

The adoption of digital technology in the arts

Golant Media Ventures

— **Golant Media Ventures** is an innovation agency which works in the creative, cultural, digital and public sectors. We have extensive experience in the publicly funded arts sector, but our projects beyond the arts serve as an essential enrichment to this work: we believe strongly in the power and necessity of sharing insights between sectors.

We like working with organisations wanting to do something new, different, difficult or perhaps not yet fully defined. We specialise in creating a coherent whole from disparate elements: digital, data and content; public funding and private financing; physical tangible assets and intangible ones like Intellectual Property; commercial revenues and social benefits. New business models are the glue holding all of these together to create a practical result.

— **Patrick Towell**

Patrick is a strategy consultant turned service designer and media executive. He brings a practical and commercial approach to complex challenges that span business and public policy. He was the architect of three national digital services – spanning local heritage, digital learning content to service directories for parents. He combines an ability to envision future products with a detailed understanding of information and content market, business affairs and technology.

Formerly he founded digital agency, Simulacra Media, chaired the Information Society Working Group for UK's National Commission for UNESCO, was vice-chair of the British Standards Institute's committee for learning technologies and lead strategy and marketing for the equivalent International Standards body.

— **Sophia Woodley**

Sophia specialises in building bridges between the worlds of business, culture, education and technology. Before beginning full-time work for Golant Media Ventures in 2015 she spent three years as a freelancer, working with GMV on projects including the development of product strategy for Arithmetica, a scientific software company; market research on the film industry for Cinegi; and work on digital innovation, intellectual property rights and commercial strategy for the Royal Shakespeare Company.

With a DPhil in Modern History from the University of Oxford, she maintains an interest in online learning, and has done curriculum development for Nord Anglia Education and Oxford Royale Academy. From 2013 through 2015 she was a board member of the Arts Alliance of Northern New Hampshire.

— **Chris Yapp**

Chris is an Independent Consultant and a Senior Advisor to Golant Media Ventures. He has a portfolio of interests including being a Director of Koru Services, working in Local Government. He has extensive experience of assessment work for Innovate UK, Creative England and private investors. Chris has over 30 years' experience in industry at Honeywell, ICL, HP, Microsoft and CapGemini.

For over 25 years, he was involved in the practise and theory of innovation and futures thinking, including scenario planning. He has worked extensively in both the public and private sectors over that time. He is a Clan member of the International Futures Forum. Chris is a Fellow of the BCS and is the official blogger on societal-technological futures. He also blogs for Long Finance, a City think tank. He has written and edited contributions to a number of books on these topics and is a frequent public speaker. He lectures at a number of universities around innovation and futures.

— **The Digital Innovation Fund for the Arts in Wales** is a strategic partnership between Arts Council of Wales and Nesta. It is the successor to the Digital R&D Fund for the Arts in Wales that ran from 2013-2015. The fund has supported arts organisations to experiment using digital technology to enhance audience reach or to develop their business model.

innovation.arts.wales
arloesi.celf.cymru

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How To Use This Document

This report is designed for use by:

- Senior management and board members of arts organisations
- Staff, external consultants and technology partners doing R&D in the arts
- Policymakers and funders of the arts

It is intended to help these people navigate the process of organisational change that is required to make effective use of digital technologies. It isn't about the technologies per se or how to do R&D.

Some of the conversations that the document can help inform are:

- “What's the point of investing in digital technology?” (Section 2)
- “Where can we find inspiration and support?” (Section 3)
- “What kinds of digital technology should we be considering?” (Section 4)
- “How can we make new stuff stick?” (Section 5)
- “How can digital help our resilience and sustainability?” (Section 6)

The text of the report hopefully provides a summary and some provocation in discussing innovation using digital technologies. The references in footnotes provide some ideas of where to go for more. To know more of the opinions and work of the people we quote, follow the links in the consultee list at the end.

1

Introduction

The arts tend to be ahead of society when it comes to envisioning the future of technology – think of all the science fiction that has shown us the future before scientists and engineers got there in reality. Many artists ‘magpie’ new technologies to use within the creative process. However, arts organisations often face challenges in adopting digital technologies ‘successfully’ – in other words, in a way that results in innovation. For a consideration of the difference between innovative application and creative experimentation see Appendix 1.

Innovation is more important than ever for the publicly-funded arts sector. It is facing both budget cuts and heightened expectations from funders that bring new demands in terms of resilience and sustainability. But this is not just a matter of tightening budgets – the march of technological progress means that audiences are bringing new expectations in terms of ways to connect with arts organisations and the content they produce. Without being able to adopt new digital technologies in transformational ways, arts organisations will be left behind and lose their relevance to society.

This report is intended specifically to help Welsh arts organisations adopt and make use of new digital technologies – and to transform their business models as a result.

2

Why adopt new digital technologies?

Many organisations see 'digital' or 'technology' as something separate from their mission and artistic goals – as activities that they need to do or systems that they need to procure because of the realities of modern life and the demands of funders, or simply to 'keep up' with the sector. They do their best not to fall behind the pace of change, but they see digital technology as an end in itself rather than an integral part of their work.

"Lots of the projects which are technology-led are there for the sake of it," says Colette Hiller of Sing London, participatory arts producers who work in public spaces. "The point is to really use it to solve an actual problem."

