

# Threats and Opportunities for Museum Collections in the Digital Era

**An address delivered by David A. Larsen, Managing Director of Africa Media Online at the South African Museums Association Conference 2010 in Durban, South Africa**

(The data projector presentation for this address can be found at:  
<http://prezi.com/okuys8wpdllg/threats-and-opportunities-for-museum-collections-in-the-digital-era/>)

I count it as a great privilege to be speaking to you today on this auspicious occasion. I want to address the topic of Threats and Opportunities for Museum Collections in the Digital Era. The waves of digitisation and digital collections have been lapping at our shores in South Africa for a while now. At Africa Media Online we have been attempting to contribute toward the Museum sector in this country being ready for what is to come, and we do believe this is now gaining momentum. So I would like to share with you today some of our experience in Africa Media Online as we look at this topic.

## The Digital Era

Perhaps though, we should back up briefly and speak about “The Digital Era” and how we come to be in the Digital Era. As far as I see it there are two fundamental innovations that have changed the way the world of business and communications works, and these same two innovations are changing the way we in the museums sector work.

The first innovation was the ability to reduce information to machine readable code. The second was the ability for any computer in the world to connect to any other computer through the world wide network called the internet.

What is the impact of that upon our lives? Well I do believe it has been quite far reaching and I have noted some points in this regard:

### *1. The democratization of technology*

The first thing I see that has happened is that systems and processes that used to be owned and operated by governments and wealthy multinational corporations, are now in the hands of you and I. An example from the Media world is the wire agencies – Reuters, AFP and the Associated Press who give us our news. In the past, these multinational companies were the only ones who had the satellite technology to be able to deliver pictures and news stories around the world in minutes. That is no longer the case. You and I can do the same through the internet.

### *2. The rise of citizen media production*

The second impact on our lives is the fact that these innovations are changing the way that history is captured and recorded. Instead of this role in society being left entirely to professional journalists and news organisations, citizen journalists through blogs and social media are now defining the record of history. This will certainly change the way we in museums gather and collect artefacts of history.

### *3. The demise of the expert*

Allied to this is the consequent demise of the expert. Now that so much expert advice and opinion can be accessed on the internet, experts take on a different role. Rather than being the route to information, experts are now the authorities as to what information is authentic and what is not. This does mean that experts can emerge out of nowhere it seems if they have a large enough Twitter following and they know what they are talking about. This too will

change the way that museum professionals see themselves and how they operate in terms of preserving and presenting history.

#### *4. The attention deficit age*

With such a plethora of information now available at our finger tips, and the overwhelming stream of information that comes at us on a day to day basis through email, social media, blogs and other channels, the impact has been that we now live in the “attention deficit age.” The scarcest resource is not information, it is attention. How does one attract and hold the attention of an audience. This too is highly relevant to museums who are seeking to communicate information that is vital to the education and identity of our citizens.

#### *5. The long tail*

Fifthly, and perhaps allied to the previous point, in a world with an over abundance of information, people become far more discerning what information they are really interested in. It is also now viable to maintain information that only one or two people are looking for, because it is digital and storage tends not to be a problem. This concept was popularized by [Chris Anderson](http://www.longtail.com/) (<http://www.longtail.com/>) in an article in Wired magazine in October 2004 and a book called *The Long Tail: why the future of business is selling less of more*, in which he showed that in the digital era which information storage is negligible, very specific information becomes more valuable because it is more findable. So the bookseller Amazon, for instance, now sells more books in total that are just sold two or three times a year than those that are best sellers. For us in museums, this means that the specific information that we are uniquely the custodians of, is becoming more valuable, particularly if it is digitised and made available.

#### *6. The erosion of privacy*

Another impact has been the erosion of privacy. Social media means that something that your teenage child did at a party that in the past would have been forgotten months or years down the line, may now haunt him or her for the rest of their lives, because it is forever findable on the internet. For museums and heritage organisations, this means that clear policies need to be put in place with regard to what is put online and how it is put online and made available.

#### *7. Media convergence*

Digital platforms also mean that there is now the ability to present different types of media simultaneously – text, images, moving images, and sound. This is going to have a dramatic impact on how we as museums present our information.

