it up and then I sat back in the cafe and watched people interact and enjoy it, and for a crowd to gather around it.

Q: What were the most interesting aspects of the commissioning experience?

A: Working on something physical – most of the stuff I do stays very much in digital. Working with Dominic – he brought a humanistic grounding in his ideas – people can instantly understand his installations by looking at them, and they invite your touch.

Q: How did you approach the research and development of this commission?

A: We had a few different ideas. Initially, I prototyped one of the candidates (an audio game) in website code, to test feasibility. It seemed feasible, but

we discounted the idea. There were two parts of the final idea that needed to be feasibility-tested:

1) There were several options for sensing rotation. I wasn't sure which would work, but I was sure the problem could be solved somehow. Late on – and with little time to go – after deciding on a magnetometer (magnetic compass) it was suggested by the venue staff that the large amounts of metal in the building might affect the chosen solution. This was an unanticipated concern. 2) Generating / fading multiple sounds simultaneously. I coded a prototype to ensure that this was possible with 15-20 sounds, and that I could make it sound realistic. I sketched the stereo sound-angle dropoff curves on paper to ideate, and coded it up. I concluded I could do this. When I tried with the real sound set (~40 sounds), I discovered intermittent problems. This took a while to figure out- I re-encoded into different sound formats and changed the file sizes. I resolved by restructuring the system so that it only ever played 5-10 sounds simultaneously. This was also unanticipated despite the prototyping.

Q: Were your expectations of the process of development met? If so, not, please tell me why? Yes. As mentioned, development crunched for various reasons; but this is something I'm used to on open projects.

Q: Were your expectations of the process of exhibition met? If so, not, please tell me why?

A: Initially exceeded – I was pleased that the piece was given prominence in the venue, and contextualised by floor graphic. The piece was well promoted during the conference sessions. Unfortunately, the piece was damaged shortly after the Thinking Digital exhibition period. Communication with the venue has been a bit confused, and I'm not sure what the future will be for it.

Q: Were there any tensions? If so, how were they resolved? If so, not, please tell me why?

A: Nothing major. I think we both respected each other's roles and experience. I had originally hoped for more involvement in ideation, but in hindsight I had some good space there, and this was my collaborator's specialism.

Q: What new knowledge do you feel you got from this commission process?

A: To think about the piece situated. To make it attractive. To grab some good photos/videos for publicity materials. To have both clarity and flexibility when collaborating to specify something at a distance.

Q: What do you feel the key learning outcomes of the commission process?

A: A concentration on individual roles to drive towards the final collaborative piece together.

Q: Would you like this commission to evolve moving forward? If so, how?

- A: It would be nice to see the commission piece re-situated, possibly be repurposed, available for more people to enjoy, and to potentially provide commercial income – as pocket money, or to develop further. I don't think any of us have the commercial exhibition nous to understand what it would mean to exhibit as a business. The piece lies a little in limbo since it was damaged. It needs to be repaired, and augmented to be safe for unattended exhibition. I'd like this to happen, but I think we've all lost some steam for driving it.
- Q: Has this commission inspired you to work in a new way? If so, not, please tell me why?
- A: I think it's certainly inspired me to be more grounded and focused on how people physically interact. Also, to aim more for the magic people experience, rather than the sophistication of construction. I recognize more acutely that I need to stay completely open in ideation. I've done remote work (though not really collaboration) before. I think the process here was very similar, though the physical aspect added a new dimension. (Sorry, I didn't mean this pun!) I'm inspired to work more with physical/interactive things, and have ideas for installing things to play with around our collaborative workspace.
- Q: Has this commission informed your current work? If so, not, please tell me why?
- A: I think it's opened me up to thinking about opportunities. I'm shortly to relaunch my portfolio site, and will specifically court creative, and collaborative jobs alongside my core skill offering. In a practical sense, it's also become a great piece for the portfolio, to help me find further projects like this.

6e: *Thinking Digital Arts: Commission Brief*

Thinking Digital Arts 2014: Commission Brief

Thinking Digital provides the perfect context to examine, stimulate and support experimental collaborative practice across cultural and sector boundaries.

Thinking Digital Art 14 will pair a contemporary artist and a technologist and support the creation of a new commission.

Key aims for the collaborative commission include:

- Enable deep, innovative engagement within the intersection of two distinct sectors. Investigate the collaborative process as a method for converting the creative possibilities inherent in the common ground that exists between each field into tangible projects.
- Examine the current nature of collaboration in art and technology and the role of each in contemporary culture.
- Facilitate a space for the creation and sharing of collaborative, new knowledge.
- Present innovative models of art that push existing, formal and conceptual boundaries and will resonate with contemporary digital culture into the future.
- Create new opportunities for audiences to participate, learn and enjoy contemporary art.

Thinking Digital provides the perfect context to examine, stimulate and support experimental collaborative practice across cultural and sector boundaries.

Thinking Digital Art 14 will pair a contemporary artist and a technologist and support the creation of a new commission.

The commissioned creatives will create a new commission that is inspired by the conference context in the North East of England, and more specifically, the cultural, quayside quarter of NewcastleGateshead.

The commissioned work may take the final form of web-based works, works that engage mobile platforms, performance, video, installation, sound or object based art. The final work can be made for the context of the gallery, the public, the web or networked devices.