In isolation, there is no point in digital technology. There is no point in data. These things are only valuable in that they allow arts organisations to better do the things that they have been doing all along. For example:

Audiences

- Enhance audience reach and engagement
- Gain additional data about and insight into audiences and their behaviour
 - Deepen relationships
 - Market and communicate more effectively
 - Make the case to funders about impact
- Create new experiences and content for audiences

Art

- Create new genres of creative work
- Capture and distribute creative work in new formats
- Help artistic communities to connect with one another
- Embed digital within the work
- Use digital within the creative process

Operations

- Create new business models
- Generate new revenue streams
- Lower organisational costs and increase efficiency
- Enhance inter-organisational collaboration
- Improve internal and external reporting on performance and impact

For instance, Seb Chan (formerly Director of Digital at the Cooper Hewitt Smithsonian Design Museum in New York, now Chief Experience Officer at the Australian Centre for the Moving Image) emphasises the link to audiences:

“Digital transformation is really about something else that often isn’t openly talked about – transforming audiences. Sure, we might change work practices along the way, but really digital transformation efforts are really in the service of visitors wherever they might be.”¹

Technology is always a tool. One of the most important lessons for arts organisations adopting new technologies is to define early – and keep their focus on – the way that they expect the technology to improve their work and achieve their organisational mission.

As Jennifer Tomkins, Head of Marketing and Development at Artsadmin, discovered when trying to communicate the benefits of its digital transformation project,² “we need a new CRM system” is not terribly exciting or motivating, unless perhaps you are a CRM consultant, and maybe not even then. Perhaps more inspiring is “we need to deepen our relationships with our audiences, artists and stakeholders, and we’ve found a tool to help us do that.”

¹
www.freshandnew.org/2016/01/roundup2015/

²
Project KIWI, Artsadmin’s digital transformation project, is funded by an Arts Council England small capital grant.
www.artsadmin.co.uk/blog/259/project-kiwi-part-1

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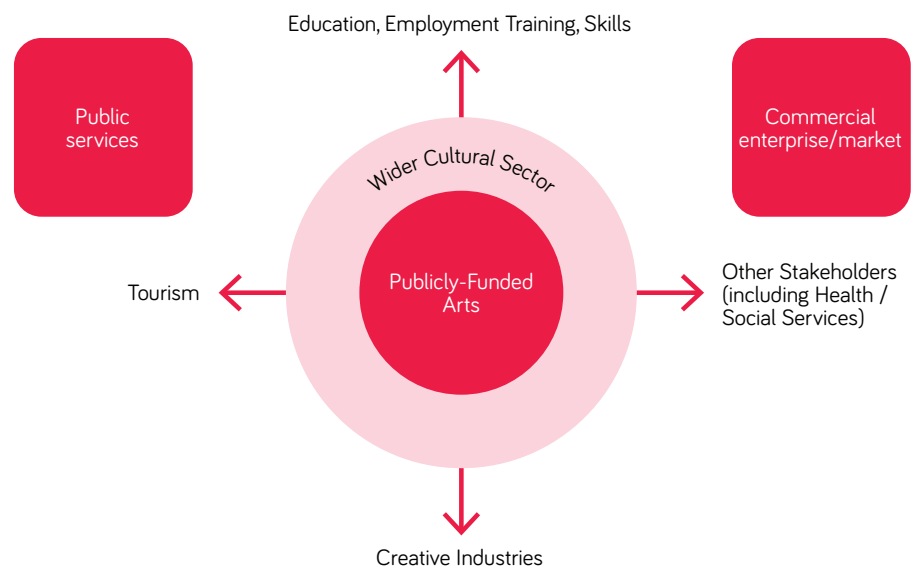
Where to look for inspiration?

Arts organisations are not alone – or in a vacuum

Publicly-funded arts organisations often look to the rest of the publicly-funded arts sector for inspiration. This is entirely understandable: this is where their networks and contacts lie; these are their closest direct comparators and competitors; these are the organisations with a similar culture, facing the most similar demands and pressures and funding requirements.

Yet an exclusive focus on the arts sector means missing out on opportunities, because many of the really innovative applications of technology are happening in the wider creative industries, in the charitable sector, or beyond.

This is true both in operational and artistic terms. Ghislaine Boddington, the creative director of body>data>space, comments that “examining comparable creative sectors is very important research for artists pre starting projects involving technologies. We have seen that, in the last five to ten years, the creative industries have started to overtake the arts in their ability to integrate technologies alongside design, moving rapidly towards well developed user-led creative outputs much appreciated by the public.”



How can arts organisations find comparable examples outside of their own sector? One way is to break down their work in terms of the activities they perform. These same activities exist as ‘categories’ undertaken in other sectors. For example:

- Fundraising and donations – charitable sector generally
- Ticketing and related e-commerce – commercial entertainment events, music, venues
- e-Learning content and services – commercial publishers, educational aggregators, educational institutions
- Entertainment content production and distribution – film, TV, music, games industry

- Marketing and communications – marketing agencies, businesses generally
- Customer relationship management – businesses generally
- Tracking and reporting on performance – businesses and charities generally

Why working together is the way forward

Successful adoption of technology cannot occur in a vacuum. It isn't just about the adoption of digital technologies by arts organisations. At one end of the value chain, it is their adoption by audiences, artists, participants, customers, in person and remote digital visitors, and service users. At the other end of the value chain, it is their adoption by suppliers to arts organisations (both technical and creative, including artists).

There may be an intermediary between arts organisations and their audiences and other end users. This may be a partner who acts as a channel or distributor. Or it may be a widely used technology platform which can be used for arts related applications, content and/or experiences.

Very rarely does an individual invention or new technology on its own create change across a market or sector in isolation. Creatives, technologists and entrepreneurs put together suites of technologies that together are useful to individuals professionally or personally, provide some psychological gratification, have an organisational benefit by solving a 'business' problem or some combination of all three. Different suites apply at different points in the value chain - and need to align technically, commercially and in terms of working practices.

One of the important developments in technology is not the development of the individual technologies per se, but the development of so-called platforms providing an integrated set of technologies around a common purpose. Consider how social networks such as Facebook, Twitter and LinkedIn have developed over the last 15 years. Looking at the potential of the digital technologies can be overwhelming for any organisation. However, if the focus were on developing an 'Arts Platform' many of the above functions are common across different arts organisations. The uniqueness of individual organisations is not threatened by sharing many of these functions and could provide a lower cost basis to widen the impact of the arts across the economy and society.