#### *8. The rise of rich media*

Allied to the above, there is the rise of rich media, text, images, video and sound in the capturing of history and research. So the media in which history and research will be coming to us will be changing dramatically and as heritage organisations, we need to be ready to build digital collections. It is not good saying, “O we don’t need to engage with the digital world in our little museum, all our collections are analogue.” The reality is, soon you won’t be able to collect, or you will certainly be hampered in your collection, unless you can manage digital collections. This is because so much of what is happening in the world today is only being recorded in digital. It is “born digital” and there is no analogue alternative.

The presentation shows a picture of a friend of mine, DJ Clark who works as a multimedia journalist for China Daily in Beijing. Recently we were involved together in a project with World Press Photo to train journalists from across Africa to be multimedia journalists. This is a reality that is upon us right now.

### *Transformation of Memory Institutions*

All of this does mean that memory institutions like museums are going to have to change and change rapidly. The DigitCult Report that emerged out a project sponsored by the European Union redefines memory institutions in the digital era in the following ways:

Archives: From “storing objects” to the life cycle management of digital/digitised objects  
Libraries: From “reading room” to digital information service centre  
Museums: From collections to narrative connections and new experiences<sup>1</sup>

## **Dilemma!**

All of this, of course, creates a dilemma for us as museums. As the DigiCult Report goes on to say:

Cultural organisations are learning that their presence and authority in the real world is not automatically translated into the virtual world.<sup>2</sup>

And again they say:

In the Information Society, in the long run, only the digital will survive in the memory of a nation as it is more readily available and accessible than analogue cultural heritage resources.<sup>3</sup>

So what do we do?

Well we could put our head in the sand and hope it is going to go away and everything will return to the comfortable analogue world that we know. But that would be like trying to ignore the emergence of the printing press in the 1440s.

Realistically, there is only one option: ENGAGE!

That means:

- Facing the threats and
- Taking the opportunities

## **THREATS AND OPPORTUNITIES**

### **Learning to Embrace the Digital Era**

I am going to look at these threats and opportunities from the perspective of critical elements in the building of an archival quality digital collection. And I am going to try and draw on some real world solutions that we have worked out in Africa Media Online in the past decade of working with

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<sup>1</sup> *QUEST* quoted in European Commission: Directorate-General for the Information Society. (January 2002). The DigiCULT Report: Technological landscapes for tomorrow’s cultural economy: Unlocking the value of cultural heritage. Full report. Available: [http://digicult.salzburgresearch.at/downloads/dc\\_fullreport\\_230602\\_screen](http://digicult.salzburgresearch.at/downloads/dc_fullreport_230602_screen). Page 91.

<sup>2</sup> Ibid. Page 116.

<sup>3</sup> European Commission: Directorate-General for the Information Society. (January 2002). The DigiCULT Report: Technological landscapes for tomorrow’s cultural economy: Unlocking the value of cultural heritage. Full report. Available: [http://digicult.salzburgresearch.at/downloads/dc\\_fullreport\\_230602\\_screen](http://digicult.salzburgresearch.at/downloads/dc_fullreport_230602_screen). Page 40.

and digitising collections which I trust will give you some hope that the challenges faced are in fact surmountable.

### **Selection**

Selection is perhaps the first hurdle one faces when looking at transforming your analogue collections to digital.

**The threat** here is feeling completely overwhelmed. There is so much stuff, how do I even begin to start thinking about digitising all of this?

The reality is that selection has always been part of collections management. After all, who wants to deaccession. So one tends to be quite critical about what you allow into your collection in the first place, which is a selection process in itself.

So selection is here to stay! And no less so when born digital collections come down the line to us to be preserved. There is a plethora of born-digital objects, even more so than in the analogue world, and we have to learn to deal with them. For instance, professional photographers in the past might shoot 10 rolls of film of 36 frames each at an event. Now photographers can shoot thousands of images in a day, because it is so much cheaper to capture the images up front. It just means there is so much more to wade through to get at the good stuff!