Any final work must be credited as follows: the artist AND creative technologist.
Commissioned by Thinking Digital Art 2014

The final work will be launched during Thinking Digital Conference 2014 at the Sage Gateshead and presented for the duration of the art programme.

As this project is part of a research based case study, the process of development and delivery will be documented throughout.

6f: *Thinking Digital Arts* Commission: Local and Online Press

Regional Press and Radio

The curator had significant input into the regional press and radio PR campaign for the Binaudios Pairing Commission and as such, both roles featured equally in all features.

- 20 May 2014 Journal Front Page:
<http://www.thejournal.co.uk/news/north-east-news/sage-gateshead-welcomes-tourist-binoculars-7146864>
- 26 May 2014 Sunderland Echo: <http://www.sunderlandecho.com/what-s-on/arts/artist-inspired-by-sound-of-the-city-1-6636987>
- 21 May 2014 BBC Radio NCL

Social Media Storify

Storify is a social network service that lets the user create stories or timelines using social media such as Twitter, Facebook and Instagram. A storify of the social media generated around Thinking Digital Arts can be found here:

<https://storify.com/casspence/thinking-digital-arts-19-25-may-2014>

Online Press and Blogs

The online press campaign was led by the artist Dominic Wilcox and in all the features the artist name leads the coverage.

- 28 May 2014

Dezeen online Design Magazine: <http://www.dezeen.com/2014/05/28/binaudios-by-dominic-wilcox-allow-users-to-listen-to-the-city/>

Design Boom:

<http://www.designboom.com/art/dominic-wilcox-binaudios-listen-sounds-of-the-city-05-28-2014/>

Trend Hunter: <http://www.trendhunter.com/trends/binaudios>

- 29 May 2014

Design Week:

<http://www.designweek.co.uk/i-can-hear-for-miles/>

Luxury Launches:

<http://luxurylaunches.com/gadgets/binaudio-giant-hearing-cones.php>

- 30 May 2014

Adafruit:

https://blog.adafruit.com/2014/05/30/binaudios-listen-to-a-city-through-binoculars-for-your-ears-piday-raspberrypi-raspberry_pi/

Stupid Dope:

<http://stupiddope.com/2014/05/30/hear-the-different-sounds-of-the-city-with-binaudios-by-dominic-wilcox-video/>

- 31 May 2014

Impact Lab

<http://www.impactlab.net/2014/05/31/binaudios-giant-binocular-turned-headphones-let-you-hear-all-of-the-citys-sounds/>

The Fruity Computer:

http://www.thefruitycomputer.com/forums/page/index.html/_/raspberrypi-news/fantastic-audio-art-installation-with-a-raspberrypi-r828

Others

- Before its News
- News Locker
- Fast Company

6g: *Thinking Digital Arts* Commission: Raspberry PiBlog

The “Pairing” Collaborative Commission was reviewed by Rachel Rayns, artist in residence at Raspberry Pi Ltd. This feature is a good example of a more equal balance of power and featured both the role of the artist and the creative technologist equally. The feature can be found here:

<https://www.raspberrypi.org/blog/art-showcase-binaudios/>

6h: *Thinking Digital Arts*: Evaluation Report for Arts Council Grant

A video of Thinking Digital Arts 2014 can be found here:

<https://youtu.be/gkU38sgsevU>

Film by Adam Green



Thinking Digital Arts 2014 ACE Activity Report

Thinking Digital Arts was delivered as part of the Thinking Digital Conference 19 – 15 May 2014. Thinking Digital Conference (TDC) is committed to celebrating the curiosity we all have in how technology is shaping our future and provides an internationally renowned platform for its delegates to hear from those already making an impact. The aims of the first Thinking Digital Arts (TDA) were equally as ambitious, to investigate and celebrate the emerging area of contemporary arts where the arts, technology and digital culture collide. I feel this year's programme clearly demonstrated the scope and depth of experimental creative arts practice emerging within the art and technology field.

The outcome has exceeded expectations and the experience of curating and producing a programme of this nature, has produced a deep level of critical learning that has informed my own practice but also the current practices of the TDA's partner organisations, participants and audiences.

'The new commission sparked ideas about where else it could be exhibited; the 'In Conversation' event caused me to rethink some of my future research in the field.'

Dr Sarah Cook, New Media Curator and Reader, University of Dundee

Most importantly, Thinking Digital Arts 2014 has successfully produced strong foundations for a deeply routed, outward facing digital arts platform that the wider team at Thinking Digital Conference and I can evolve and grow with the conference.

‘the diversity and friendly crowd and the different types of events that I joined brought a curious and fresh diversity. The fine blend of makers, thinkers students, professionals, policy-makers etc.’

Olga Mink, Director, Baltan Laboratories, Eindhoven, Netherlands

‘Excellent – depth of curatorial expertise, really well structured, very warm and low key.’

Andrew Wilson, New Media Artist, Organiser of Hannah Festival

A clear route to progress TDA for 2015 has emerged from a rigorous research and evaluation strategy that has sought collective and individual feedback from partners, invited guests, participants and audiences.

The context of the Thinking Digital Conference has proved to be a positive catalyst for the development of a new space for those invested and interested in the arts, cultural, heritage and digital technology sectors to come together to debate, share skills and knowledge and learn, through creative and professional experimentation.