Emerging technologies tend to be sustainable in clusters and in the early days many organisations develop mechanisms to socialise and develop mutually beneficial networks. For instance, in the "Internet of Things" there are nearly 2,000 local meetups.³ There are many meetups within the arts sector, and even a few related to the intersection between arts and digital. Consideration should be given to whether these semi-informal networks might be helpful in developing a wider digital culture between arts organisations where there is an existing creative cluster or a potential emerging one.

3

www.meetup.com/topics/internet-of-things/

4

What technologies?

‘Driving’ technologies are changing audience expectations

Technologies can be divided into two categories:

- Enablers: tools that enable arts organisations to do something more simply, more quickly, or to do it in a way that was previously not feasible or sustainable
- Drivers: entirely superseding established ways of doing things, or changing end user behaviours and expectations in a way that drives arts organisations to respond

In 2017 there a massive number of ‘driver’ technologies that are changing the expectations of audiences, visitors, participants, and stakeholders. These provide the basic context for any adoption of digital technology by an arts organisation – and, more to the point, often provide an urgent reason for that adoption.

These drivers include:

- Increasingly ubiquitous broadband (fixed and mobile)
- Smartphones and apps
- Cloud computing
- Streaming of both video and audio
- New and emerging technologies including AR, VR and wearables
- ‘Sharing economy’ and related new business models

The Arts in Wales Survey 2015 noted significant digital consumption of art and cultural products amongst Welsh audiences:

“...three in ten (30 per cent) had purchased music via digital download within the last year, 29 per cent had purchased a film or TV Drama via a digital download, almost a quarter (24 per cent) had purchased a book of fiction or poetry via a digital download and 16 per cent had visited a website to view or download an online arts collection or arts performance.”⁴

This inevitably will shape audience expectations of how they interact with publicly funded arts organisations.

But new technology does not always mean more access

“The future has arrived — it’s just not evenly distributed yet.”

So runs a quote attributed to William Gibson. It is worth noting that not all audiences have equal access to these new technologies, an issue of particular importance in rural and deprived areas of Wales.

⁴
Arts Council of Wales, Arts in Wales Survey 2015, p. 55.
www.arts.wales/what-we-do/research/latest-research/arts-in-wales-survey-2015

⁶
gov.wales/docs/statistics/2015/151014-national-survey-2014-15-internet-use-access-en.pdf

⁷
cinegi.com/arts_and_film

The 2014/15 National Survey for Wales found that only 78 per cent of households had broadband internet access, and only 60 per cent browsed the internet using smart-phones.⁶ Arts organisations must bear these structural inequalities in mind in order to create solutions that will work for their specific audiences – and the audiences they hope to attract in the future.

One example of technologies being used to widen access to the arts and increase audience diversity is Cinegi Arts&Media⁷. An Arts Council England funded project in association with the BFI, it enables venues which are not cinemas to put on public screenings of filmed performance and cultural film. By applying consumer Video on Demand technologies to professional film distribution, consumer broadband and commonly available laptops, the cost and complexity becomes within reach of non-professional venues. Their screenings can address audiences who are far from live performance and the kind of cinemas that would screen filmed performance or cultural film. Research by The Audience Agency with Nesta on the potential impact of this is ongoing.

Considering the options

A wide range of enabling and driving technologies have been recently adopted in the funded arts sector. These include:

- Low cost, HD or better digital capture (filming, post-production)
- HD Digital video platforms, sufficient connectivity and device support
- Mobile/tablet internet/apps including gross geo-location
- Fine geolocation for mobile/tablets via NFC, WiFi proximity, etc
- Low cost, cloud-based, secure and flexible/extensible Customer Relationship Management, project and/or case/issue tracking software as a service
- Social media
- Relatively low cost data integration using APIs between local systems and cloud-based services
- Flexible, low-cost, easy-to-use data aggregation and visualisation including insight and analytics across systems, touchpoints and communications ('business intelligence')
- Digital whiteboards, multimedia capable laptops and tablets, such as those used in schools

⁸
 Gartner's 2016 *Hype Cycle for Emerging Technologies*:
www.gartner.com/newsroom/id/3412017

⁹
www.wired.com/2012/10/gartner-hype-cycle-2012/

¹⁰
blogs.brighton.ac.uk/james/2016/01/25/qr-codes-quietly-retreating-or-quintessentially-revolutionary/

Not all technologies are appropriate or fulfill their promise. Gartner's 'hype cycle' is a useful yearly diagram that charts the most significant emerging technologies – as they pass through 'the peak of inflated expectations' and beyond⁸. Given that the arts sector works to a different timetable than the technology sector, earlier editions of the Gartner hype cycle may be more relevant⁹. There is an art to working out which technologies are essential and which have been over-hyped. For example, QR codes may not have lived up to the early enthusiasm for them¹⁰.

5

Effective strategies for adoption

Barriers

More attention in the literature has been paid to digital barriers faced by arts organisations. For example, Digital Culture 2014 offered an extensive survey of ‘barriers to achievement of digital aspirations,’ with the top three being lack of funds (70 per cent), lack of staff time (70 per cent)¹¹, and lack of external funding (60 per cent). As this has already been discussed in some detail, we will not focus on this aspect of the issue.

However it is worth noting that there are major structural challenges which are common across the voluntary sector, social enterprise, the public and private sector, not in the arts alone. These include the need for:

- Trustees, patrons and funders who ‘get’ digital
- Sustained funding for R&D work – with support which continues after project end
- Sectoral skills development
- Commercial and technical partners who understand the specific needs of the sector

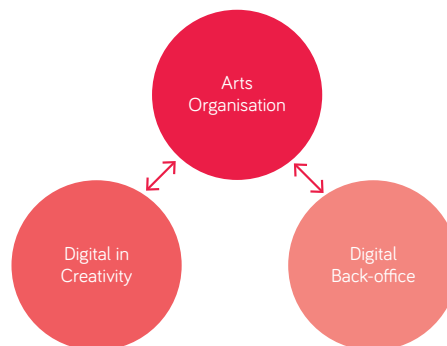
Strategies for adoption

Centring organisational readiness

Procuring a piece of technology – or even paying for it – is often the easiest part of the journey for arts organisations. Often these journeys seem to follow the 80:20 rule the other way round to the classic IT projects of 20 years ago – 80 per cent organisational change to 20 per cent technological spend. As such, the most effective strategies for adoption focus around organisational readiness.