As Trevor Jones says in his very helpful *Introduction to Digital Projects for Libraries, Museums and Archives*,

The idea of entire libraries or museums being completely online is a long way off, and many experts say that it will never happen. Successful digital projects are the result of careful evaluation of collections, and the digitisation of only those items that will provide the greatest benefit to the user.<sup>4</sup>

And as the DigitCult report says:

Even if you decide to undertake the comprehensive digitisation of a collection, it will still be important to prioritise the material – which will require you to develop some sort of criteria. One common approach in these circumstances is to prioritise according to user demand and then systematically fill in the gaps during the low-demand periods. Another is to begin by providing a representative sample of the collection and then progressively fill out the content.<sup>5</sup>

### *Two Principles of Selection*

Since selection is here to stay, it might be helpful to bear in mind two key principles in selection:

#### 1. Work per collection

When attempting to approach a digitisation project, it is overwhelming if you approach all the holdings of your museum at once. It is far more manageable if you approach the project one collection at a time. Perhaps it is possible to do more than one as part of a single project, but

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<sup>4</sup> Jones, Trevor. (2001). *An Introduction to Digital Projects for Libraries, Museums and Archives*. Available: <http://images.library.uiuc.edu/resources/introduction.htm>.

<sup>5</sup> **JiSC Digital Media**. (November 2008). *Selection Procedures for Digitisation*. Available: <http://www.jiscdigitalmedia.ac.uk/crossmedia/advice/selection-procedures-for-digitisation/>. Last accessed 5 February 2010.

they should have a lot in common that hold them together. Break it down, make it manageable.

## 2. Work in projects

The second key principle is to approach digitisation of a project basis. What you don't want is an unending flow of digitisation with no achievable end point. Break it down into manageable projects and then you can close one project off and start another. It is far more measurable and far more achievable.

**The opportunity** here is that we tend to find that digitisation projects provide an amazing opportunity to refine collections and organise collections. For you as a museums professional, here is a great opportunity to grow in discernment as to what is valuable, and worth digitising and preserving, and what is not.

**How we can help** as Africa Media Online is that we do provide a consultancy service. This has included creating a digitisation strategy for organisations which includes a selections procedure. We also provide training by leading experts in the field. Every year we tend to run a Heritage Digital Campus. Again it helps you get sufficient background and confidence to approach a digitisation project.

## Quality

The next step in the digitisation process where we find both threats and opportunities is in the area of quality.

**The threat** is ending up building a digital or digitised collection that is not at the right quality. The key question here is, how does one recognise quality in a digitised file? We are all used to looking at analogue artefacts or media files and knowing immediately if the item we are engage with is a quality item or not. We are not so sure when it comes to digital files.

**The opportunity** here is that you can grow in skills.

**How we can help** as Africa Media Online is through our Heritage Digital Campus where you can learn to understand the digital world, pixels and bit depth and colour spaces and so on. And along with that you can get to understand what makes for quality in digital media.

## Standards

The next critical element in the building of an archival quality digital collection is that of standards, which is closely allied to what we have just discussed under quality.

**The opportunity** here is that standards have already emerged for most media types. This is the advantage of engaging with the digital world more slowly than the North has engaged with it. We get to learn from their mistakes and have the opportunity to do it right, right from the start.

**The threat** here is that in some areas, like video, standards are still emerging and there is always the threat of changing standards over time as technology changes. Having said that, certain standards have stuck for long periods of time relative to the fast pace of change in the digital world. Tiff files, as the standard for archival still images, for instance, has stuck for close to a decade and all future formats are expected to be backwards compatible to the current standard.

**How we can help** is that Africa Media Online has been involved in an initiative at national level to publish standards. This has emerged from extensive research conducted looking at standards all over the world. From time to time we have published standards on our various blogs and also

intend to create open resources for the heritage sector that provides this kind of vital information. A resource we have already created is Shutha.org (<http://www.shutha.org/>). Although it is aimed at professional photographers, it contains many modules that are very useful for heritage practitioners, particularly the “Digital Imaging” module.

Of course our Heritage Digital Campus also provides hands on training to gain insight into standards that are essential to know.

### **Metadata**

The next element to look at in terms of threats and opportunities is the area of metadata. Metadata is information about information. So if you put a caption against a picture, it is written information about the subject of the picture. This is therefore, metadata.

**The threat** is that I go to all the effort of building a digital archive only to discover I have used the wrong metadata schema.

Fortunately metadata is becoming more standardized. The International Press and Telecommunications Council (IPTC) which developed the most widely used simple metadata schema on the planet (based on Dublin Core) has just released a new standard which includes heritage fields. Our international colleagues who we have brought out to teach on our Digital Campus, Graeme Cookson, Peter Krogh and Sarah Saunders were all a part of the effort to produce that standard. Because of its extensive uptake, being incorporated into the software of all the major vendors, Adobe, Apple, Microsoft, Nikon, Canon and the like, it is very likely to become the de facto minimum standard for metadata.