The programme has succeeded in highlighting the clear appetite and need for a deeply collaborative, digitally focused arts programme that is embedded within both the Thinking Digital Conference and the wider arts, cultural and heritage infrastructure across the North East and beyond.

Thinking Digital Arts: Audience Engagement

Thinking Digital Arts (TDA) successfully engaged a wide range of professional and public audiences. Key audiences include:

Professional Audiences

Regional, national and international delegates from Thinking Digital Conference (TDC) delegates had a range of opportunities to engage with the TDA programme including:

- **Main Speakers at the TDC conference**

TDA brought two Main Stage speakers to speak during the two day conference at the Sage Gateshead:

- **David Griffiths**

David Griffiths is an award winning game designer, creative coder and livecoding artist, and part of [FoAM](#) – an independent arts and research organisation. After studying at the National Centre for Computer Animation at Bournemouth University UK, he worked in the games and film industries for 10 years and has credits on films including Troy and Kingdom of Heaven.

In 2009 he joined FoAM to work on computer games about plants, permaculture and robotics research. Alongside Aymeric Mansoux and Marloes de Valk he created the satirical Facebook game Naked on Pluto which won the Telefonica Vida competition in 2011. With Gabor Papp, he works on Fluxus – an open source 3D game engine used for livecoding performances by artists internationally.

David is also an associate researcher at Exeter University, working on citizen science and public outreach projects for ecology and conservation research, and teaches primary school children games programming as part of the international CodeClub scheme. Since 2013 Dave Griffiths has also been teaching Critical Programming at the Institute For Music And Media of the Robert Schumann School of Music and Media in Düsseldorf.

He performs with Alex McLean and Adrian Ward as Slub, a livecoding algorithmic rave group who will also be making an appearance at Thinking Digital 2014.

- **Conrad Bodman**

Conrad is Guest Curator of Digital Revolution the Barbican Centre's first major digital season which will run from 3 July to 14 September 2014. The exhibition and season of related events will explore the revolutionary impact of digital technology on the worlds of art, film, music and the performing arts. The exhibition includes a major partnership with Google called DevArt which has resulted in 4 major new interactive commissions with creative coders.

Previously, Conrad curated Barbican exhibitions including Derek Jarman; A Portrait, Space of Encounter; The Architecture of Daniel Libeskind and Game On, the world's first major museum exhibition dedicated to games culture which has also toured the globe.

At the Australian Centre for the Moving Image (ACMI) Conrad helped create the ACMI's permanent exhibition Screen Worlds: The Story of Film, Television and Digital Culture. He also programmed exhibitions including Tim Burton and Game Masters, featuring the work of 30 of the world's leading game designers which is currently touring internationally.

• Thinking Digital Arts Hack Day

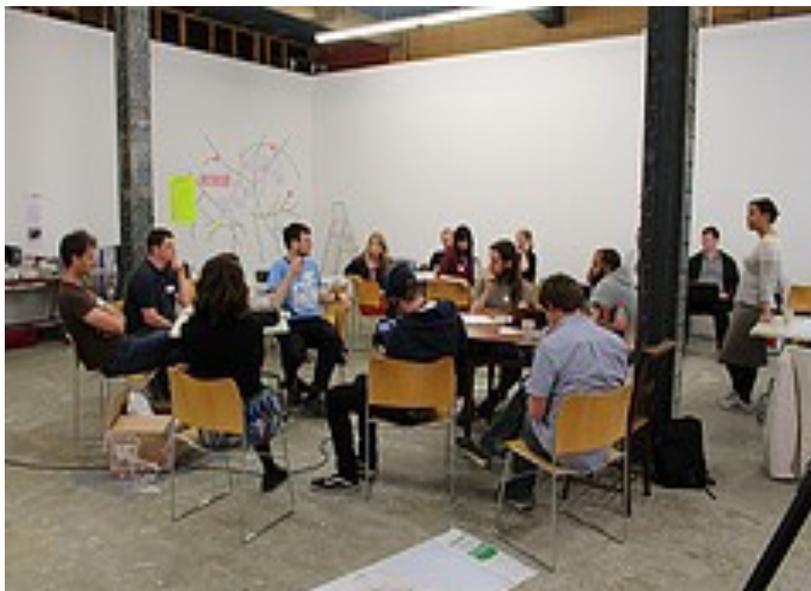


Figure 44: Thinking Digital Arts 2014, Group Collaboration Hackathon. Installation shot at the Newbridge Project, Newcastle Upon Tyne. Photographer Karolina Maciagowska

TDA invited twelve TDC delegates to take part in the TDA Hack Day at its Hub venue Newbridge Project Gallery and Maker Space Newcastle, and work alongside twelve artists. The hack day was promoted on the TDC website as a full day masterclass for delegates to attend on Tuesday 20 May 2014. The day was a resounding success and five new collaborative projects were generated in an 8 hour facilitated workshop. These projects were then showcased for two hours for a public audience.