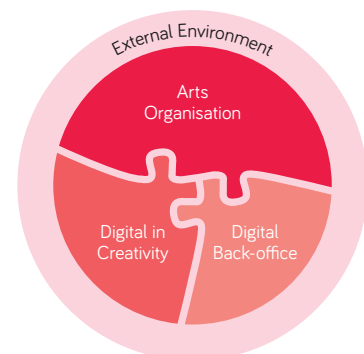
Organisational Readiness

Internal Silos



Weak External Links

Internal Integration



Strong External Links: Whole organisation feel

¹¹ Digital Culture 2014: *How arts and cultural organisations in England use technology*, p 36, fig 10. www.artscouncil.org.uk/sites/default/files/download-file/Digital-Culture-2014-Research-Report2.pdf

Comments Jane Finnis, CEO of Culture24:

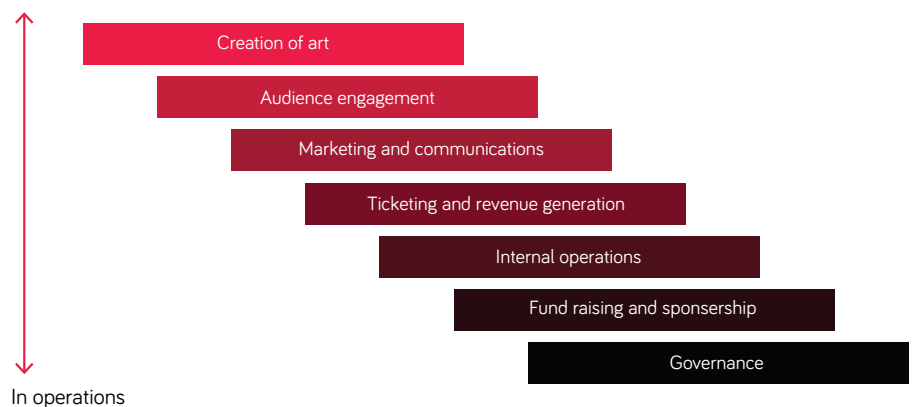
“Digital is a signifier of the bigger changes that organisations need to make. The nature of online technologies are driving these changes – requiring cultural organisations to be more open, more participatory, more inclusive, and less hierarchical.”

Digital is not a vertical. It cannot be viewed in isolation, as a tool to be slotted into the corner of an office – or used in a single project – and then forgotten by the rest of the organisation. Instead it must be viewed as a horizontal, woven across projects and operations as a whole.

Instead of ‘siloeing’ digital technology, the most effective strategies for adoption seek to integrate digital internally across the organisation as a whole. Innovation may take place in a range of different organisational activities, from creation of art to audience engagement to ticketing, but it requires underpinning with good operational support – particularly finance and governance.

Opportunities for digital innovation

In creative processes



Considering potential strategies

Successful/necessary strategies include:

- New or enhanced capability in the extended enterprise of staff, trustees/ funders, freelancers, partners and strategic suppliers
- Changed roles, responsibilities, structures and governance at organisational, team and individual levels
- Changed processes and systems including related guidance, documentation and other performance support
- Alignment of change with organisational mission/remit, funders' and other policy objectives and personal motivations

- Cultural change to viewing digital technology, and resulting innovation, as integral to organisational identity rather than an optional add-on or a distraction from artistic or public service mission
- Communications to the extended enterprise and other stakeholders about the innovation and its adoption
- Use of data to better understand user behaviour and motivations, to target specific groups with particular approaches etc...
- Development of Intellectual Property literacy
- Collaboration with technology partners, business partners, universities
- 'Open' as opposed to 'closed' innovation: hubs, meetups, creative clusters, bootcamps

Capability models

Developing new capabilities is at the centre of managing change – and it is obvious that skills and capabilities are necessary if the above strategies are to succeed.

The central challenge is to move beyond seeing 'digital' as a department or as a skill for a few 'techies,' to ensuring that all staff have the appropriate skills to operate in a digital environment regardless of their role. The ability to use new technology to create business model innovation requires an organisation-wide programme to ensure that arts organisations can achieve the full potential of digital technologies.

It may also require some attention to skills development on a level beyond individual organisations. Nesta has identified the need for STEAM (science, technology, engineering, arts and maths) talent within the creative industries – a need which is also felt specifically within the arts sector¹².

Many frameworks have already been created with the aim of assessing and developing digital capabilities. However, these are generally not known within the arts sector because they have not been fully contextualised for its needs. They include the European e-Competence Framework, which supports the European Qualifications Framework.¹³ It is intended to document the capacities of ICT (information and communications technology) professionals specifically, rather than to give an organisation-wide view. Within the UK, Tech Partnership has developed standards for both user and professional IT skills.¹⁴

In Appendix 2 we offer excerpts from a capability framework created in 2009 by Patrick Towell and Jonathan Hirsch for '21st century cross-media professionals'. Whilst it is a tough ask for any one individual to cover inclusive design, intellectual property and distribution strategies – across an organisation as a whole, these and the other capabilities identified are necessary for the sustainable creative application of digital technologies to media and experiences. Something of this ilk more tailored to the needs and language of the arts sector may be a useful way of creating the conditions for digital innovation to flourish.