**The opportunity** here is a massive one. Digitisation forces the standardisation of the management of collections. It also forces the capturing of metadata as it is so critical for finding digital objects, even more so than it is in the realm of physical objects. What we have found is that a digitisation project forces all those wonderful facts that are stored in the heads of those who have been building or managing the collections for years and years to come out of those heads and land in metadata fields that many people can now benefit from. We had that experience at the International Library of African Music where Professor Andrew Tracey sat for days on end dictating to someone what various digitised items were. And we had that experience at the Vukani Museum where, as Vivienne Garside says, the digitisation process has forced them to clean up and correct their metadata that has gathered over decades.

**How we can help** is that we have been developing metadata capture mechanisms and a controlled vocabulary that is in all the major trade languages of Africa (Arabic, English, French, Portuguese and Swahili). Called the African Archival Thesaurus, we expect it to be released shortly. We have also developed as part of our MEMAT collections management and presentation system, a sophisticated mechanism for cross-mapping fields from various schemas and even prioritising fields. So if you have captured metadata in an archaic schema, we can help to migrate it to where it should be.

### **Resource**

The next element to look at when engaging with the process of digitisation is that of resources.

**The threat** here is the fact that engaging with digitisation will overstretch an already limited resource in my museum.

This threat is an extremely real threat:

- Digitisation itself is extremely costly because it is so labour intensive and not only that, it is very technical, which means the labour is expensive as they need to know what they are doing
- Digitisation is also very time consuming and it can tend to overwhelm the activities of a small museum unless it is carefully managed

**The opportunity** however, is that it is possible to engage with the digital world fairly inexpensively. You may, for instance spend lots of time doing field research. You can relatively inexpensively get a good digital camera which will serve your needs well and learn to use an inexpensive cataloguing programme like Expression Media or Adobe Lightroom.

Even while swallowing the costs of digitisation might be difficult initially, there are some significant cost savings to digitisation in the long run. Particularly when you add up all those hours of fulfilling requests for this or that information from researchers and the public.

Finally it is possible to get funding and we do expect it to become increasingly available from government as digitisation becomes part of government policy as it will do.

**How we can help** is that we have been quite successful in helping organisations to win funding from funders. The National Heritage Council funded our digitisation of the ILAM photographic archive at Rhodes University. The National Lottery funded our digitisation of the Vukani Museum objects collection and the Natal Museum photographic collection. And the European Union funded our digitisation of images from 32 collections including from Museum Africa, Iziko, the Cory Library at Rhodes University, the Albany Museum, Ditsong, District Six Museum, Klerksdorp Museum, Ladysmith Siege Museum, National Museum Bloemfontein, McGregor Museum, Western Cape Museum Services, SAN Parks, Bailey's African History Archive and the University of Fort Hare among others.

## **Management**

Managing a digital collection is another area where there are threats and opportunities.

**The threat** seems to be that if we digitise, we don't know how to manage a digital collection. And how are we going to maintain it? Surely this involves lots of resources.

These again are real threats. You do well not to underestimate how much it takes to manage and preserve a digital collection in terms of money and in terms of human resource.

**The opportunity** however, is that there are some widely available open source collections management systems. There are also very inexpensive collections management systems that are quite capable of managing small collections. I think of a system like Expression Media and with a number of external hard drives, you can do a lot with it.

**How we can help** is that we can train you to use Expression Media on our Digital Campus training programme. But more than that, we have also been developing a full collections management system. Our MEMAT system is state of the art and has been developed to very closely conform to the ISO standard for the long term archiving of digital media known as the Open Archival Information System (OAIS). For instance, our Digital Vault, which is a fundamental part of the MEMAT system, ensures the authenticity of digital files because once they are loaded into the system, they cannot be changed. A new version can be made and changed and even be made to supercede the original, but the original cannot change. The system can also operate over multiple servers in multiple locations around the country or the world for that matter, and stay perfectly synchronised.