Feedback for the event has been very positive, key things that need noting include:

- **Language:** A number of TDC delegates said that while they would have loved to have taken part, they felt that they could not provide a strong enough business case to bosses in order to take another full day out of the office (TDC is a 2.5 day conference). In light of this, I will work closer with Herb Kim, founder of TDC to articulate future events in a way that showcases key practical and learning benefits for commercial, creative technologists who are working within companies. A small number of delegate participants said that would have liked more TDC delegates to have seen the prototype projects that emerged from the day. The TDA team and agreed that the venue(s) and context of the Gallery and Maker Space was the right one and this should not change moving forward. However, as TDC is a tightly curated experience, we could explore different ways that the activity could be captured/screened/showcased at the TDC venue (Sage Gateshead). This could be through a physical exhibition or online.

- **Live Coding Performance at the TDC Launch Party**



Figure 45: Thinking Digital Arts 2014. Live coding Performance by Alex McClean and Dave Griffiths at the Tiger Tiger venue on 19 May 2014, Newcastle Upon Tyne. Photographer Thomas Jackson

Dave Griffiths and Alex McClean performed as the collective ‘Slub’ during the TDC Launch Party at Tiger Tiger. Feedback from delegates showed a keen interest in the live coding performance, as most had not seen code being used in this performative way before. It was also a great way for delegates to engage with the broader arts programme, outside of the main conference venue.

The venue was a night-club environment, with a raised platform in the middle of the space for the performers. Tiger Tiger provided all of the requested audio and projection equipment, which worked well logistically. Feedback from the performers themselves was generally positive, however, it was felt that had the equipment had been of a slightly higher speck for the kind of sounds that were being produced, the experience could have been improved. While I had been vigilant in regards to the range of equipment needed for the performance, moving forward I will ensure that the speck of all equipment meets the needs of the performers.

-
- ***Binaudios* (2014) Dominic Wilcox and James Rutherford**
A video of Binaudios can be found here: <https://youtu.be/taTP6eXp9tg>
Film by Adam Green



Figure 46: Thinking Digital Arts 2014, Collaborative ‘Pairing’ Commission Binaudios with James Rutherford and Dominic

A new collaborative commission between Sunderland born, but London based artist/designer Dominic Wilcox and Newcastle based creative technologist James Rutherford. The new commission 'Binaudios' has had a resonating impact for both the delegates of TDC and also its host venue, the Sage Gateshead. The work is an ambitious exploration of the sounds of a city, and has responded to both the venue of the Sage Gateshead itself, with its views of Newcastle upon Tyne from its vast windows, and the organisations focus on sound and performance.

We are now in negotiation with the Sage Gateshead, who want to showcase 'Binaudios' indefinitely or potentially purchase it. We have also have had a strong approach from Tyne and Wear Museums and Archives, who would like to showcase a modified and bespoke version of the work at their Segedunum venue.

- **Pop Up Bookshop**



Figure 47: Thinking Digital Arts 2014. Installation shot of the Pop Up Bookshop by Newbridge Books, Newbridge Project at the Sage Gateshead. Photographer Suzy O'Hara

Newbridge Project's successful crowd funded initiative Newbridge Books: Offsite, was in situ at the Sage Gateshead for the duration of the main TDC conference. Delegates of TDC and Sage Gateshead broader audiences had full access to the range of curated publications that emerged from the TDA programme.

The Newbridge Project Director of Participation Alexia Mellor and Bookshop Producer Laura Cresser, had full access to the conference during this period. Feedback for the project was positive, however, it was felt we could have had more engagement from TDC delegates had the pop up bookshop been located

outside of the main Hall, alongside the other 'exhibitors' stalls.

- **Wunderbiz, by Wunderbar**



Figure 48: Thinking Digital Arts 2014. Installation shot of the Exhibition Stand by Wunderbar for project Wunderbiz at the Sage Gateshead. Photographer Suzy O'Hara

Ilana Mitchell, director of Wunderbar festival was given an 'exhibitors' stall space outside the main hall throughout the TDC conference, alongside a range of other businesses and initiatives who wanted to engage with delegates.

She presented her project '*Wunderbiz*' on the main stage at TDC conference and could access the conference at all times apart from programmed breaks. Her feedback was overwhelmingly positive, as she felt she had met a range of different people with skill sets and knowledge that could be useful for the development of her artistic project, as well as seeing key speakers that progressed her understanding of how creative technology could be employed in her wider business to progress its key mission and objectives.

Arts Professionals. Artists and wider Arts & Cultural Audiences

TDA successfully engaged a range of different artists and wider arts audiences throughout its main TDA Hub and Digital Cultures programmes.

The Hub programme took advantage of the Newbridge Project Gallery and Bookshop spaces. The programme was fully inclusive, interactive and engaging, and featured the TDA Hack Day, TDA Panel (part of Digital Cultures Conference), Betagrams exhibition, Nomadic Salon conversation and In Conversation.

- **TDA Hack Day**

Twelve Artists and Makers were invited to participate in the TDA Hack Day, via

direct invitation and an open call process. It should be noted that the response to the open call was incredible, with applications to participate coming from Berlin, Paris, London and across the UK. There is an obvious appetite for creatives working in this sphere for opportunities to collaborate in a lab style context.

The TDA Hack Workshop was hosted by Victoria Bradbury and Lalya Gaye (Attaya Projects) at Newbridge Project Gallery and Maker Space. A total of twenty four artists, designers and hackers were invited to participate in the TDA Hack Day, via direct invitation and an open call process. It should be noted that the response to the open call was incredible, with applications to participate coming from Berlin, Paris, London and across the UK. Participants came together at the NewBridge Project and Maker Space to create tangible reflections, comments, explorations and interpretations of the theme of 'Decentralisation'.