¹²
www.nesta.org.uk/blog/fix-pipeline-steam-talent-creative-economy

¹³
www.ecompetences.eu

¹⁴
www.thetechpartnership.com/standards-and-quality/

Using artistic skills

Digital-specific capabilities are not the only ones required to effectively apply digital technology to the arts. Comments Frank Boyd:

“Skills and practice which are commonplace in the arts – innovation, curation, choreography – are really valuable skills in almost any innovation context.”

Similarly, Fiona Morris, CEO and Creative Director of The Space, says:

“With regard to immersive technologies like Virtual Reality and Augmented Reality, arts organisations get distracted by the operation of the technology, rather than focusing on the far more important fact that they already have extensive knowledge of how to create immersive experiences and how to direct audience attention within a narrative.”

Fiddian Warman of soda.uk emphasises the importance, when creating new technology, of “having an artistic vision beyond what delivers information. It must have poetry, be beautiful and elegant, and have coherence as well as functional utility.”

Governance

Governance challenges significantly underpin many of the issues around the adoption of digital. There is an urgent need for trustees who are knowledgeable about digital, and understand that digital change is something which has to occur across the organisation rather than on a project basis. Mission Money Models highlighted that trustees must understand artistic risk,¹⁵ but it is increasingly clear they must also understand the risks and opportunities around technology and the innovation process.

To some extent this is a demographic challenge. The demographics of those who are in a situation to be able to spend the time and have the skills to work as trustees does not match the population with the appropriate digital skills and commercial understanding. One potential route is to work with corporates around their corporate social responsibility programmes. Short term secondments and “high flyer” development schemes could provide a better flow between the sectors and valuable mutual developments.

¹⁵

Sarah Robinson, *Mission Accomplished: Ensuring good governance in challenging times*.
www.missionmodelsmoney.org.uk/sites/default/files/24539114-MMM-Governance-Roadshow-Report-With-Recommendations_1.pdf

Yet Jon Kingsbury, Head of Digital Economy and Creative Industries at the Knowledge Transfer Network, has highlighted the fact that there is also an issue with commercially knowledgeable trustees who take a different approach when they are embedded within the context of an arts organisation:

“Time and time again, we find that arts organisations have on their boards terrifically talented individuals who in their day jobs take quite significant risks, such as running a business. But when they enter an arts organisation as a trustee they tend to become very risk averse. Trustees tend to think that spending money on creating producing content is the most important thing and avoid spend on technologies which are seen as taking money away from the creative.”

This again highlights the need for technology to become an integral part an organisation’s activities, viewed as sustaining its artistic and public value mission.

If trustees and organisational leaders are lacking in background digital savvy, then more attention will need to be paid to winning their buy-in and support. Internal communications and education are a major part of any digital change project, but particularly if there is a lack of prior digital experience within the organisation.

Having knowledgeable trustees also provides staff with extra opportunities for mentoring and support. A trustee with digital competence makes an ideal sponsor or ‘uncle/aunt’ for a project. Without this sort of knowledge base, expertise will have to be brought in from elsewhere – this may involve collaboration with a commercial or technological partner.

Scale

The small size of most arts organisations can pose a barrier to their adoption of technology, but not only a barrier. Small organisations have the advantage of being more nimble, having less baggage in terms of legacy systems and processes – they also have a smaller field of operations across which to integrate digital.

Given the scale of the potential of digital technologies many arts organisations are too small, on their own, to achieve the full potential for their own organisation. If digital is approached on a project by project basis by single organisations, then the wider potential may be lost without an understanding of the sectoral benefits.

Issues of scale can also be mitigated through collaborative working, from knowledge sharing right through to the creation of shared platforms. Many organisations in other sectors collaborate or develop shared services, for instance, to lower costs and develop access to digital skills in a way that is responsive to the arts requirements. In the tech sector it is also recognised that collaborative working is a major driver of innovation and adoption – hence the existence of creative clusters, hubs, bootcamps and meetups.¹⁶

¹⁶ www.nesta.org.uk/sites/default/files/creative_clusters_and_innovation.pdf

Drawing on lessons from other parts of the cultural sector

Let's Get Real is a project run by Culture24 to look practically at different aspects of use of digital in the cultural sector. Historically, the project focus has been on galleries and museums although it is open to all arts sectors. All of the reports give good examples of effective application of digital technologies. Some broad themes of successful adoption of digital technologies in the most recent Let's Get Real 4¹⁷ are:

- Having stories through social media reflect the interests and perspectives of fans and enter into a co-design relationship with them (with organisations Situations and Watershed¹⁸)
- Making editorial formats suit online blog platforms, with 'lighter' and more topical content and lists (National Galleries Scotland and Bristol Culture, respectively¹⁹) and structured visual 'essays' (Wellcome Collection²⁰)
- Avoiding traditional video formats online, with how-to advice for hair and make-up (Royal Shakespeare Company), presenter as tour guide and virtual eyes (Getty) and spontaneity and playfulness (Fitzwilliam Museum)²¹
- Prototyping of editorial formats rather than of products (Bodleian Library, Portland Art Museum), paper prototypes before digital ones (Wellcome Collection and Wellcome Library) and the barrier of perfectionism to releasing a Minimum Viable Product²²
- In organisational terms viewing 'digital' as a catalyst not a category, not being siloed in one department, as a horizontal approach to the big strategic challenges of the organisation and requiring change the responsibility for which cannot be outsourced²³

Partnering with technology companies and other businesses

Partnering with technology companies and other businesses may be necessary, particularly for smaller organisations, if they are to access the necessary technological expertise and benefit from a more market-oriented approach to innovation. However, these partnerships have their own pitfalls. Without a cultural fit, and individuals (on either side) who are able to bridge between the worlds of business, technology and the arts, these relationships can be major hindrances rather than helps. Comments Frank Boyd,

“You have to find people who understand the affordances of digital tools, but who are also able to speak the language of creative practitioners.”