It should be noted that the response to the open call exceeded expectations, with applications to participate coming from Berlin, Paris, London and across the UK. and the TDC delegates who signed up via the conference came from across the UK.

We secured sponsorship from the House of Objects for a range of recycled materials that could be used to create new artworks. Alongside the materials we bought with our budget, this offered an abundance of creative material for participants to create with.

‘...the possibilities offered by the space and the equipment was inspirational and had a great effect on everybody...’

Martin Reiche, New Media Artist, Berlin

The TDA Hack ended with a free public exhibition, on for one night only, where a broad range of audiences could see the innovative prototype projects that had been developed during the first TDA Hack and speak to the artists and creatives who had made them. Featured artists include: Cally Gatehouse, Clifford Hammett, Antoine Kik, Shelly Knotts, Martin Reiche, Colin Rennie, Stevie Ronnie, Andrew Wilson and Cay Green, Vladimir Resner, Dr Brian Degger and Alistair McDonald (Maker Space)

Feedback from the day confirms that we succeeded in creating a platform that nurtured new and existing relationships between arts and digital professionals. It is also clear that the experience informed working practices and developed the potential for future collaborations, art work and audiences between the sectors.

When asked ‘Did you learn or meet anyone new by attending a Thinking Digital Arts event? If so, can you tell us more about it?’ participants responses included: I met a great group of people in the participants and organisers. Some of whom I'm sure I will work with in the future.’

Yes, new working methods, especially from Art Hack’

‘Some insights from the hack day have helped me think a lot more clearly about what I'm trying to achieve. I thought something the facilitators did to form groups of participants was a very neat approach and I might use it in the future.’

'It was really good to be among such a bright, and nice, group of people and feel challenged to work at their level.'

'yes worked with several artists who I had never met. I recommended two based in Newcastle to the organisers of another opportunity that came up after the event.'

'being around artists all day – their *hands on* approach has inspired me to get, erm, *hands on* to work out what I want to do, rather than just thinking about things *really hard*.'

'I met new people and got to know some people I already knew better.'

'Yes, several people for new social and business connections. Put into practice use of materials I had known about but not had access to before.'

'Everything was very inspirational! I particularly liked the way that the worlds of art, design and technology were brought together, too often we exist in separate bubbles'

'This event is a great addition to the TDC programme as it brings an arts mindset to the more commercial TD Conference'

- **TDA Panel Discussion, as part of Digital Cultures Conference**



Figure 49: Thinking Digital Arts 2014. Panel Discussion, as part of Digital Cultures Conference at Discovery Museum. Photographer Suzy O'Hara

TDA provided a variety of professional and public forums where leading critical thinkers and a public audience could participate in a forward thinking debate on the position of technology in art and the wider cultural sector.

The commissioned artist, Dominic Wilcox and and creative technologist, James Rutherford, shared a reflection on the collaborative process they embarked on for the TDA and identified key opportunities and challenged they faced. This was very well received by the Digital Cultures audiences.

The TDA Panel discussion at the Discovery Museum, which was part of Digital Cultures 2014 (co-produced by John Coburn, TWAM and Suzy O'Hara, TDA) was an excellent example of how specialist curatorial knowledge within the new media art field can be disseminated to a broader arts, heritage and cultural professional audience and networks. The TDA Panel engaged over one hundred and twenty professionals delegates working across the arts, cultural and heritage sectors as well as the commercial creative technology industries.

The panel was made up of five new media curators /directors from different organisations and contexts; Alan Smith (Director, Allenheads Contemporary Arts, Northumberland), Dr Noel Lobley (Sound Curator, Pitt Rivers Museum, Oxford), Marialaura Ghidini (Director, Or-bits.com, online gallery), Irini Papadimitriou (Digital Programmes Manager, V&A Museum, London), Olga Mink (Director, Baltan Laboratories, Eindhoven, Netherlands)

The structure of this panel discussion was short, rapid presentations by the panelists, which focused on the theme of collaboration, followed by an engaging discussion between the panel and the floor. This discussion was chaired by Prof Beryl Graham, CRUMB, University of Sunderland. The panel discussion was a success and I feel that those delegates who work in organisations that have been most proactive with integrating the digital into their everyday working practices gained most from the discussions.

I feel others, who were less developed in this area, perhaps struggled to grasp how they could convert the ideas and examples of best practice presented by the speakers, into their individual contexts. This highlighted a clear gap in knowledge and confidence within the wider cultural and heritage sectors nationally, around how to assimilate the digital into the heart of the work and to utilize it effectively to achieve the potential of their particular organisation.

There are minor structural changes I would make within this format to ensure the more broad audiences had time to assimilate the new and potentially unfamiliar ways of working being presented by the panelists. I would also consider moving the discussion with the floor to a smaller, more intimate and less intimidating venue to facilitate a more informal discussion around key themes and topics.