¹⁷
Let's Get Real 4
weareculture24.org.uk/
projects/action-research/
phase-4-whats-the-story/

¹⁸
Ibid p14

¹⁹
Ibid pp19-20

²⁰
digitalstories.
wellcomecollection.org/

²¹
Let's Get Real 4 pp20-21

²²
Ibid p25

²³
Seb Chan, Owen Pringle
referenced in Let's Get Real
4, p27

Partnerships with large companies, in particular, can offer very concrete financial and in-kind benefits. For example, Sing London, participatory arts producers who work in public spaces, have received support from Audible to create Talking Statues. Colette Hiller of Sing London emphasises the need for arts organisations to lead in defining the relationship:

“With partnerships you have to be really clear with what you’re offering and what you’re getting back. The real challenge is to be quite clear at the start why this will be of use to them. Be specific and concrete, don’t talk in a floaty way. Big companies like to be seen to be doing artistic things.”

Ideally, technologists can bring their own creative talents to an arts organisation through a collaborative, co-creative process (see below). In innovative projects – and certainly in R&D – it is not clear at the beginning of the project what the final outcome will be. Therefore it is unwise, or impossible, to simply dictate a list of requirements to a software or IT company. A common theme in our interviews was the need to give technologists a position of equality in the creative process. Says Ghislaine Boddington,

“projects can be held back by the artist’s own lack of knowledge about what the technology can do creatively. Few artists allow the technologist/s to truly be co-creator/s – yet this is essential and deep collaboration right from the beginning of the project will enable high level outcomes.”

Co-creation and co-design

Most consultees cited the importance of collaborative working practices and in particular co-creating and co-designing with customers, users, artists and other stakeholders.

“When making or commissioning work body>data>space use our own methodology called ‘The Weave’ that we developed in the 90s during numerous performing arts / technologies projects. It is a fully working co-creation process and we use this metaphor of plaiting or weaving very successfully. Three key strands are initiated, integrated and evaluated throughout a project - however large or small - the BODY of the participant, the dancer, the user; the TECHNOLOGIES in use; and the CONTENT - message / issue. One needs to keep interweaving these different strands to enable the outcome to be a

solid plait or braid, just as in rope-making. Then we can see the technological become inherently woven into a project - rather than see it being “tech-led” or “arts-led”.”

— Ghislaine Boddington, body>data>space

“When National Theatre Wales was created in 2008, John McGrath, the founding artistic director, started it as a digital-first theatre company. The addition of a national theatre company for Wales creating work in the English language was essential in order to shine a light on the talent and stories of Wales on the national and international stage. The very first thing the company did was create and host an online community using the platform Ning. Starting a new theatre company from absolute scratch needed to have ‘the door open’ to start that conversation in Wales with those who were working in artistic practice but to ensure that online community belonged to the people and not National Theatre Wales. This approach comes from a particular style of leadership. The development of this online community platform continues to overcome the ‘connectivity’ challenges in Wales caused by its rurality and geography.”

— Michelle Carwardine-Palmer, National Theatre Wales

In particular, our consultees emphasised the importance of user-centred design:

“Proper user-centred design is at the heart of any digital strategy for an arts organisation.”

— Frank Boyd, The Space

“An organisation needs to see itself as being as being responsive to users. Their understanding of their sense of purpose has got to have users at the heart of it.”

— Jane Finnis, Culture24

Flexibility

Finally, this discussion of successful strategies may give the impression that there is a “royal road” to the successful adoption of technologies, or that it can be achieved without failures along the way. This is not true.

By its nature, the R&D process involves uncertainty, risk and failures along the way. In the words of an old saying: “If we knew what we were doing, it wouldn’t be called research.” The good news is that trial and error, and experimentation, are legitimate strategies to adopt when working with new technologies. This is particularly the case when it comes to reaching and engaging audiences. Comments Marko Balabanovic, CTO of the Digital Catapult:

“In the e-commerce world there is a general trend – rather than assuming you know what people want, you run experiments to try out what works better. Instead of picking one product to sell, we’ll pick 10 products and see which sells better. A lot of what you see on the internet means that you are constantly in an experiment. What’s the best message, what’s the best branding, what’s the best product.

You no longer need ‘the hippo’ – the highest paid person’s opinion. Don’t listen to the hippo - do it based on experimentation. Technology makes experimentation far easier now - you can target Facebook so precisely and penetration is very large – and rapid testing means that you can easily get feedback. Tech companies have adopted this way of working, and early stage funders expect it.”

Similarly, Fiddian Warman of soda.uk says that:

“I strongly advocate building little solutions and testing them, then iterating. In other words, using a test-driven approach. The more people are invested in and passionate about a project, the more they fail to see how it is going to be perceived by visitors or users.”

Yet Marko Balabanovic points out that there can be cultural issues adopting a data-driven approach, which is often novel to arts organisations –

“because the person or people in the organisation (artistic director, curators etc) who previously made the decision may not want to look at the data and prefer to pursue their own instinct instead.”

²⁴

Innovation from co-design and data in the UK's Creative Industries:
golantmediaventures.com/projects/innovation-from-co-design-and-data-in-the-uks-creative-industries

If you want to know more about data-driven decision making or co-design, the Creative Industries Knowledge Transfer Network (CIKTN) commissioned Golant media Ventures to gaze into the future of innovation driven by data and co-design. The result was a map of opportunities for UK creative businesses and cultural organisations in 2016.²⁴

6

Impacts on business models

The problem of business models

What impact does the adoption of digital technology have on arts organisations? There are many possible motivations – including increasing audience engagement and creating new artistic works – but one of the most important and elusive impacts that digital technology can have is to catalyse a change in business models. As discussed in the introduction, diversifying business models – and developing new revenue streams – is of increasing urgency in an environment of budget cuts and heightened expectations from funders that brings new demands in terms of resilience and sustainability.

Yet the need for new business models is not just driven by funding cuts. Instead, as Hasan Bakshi and David Throsby observe, it is driven by wider audience expectations and technological developments – and as such, it places its own new demands on funders:

“On the demand-side, audiences expect ever more customer-oriented business strategies. On the supply-side, new technologies are shifting ways in which cultural institutions are identifying their customers and the nature of the services and experiences they offer. The need to experiment with new business models requires new funding streams – both private and public – with an appetite for risk.”²⁵

Hence the new funding streams supported by Nesta, Arts Council of Wales, and Arts Council England. One of the medium-term aims of the English Digital R&D Fund for the Arts was “new business models – mechanisms for generation [of] income and public good.”²⁶ The Digital Innovation Fund for the Arts in Wales has prioritised the twin pillars of audience reach/engagement and new business models.

Yet the link between digital transformation and business model transformation remains less clear-cut than it might be. The Digital Culture 2014 report suggests that English arts organisations feel that the two are increasingly linked:

“In 2013, 34 per cent of respondents said that digital technology was important or essential to business models. In 2014 this figure has risen to more than half (51 per cent)... this growth in importance stands out from other organisation functions which are relatively stable.”²⁷

²⁵

Hasan Bakshi and David Throsby, *Culture of Innovation: An economic analysis of innovation in arts and cultural organisations* (2010), p. 6.

²⁶

Digital R&D Fund for the Arts: Evaluation (May 2016), p. 8, fig. 1.

²⁷

Digital Culture 2014, p 17

And yet previous projects intended to catalyse the development of new business models using digital technology have had notably mixed results. In England, the Digital R&D Fund for the Arts identified this as an important medium-term outcome of the fund. Yet the evaluation of the fund found that:

“the percentage of [funded projects] seeing digital technology as important to their business model decreased from 77 per cent before their projects to 66 per cent after, whilst for other organisations the figure increased significantly from 33 per cent to 44 per cent.”²⁸

Why might this be the case? The evaluation continued:

“This could be because funded organisations have developed a level of digital literacy and capacity where they are more measured in their appreciation of how digital technology can affect their business model – especially given that most projects focused instead on audience reach and engagement. It could also be because few funded organisations made any headway in generating new business models or significantly enhancing their existing ones.”²⁹

Innovation and new business models require time for an embedding of changed business processes. It may be that there was simply not time within the scope of the project plus evaluation for these to become apparent – or for organisations to pursue the possibilities.

Towards a typology of business models

One way of envisioning business models as a whole is to use the Business Model Canvas developed by Strategyzer.³⁰ (This is an excellent tool to use when considering new business models.)

Taking inspiration from this framework, a changed business model can include:

- new audiences/markets
- new value propositions
- new channels/distribution
- new ways of delivering

Crucially, these can also result in new cost structures (for example, from internal efficiencies) and/or new revenue streams.

²⁷

Digital R&D Fund for the Arts: Evaluation, p. 19.

²⁹

Ibid

³⁰

Strategyzer Business Model Canvas. <https://strategyzer.com/canvas/business-model-canvas>

Earned income and ‘second order’ activities

In *Capitalising Creativity: developing earned income streams in Cultural Industries organisations*, Sarah Thelwall emphasises the need for earned income to be driven by ‘second-order’ activities, which she defines as follows:

“First order activities are intrinsically linked to the human labour involved, therefore they are inherently non-scalable... If the relationship between revenue and cost of production can be broken and, replaced with a connection between revenue and customer demand, then the bottleneck is removed. In practice this will likely mean establishing a new method of production which enables scalable production to meet customer demand.”³¹

Digital, as a key method for breaking the relationship between revenue and cost of production, is therefore an important strategy for developing new revenue streams – and increasing sustainability.

Thelwall identifies “a number of attributes which are commonly found in successful [second-order] activities... that affect the potential size of the returns that they generate.” These include scalability, a fit with market demand, high-value goods and services, ability to offer them in multiple formats, and “packaging ‘expert’ processes, services or products into tangible and purchasable goods which no longer require the input of the experts that created them.” She suggests a process through which organisations can evaluate and establish such activities.³²

Ghislaine Boddington comments that “from the beginning of the making process, the arts needs to think about the range of distribution options for the outputs created, a longer-term and wider distribution process that allows a range of formats to be released into a variety of “audience” access points. It is impossible to attach these options on at the end without compromising the outputs and confusing the viewer / receiver.” Her skintouchfeel project had a multi-distribution, multi-platform strategy from the start, aiming at 5-10 different audiences. Business plans need to focus on reaching different people in different ways. She points to the Guildhall, Barbican and The Cultural Capital Exchange (TCCE), as examples of organisations that integrate creative business plans.

³¹

Sarah Thelwall, *Capitalising Creativity: Developing earned income streams in Cultural Industries organisations* (proboscis cultural snapshot #14, November 2007), p.8. proboscis.org.uk/publications/SNAPSHOTS_capitalcreativity.pdf

³²

Ibid, pp. 8-9.

A business-oriented culture?

For many, if not most, arts organisations, a major issue in developing new revenue-generating business models is the fact that they do not view earning revenue as being at the heart of their mission. Arts organisations are often more interested in using new technology – viewing it as a tool for achieving their core mission – than in doing the follow-on work necessary to commercialise such technology. In England, the Digital R&D Fund for the Arts found that:

“This was linked to under-developed commercial awareness and related skills and to a lack of understanding on how to commercialise IP. Universities, which have IP, technology transfer and research support offices which offer advice and support for commercialisation, might have more effectively introduced this resource into the process.”³³

Technology partners, by contrast, had the commercial orientation, the motivation, and the skills to deliver:

“The greatest commercial opportunities were generated for technology partners. Paid for R&D allowed them freedom to test new technology and approaches that most commercial projects don’t allow. Several tech partners have gone on to win new business using the new skills and experience gained from the R&D project.”³⁴

³³

Digital R&D Fund for the Arts: Evaluation, p.19

³⁴

Ibid

Conclusion

Arts organisations should be excited about digital technology – because it provides ways to better achieve their goals and mission, as well as to achieve sustainability. Beyond this, arts organisations already possess many of the skills necessary to make effective use of them.