• In Conversation

The 'In Conversation' discussion event brought a diverse range of arts professional from across the North East to the Newbridge Bookshop, in order to engage in a chaired discussion. The discussion was framed by key themes that had emerged from the curated selection of books that had been co curated by Laura Cresser (NB Bookshop Manager) and myself. Participants included; Curators from the TDA Panel, Jim Beirne (Live Theatre), Theresa Easton (Artist/Print Maker), Jessica Rainey (Writer), Nick Malyan(NWN), Gabi Arrigoni (Curator, Culture Lab), Dr Brigitta Zics (Head of Digital Media, Culture Lab), Alistair Robinson(Programme Director, NGCA) and Stevie Ronnie (Digital Media Artist, Poet and Writer) amongst others.

Feedback for this event was very positive.

'It was certainly interesting to hear the thoughts of a diverse group of people and

to what extent they engage with digital media.’
In Conversation Participant, TDA 2014

‘Attending T.D.A helped to contextualise my organisation's work in a new way – inspiring us to break out of the "delivery" bubble and reflect on our use of digital media.’

Nick Malyan Senior Projects Manager, New Writing North

- **Betagrams Exhibition, curated by Gabi Arrigoni**

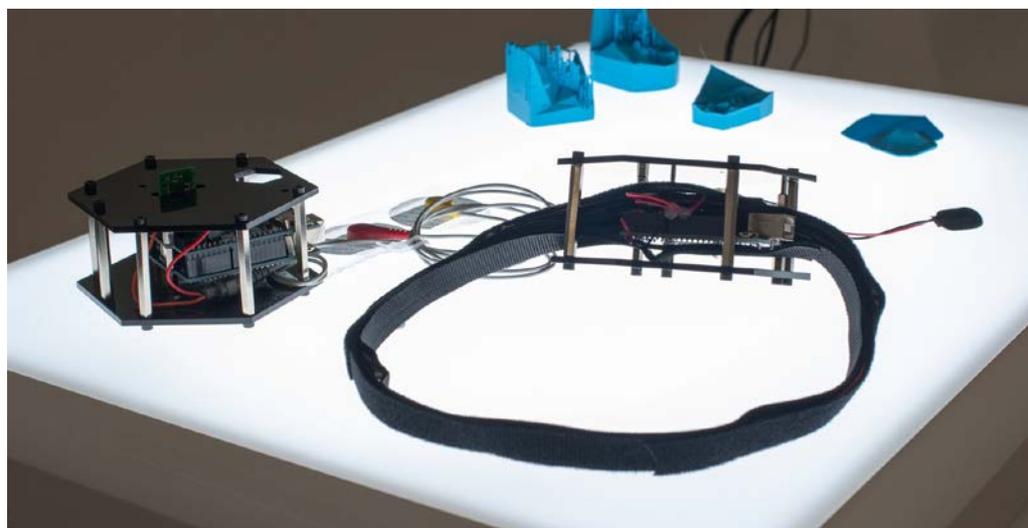


Figure 50: Thinking Digital Arts 2014. Installation shot of CONSOLIDATOR, 2014, by Ben Freeth at the Betagrams exhibition, curated by Gabi Arrigoni, held at Newbridge Project Space 21-23 May 2015. Photography Karolina Maciagowsk

I have developed close links with many of the artists and staff currently working in Culture Lab, University of Newcastle. I wanted to develop a clear practice led research strand within TDA, and so I provided an opportunity for Gabi Arrigoni, a second year PhD candidate and new media curator from Culture Lab, University of Newcastle, to curate an exhibition that showcased a selection of artworks developed by artist / researchers also working in this lab. The exhibition Betagrams, presented a critique of speculative, creative methodologies and issues inherent within the concept of the ‘prototype’ in new media based artworks.

- **Gabi Arrigoni**

Gabi Arrigoni is a PhD candidate in digital media art curating and lectures at Culture Lab for the M.A. Creative Art Practice. Her research interests lie at the intersection of future and innovation studies, design and speculative culture. She currently collaborates with FACT-Liverpool and with the Connecting Cities urban screen network. Former editor in chief of undo.net, the first Italian online platform for contemporary art, she has curated a number of exhibitions and talks in not-for profit spaces. She has presented her research at international conferences such as ISEA and Re-New and published articles and essay on contemporary art magazines across Europe, with a special focus on public art and the relationship between art and the socio-economical context.

- **David Chatting**

David Chatting is a Research Associate at Newcastle University, he is a designer

and technologist with twenty years experience working in Research and Development. davidchatting.com

Corrugations: improvisations with futures and cardboard

All design exists as prototypes for a speculated future. As such it should be approached with a playful scepticism. Too often these propositions seem too complete, too resolved. What are the aesthetic possibilities of the prototype? They need not be rough or crude, but can communicate a deliberacy while maintaining ambiguity through materials and form.

Corrugations is a series of technological prototypes constructed from cardboard using digital fabrication techniques, each reforming and reframing the potential of a discarded mobile telephone. Each inviting the audience to engage in an imaginative improvisation and challenging our conception of the *new*.

• **Teresa Almeida**

Teresa is an artist, designer, researcher, and educator from Portugal. After island hopping Manhattan and Singapore, she is now living in Newcastle while working towards her PhD at Culture Lab. Her main interests are wearable and soft technology, craft, tangible and embodied interfaces, ecology, sustainability, and design for empowerment and social innovation.