Hopefully this report has helped you and your collaborators to think through the process of adopting new technologies – and what you can achieve with them once you have adopted them. Whether you agree or disagree with the conclusions of this report, we encourage you to share your views, insights, and experiences.

Appendix 1 – Creativity v. Innovation

‘Innovation’ sets the context for this report – it is the reason for the existence of Nesta (‘an innovation foundation’) and it is intimately linked to the R&D process. But the meaning of innovation is sometimes misunderstood.

Both creativity and innovation are important ingredients in success for an arts organisation, but they are very different concepts. Although there are many creative uses of digital technology, and many uses of digital technology in creativity, many of these are not innovative – innovation requires a lasting impact beyond a single project. Using a new digital technology once in a piece of art is creative, but not necessarily innovative.

In their 2010 report *Not Rocket Science: A Roadmap for Arts and Cultural R&D*, Hasan Bakhshi, Radhika Desai and Alan Freeman comment that:

“Experimentation and innovation in content and form are inherent to the arts. There is a sense in which every work is new... However, if... the knowledge created and the methods used are neither made explicit, nor codified, nor replicable for extension and use by others, such innovative activity falls short of the requirements of R&D...”³⁵

Innovation requires a sustained impact, a change in business models, in methods, in operations, in how things are done going forwards. Part of innovation is the need to capture tacit knowledge, to make new approaches repeatable and shareable, and to embed this novelty within a context of sustainability and resilience. Fiona Morris, Chief Executive and Creative Director of The Space, comments that “effectiveness means something that is sustainable, that you keep coming back to – not just over five years.”

Of course, it is often impossible to know, at the time of a new invention or creation, how much impact something will have. So it's only in retrospect that we can say whether something is really innovative. Many inventions never get traction or get successfully applied in practice.

It is worth noting that innovation is defined by its context. It does not require the use of technology that is new to the sector – or for that matter, a business model that is new to the sector. Old technologies and old business models can be equally transformational to a particular organisation which has adopted them. It is the application of a specific idea to a specific problem in a specific context of use that can be termed ‘innovative.’

In the *Culture of Innovation* report for Nesta, Hasan Bakhshi and David Throsby have identified four main categories of innovation as they apply to cultural institutions:

- Innovation in extending audience reach
- Innovation in extending the artform
- Innovation in value creation
- Innovation in business management³⁶

Of these, the Digital Innovation Fund for the Arts in Wales, and the Digital R&D Fund for the Arts in Wales before it, have focused on two: audience reach and business models.

35

Hasan Bakhshi, Radhika Desai and Alan Freeman, *Not Rocket Science: A Roadmap for Arts and Cultural R&D*

36

Hasan Bakhshi and David Throsby, *Culture of Innovation: An economic analysis of innovation in arts and cultural organisations* (2010), p. 13.
www.nesta.org.uk/publications/culture-innovation

Appendix 2 – A capability model applicable to the arts

Here follow a selection of capabilities from the capability model developed for the proposed postgraduate cross-media 'Finishing School' in 2009 for South West Regional Development Agency in association with Two Four Group.

Business Awareness

- Understanding distribution channels, media platforms, and publication strategies – how to get a product or service to market.
- Understand costs, margin, pricing and pricing strategies – maximising return while remaining competitive and allowing for risk.
- Be aware of potential opportunities to exploit intellectual property rights – understand the processes and issues involved in securing intellectual property rights

Professional skills

- Ability to communicate with specialists in your own discipline, specialists in other disciplines, and non-specialists – both formally and informally, through presentations and written word, using everyday language and simplifying complex concepts where necessary.

Professional Development

- Keeping up to date with latest developments, ideas, tools, technologies, legislation and best practice - knowing where to go for information, keeping an eye on relevant networks / spaces etc. and being part of appropriate communities
- Build and maintain a network of peers and mentors who provide moral and practical support

Project Management

- Select, adapt and apply appropriate project management methodologies – recognising that creativity and innovation have particular needs and that existing project management techniques may not fit exactly, and hence may need to be adapted to suit the specifics and scale of particular types of project.

Research Methods

- Understanding and being able to conduct impact/benefit analysis, pre- or post-project - modelling projected and measuring actual societal, economic, commercial, attitudinal change as a result of a service or product.
- Understand and be able to conduct user research (and research with non-users)

Supporting Innovation

- Be able to select ideas for development assessing ideas for their merit as potential products, services or processes.
- Be able to select ideas for development.
- Build or support an environment and culture of innovation
- Build or support knowledge networks.

Project Initiation

- Research and analyse market opportunities, user requirements and commercial drivers to develop product or project ideas.
- Present a business case for a product, service or project idea.
- Gather requirements, determine objectives and clarify briefs.
- Specify a product or project using appropriate types of documentation or other materials.
- Be aware of the different types of intellectual property that may exist in materials to be used in the product or project, or which may come to exist as a result of the product or project.

Product and Service Design

- Understand and be able to apply design thinking, management and process
- Understand and be able to apply user experience design principles – usability, accessibility, consistency, feedback etc.
- Understand and be able to apply inclusive design methods

Content Planning

- Devise content for an interactive or cross-platform or multi-media product

Content Production & Commissioning

- Obtain and if necessary license required assets from third party sources
- Commission the creation of required assets
- Proofread copy and ensure other assets are fit for purpose

Product Development

- Appreciate computer programming / software development principles
- Rapidly learn and adapt to new tools and technologies through self-study and research
- Be able to modify, extend or adapt software tools to meet specific needs, or specify requirements and commission others to do this.

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