PELVICS consists of caring mechanisms for intimate care. It looks into how the construct of esteem and human touch are intimately related, and the ways bodies' touch and are touched by certain objects and the effects on the self that this may have. Focusing on women's health, it revisits technologies of convenience used by medical professionals and put forward by the industry. It proposes re-imagined, self-diagnostic devices and medicating technologies in relationship to the design knowledge of the body, as an access point for technology to enter and as a medium to manipulate.

• **Ben Freeth**

Ben Freeth is an artist and inventor focusing on the potential of microcontrollers for creative expression. Currently he is studying a PhD in Digital Media, researching into the development of speculative musical instruments for performance and wearable computing technologies exploring collective experience and aesthetics. He regularly lectures for the Creative Arts Practice Masters Degree, Newcastle University and delivers procedural workshops for example the recent Sun Tongs series investigating the potential for incorporating solar data and solar energy into the design of DMI's. Previous work has been exhibited in Bergen, Sao Paulo, Tokyo, New York and Budapest.

CONSOLIDATOR is an Investigation into abandoned technology and history. With Google glass in current development and due for release to the UK market later this year, several older forms of this technology now lie abandoned. The project is inspired by DeFoe's account of augmenting human senses through technology (the "Glasses of Hogs Eyes that can see the Wind" mentioned in "The Consolidator").

• **Annika Haas**

Annika Haas is a researcher and media artist from Berlin. She has a background in European Media Studies (Potsdam University and Potsdam University of Applied Sciences) and was a resident at Culture Lab in 2013 in the Digital Media group. Together with Prof. John Bowers she developed a framework to explore a wider notion of touch in musical performance with so-called Hybrid Resonant Assemblages. Currently, she studies at the Berlin University of the Arts. In various collaborations, she performs with electro-acoustics and with self-built 'instruments' questioning the notion and related performance practices, while her work also is focused on theoretical questions in the field of aesthetic philosophy and philosophy of technology.

SOUND OBJECTS is a conceptual and material framework to explore a wider notion of touch in musical performance by creating related 'non-instruments', that do not prefigure how to interact with them, but leave it open to the performer to respond to a self-made assemblage of individually chosen materials.

<http://dm.ncl.ac.uk/blog/annika-haas/>

• **Diego Trujillo Pisanty**

Diego Trujillo Pisanty is an artist and designer born in Mexico City in 1986. He holds a BSc degree in Biology and an MA in Design Interactions awarded by The Royal College of Art. He currently works as a Research Associate at Culture Lab (Newcastle University). He has developed a body of work that explores the unexpected -and often subversive- results that arise from interacting with existing or emerging technologies; this work often takes the form of technological devices and computer programs.

300 YEAR TIME BOMB reflects about the relationship between time and technology by presenting a long lasting timed explosive. In the scenario, a time bomb is set to explode in 300 years time. The bomb's timer displays the countdown in seconds making us question what meaning such a large number holds and altering our dramatic relationship with timers.

GENERATED MAN looks at how we are represented on the internet by drawing an analogy between personal profiling and role playing games.

• **Tom Schofield**

Tom Schofield is an artist and researcher in interaction design. He works at Culture Lab, Newcastle and he is also active as a freelance designer and developer. His research interests include materiality in the context of contemporary computing technologies and ambiguity in design interfaces to archives and collections.

NEUROTIC ARMAGEDDON INDICATOR visualises the 'Doomsday Clock', a symbolic clock representing the proximity to Armageddon maintained by an academic journal, 'The Bulletin of Atomic Scientists'. The clock is 'set' by a panel of scientists at long intervals, usually years apart. The artwork is in two pieces. One is a computer programme which checks the current status of the clock and then sends the results over the internet to the second part of the work, a small wall clock which displays the time of the Doomsday Clock on a red LED clock display. This process repeats as fast as possible so that the device shows in near-real-time the status of the doomsday clock.

'Betagrams' was an excellent showcase of how contemporary artists, based in the North East are critically engaged with current global discourses in this field. We delivered a Nomadic Salon discussion event within the context of the exhibition to provide an opportunity for a public audience to engage in the dialogues that emerged from the show.

• **Nomadic Salon**

The Nomadic Salon is a roaming discussion platform the project that seeks to critically interrogate practice-led research methodologies across creative disciplines, sharing thoughts between professionals and academics working in Fine Art, Design, New Media and Curation. It was founded by Lucy Livingstone and I in January 2014.

The Thinking Digital Arts Nomadic Salon was a unique opportunity to meet Betagrams exhibition curator Gabi Arrigoni who discussed the exhibition's central concept of the prototype with the exhibiting artists.

Nomadic Salon provided a space to critically explore the range of experimental, creative art practices that are challenging the traditional status of the artwork as unique and finished object.

The discussion event worked incredibly well within the context of the exhibition, and thus in turn the Thinking Digital Arts programme:

‘ Yes, really enjoyed the discussions and meeting new colleagues – and potential collaborators. The exhibitions were also great.’
Nomadic Salon Participant, Thinking Digital Arts 2014

‘Yes, I met many new people at all of the events I attended, from artists/professional contacts to students and other arts practitioners with whom I have already embarked on more collaborative projects’ Thinking Digital Arts participant, 2014

Young People and Family Audiences

TDA worked closely with Gateshead Council's Arts Development Team to devise a schools based residency project that would directly connect young people with creative technology and showcase their work to a broad, family and public audience:

Future Talent

A film of Future Talent can be found here <https://youtu.be/DQn4pJggKGU>
Film by Adam Green

Future Talent was a collaboration with Gateshead Council Arts Team and the inquisitive-minded secondary school BTEC students at Lord Lawson Beamish Academy, with an interest in art and technology, digital art and design, programming, or fine art.

Over an intensive three day residency, students worked with internationally renowned, new media artist [Victoria Bradbury](#) to explore ways to use code,

technology and new media to create interactive projects, using the history of Gateshead as inspiration. She taught the students the basics of the Processing coding language to enable the students to code four new interactive artworks.

The work was displayed in St Mary's Church and Heritage Centre in Gateshead, situated opposite the Sage Gateshead. Since the project's completion, the Head of Art has created a budget to buy code and technology based materials including 'Makey Makeys' in order to be able to continue offering opportunities to students interested in developing skills and aptitude in creative programming and code.

The key success for this project was that the school could clearly see the potential of our collaborative approach. By embedding a skilled artist into the school context and curriculum, students can quite rapidly develop skills, aptitude and capacity in creative programming and interactive code and apply this knowledge to many visual situations and creative tasks. It also enabled them to shift perceptions of how they can shape, rather than just consume digital technology and world in which they now operate.

Marketing, Social Media and PR

Thinking Digital Arts successfully engaged with local, national and international press and PR online and in print.

Partner websites Thinking Digital Arts was featured on during delivery:

www.thinkingdigital.co.uk

www.thinkingdigital.co.uk/arts

www.wunderbar.org.uk

www.sunderland.ac.uk

[Http://thenewbridgeproject.com](http://thenewbridgeproject.com)

Regional Press and Radio

- 20 May 2014 Journal Front Page
<http://www.thejournal.co.uk/news/north-east-news/sage-gateshead-welcomes-tourist-binoculars-7146864>
- 26 May 2014 Sunderland Echo <http://www.sunderlandecho.com/what-s-on/arts/artist-inspired-by-sound-of-the-city-1-6636987>
- 21 May 2014 BBC Radio NCL

Social Media

Thinking Digital Arts delivered a successful twitter campaign with the support of Digital Manager for Northern Stage, Casey Spence. Twitter was used primarily as this is the preferred social media platform for professionals and artists working in this field. A synopsis of activity is available below

- <https://storify.com/casspence/thinking-digital-arts-19-25-may-2014>

Online

Thinking Digital Arts successfully attracted interest from a variety of online blogs

and platforms.

- 28 May 2014
- Dezeen online Design Magazine
Design Boom
- Trend Hunter
- 29 May 2014
Design Week
Luxury Launches
- Dezeen online Design Magazine
Design Boom
- Trend Hunter
- 29 May 2014
Design Week
Luxury Launches
- 30 May 2014
Adafruit
- Stupid Dope
- 31 May 2014
Impact Lab
- The Fruity Computer

Others

- Before its News
- News Locker
- Fast Company
International blogs
included
- Abunawaf.com
- <http://www.etre.com>

Recommendations

- Thinking Digital Arts needs to be more integrated into the wider Thinking Digital programme in order to reach its full potential. There is scope and opportunity for the programme to take inspiration from the wide range of themes and topics that the conference is covering, as well as its North East context, to produce a public, arts focused programme in a variety of venues and spaces.
- To grow the programme further, Thinking Digital Arts needs to have more capacity within its team, to help develop and deliver the ambitions of the programme. The Thinking Digital Arts team needs; a producer/evaluator (min 30/35 days) and a curator/fund raiser (min15/20 days).
- The programme needs dedicated (arts) marketing (min 20 days) support in the run up to delivery. This year, the marketing was done on an in kind/voluntary basis, which meant that there was little strategic control over activities. Providing dedicated capacity in this area will mean that we can become more ambitious with our marketing strategies and reach more audiences locally, nationally and internationally.
- Thinking Digital Arts needs its own dedicated website that is suitable to showcase artist work and the arts programme more broadly. Rather than a web page on an existing website.
- There is a clear appetite from all partners to be part of Thinking Digital Arts. Strong local, national and international relationships were formed this year,

these relationships need to be developed and deepened to ensure all parties have an opportunity to share knowledge, sector specific expertise, audiences to ensure the partnership is mutually beneficial.

- There is huge scope for (art) reviews, research papers and publications to emerge out the programmes activities. This activity would extend the legacy of the programme significantly and reach many more audiences globally.

6i: Thinking Digital Conference 2015: Speaker Recommendation, Jennifer Lyn Morone — The Journal Newspaper

Business Business News The Sage Gateshead

Thinking Digital embraces 'extreme capitalism' at Sage Gateshead

20:55, 21 MAY 2015 BY ROBERT GIBSON

Talks from the woman who turned herself into a corporation and the man who encourages childlike creativity feature on final conference day

13 Shares Share Tweet +1 LinkedIn



Jennifer Morone speaks at Thinking Digital 2015

Thomas Jackson Photography

Most Read in Business



Newcastle Central Station regeneration triggers further investment into city centre

Figure 51: Thinking Digital Conference 2015 — The Journal Newspaper, 21st May 2015. Artist Jennifer Lyn Morone selected by Suzy O'Hara for Thinking Digital Conference 2015