Currently you can use MEMAT to backup and manage your digital files relatively inexpensively hosted by us in The Cloud in a highly secure configuration. We also offer comprehensive backup services and for those who have the budget, we have the ability to install an instance of MEMAT on state of the art servers and with LTO5 tape backup system on your premises. While this does require significant budget, we are significantly less expensive and more focused on your needs than the standard enterprise level storage solutions out there.

## **Preservation**

The next critical element to look at is preservation.

**The threat** here is “I could spend years building a digital collection and lose it in a moment.” Yes absolutely, this is true particularly if you have not carefully thought through what you are doing or you have not been putting into practice what you should be putting in to practice. As Peter Krogh often says, when it comes to Hard Drives there are only two types of people in the world, those who have had a Hard Drive failure and those who are about to have a Hard Drive failure.

**The opportunity** is to learn how to backup your archive correctly and to put policies and processes in place to ensure this. This is not unique to your digital collections. All of you in some way work on digital platforms even if it is just on your computer or you cell phone. My guess is that currently you don't have a very clear organisation wide strategy for this. Putting the systems and processes in place to ensure backup and preservation of your digital collection could have beneficial spin-offs for the digital content of your whole organisation.

The other aspect of digitisation that impacts positively on preservation is that digitisation enables access to your collections in such a way that people no longer need to handle the original analogue objects as they once did. This has the spin-off of ensuring longer preservation of the analogue originals.

**How we can help** is that we can actually help you put that strategy and those processes in place and we can train you in them. As mentioned above we can also put in the infrastructure in your institution or we can provide an inexpensive hosted solution that ensures that you do not lose your digital collection.

## **Access**

Access is the next element that comes up with thinking of opportunities and threats inherent in a digitisation process.

**The threat** is often articulated like this. “If I give access to digital files, they will be misused.”

Yes, this is true. This is a real threat. The truth, however, is that this threat was also there in the analogue environment. You could provide a copy of an image to a user and that user could scan it and print it and then leave it lying around on the computer in their organisation and before long you find it had become part of the organisation's archive.

**The opportunity** is that the digital environment forces you to engage with what was already a threat anyway, it just was not so recognised as a threat. We find that organisations that have been through the digitisation process with us are far more likely to have the infrastructure and procedures in place to manage appropriate access to their collections than organisations that have never digitised. This is simply because they have never thought they had to engage with the issue before.



The truth is that access is an important part of the mandate of public heritage institutions and there is a great opportunity in entering the digital world, to more effectively fulfil that mandate than ever before.

There is also the opportunity to understand access in a way that you have, perhaps, never had to engage with before. For instance, I hear a lot of talk in heritage circles about “commercial use” of our collections. There is a great fear that people will “make money out of our collections.” The truth of the matter is that there is a very significant and fundamental difference in the publishing and broadcast worlds between “commercial use” and “editorial use.” “Commercial use” refers to the use of media files in the service of promoting a product or a brand. Its intended purpose is to get consumers to buy. You are quite right, the use of heritage resources toward this end should be severely frowned upon. But the truth of the matter is that heritage resources are extremely rarely engaged in this end. Such media needs to have all the correct model and property releases in place for such usage, which heritage collections almost never have. “Editorial use” on the other hand, is an entirely different thing all together. Editorial use is for education and information and is not in the service of selling or promoting a product or brand, but is supposed to be firmly in the service of the common good. To label such use as “commercial” simply because these people are prepared to pay good money for the privilege of publishing content from your collection in their school text book, newspaper, coffee table book or history documentary is not only wrong but also directly in contravention of the mandate that public heritage institutions have of education and research. Publishers and broadcasters are a significant partner in enabling us as the heritage sector to fulfil the role in society we are supposed to be fulfilling.

***How we can help*** is that we have the systems in MEMAT, the experience and the network in place to assist you in granting appropriate access to digitised collections and in the negotiation of use rights. In this regard we represent collections from most of the major heritage institutions in the country and we have a distribution network to most of the major publishing and broadcast markets worldwide. What this translates into is both much needed revenue to maintain digital collections and assistance in dealing with a sector that museums and archives are often ill equipped to deal with. We have set up a number of MEMAT powered web sites for museums and our sales staff run those sites on behalf of the museums handling all the transactions in a transparent and accountable manner.

### **Ownership**

Finally, there is the often thorny issue of ownership.

***The threat*** here is the fear of copyright infringement. Often you may not know who owns the content of your collections and by digitising them and offering access to them, there is the fear that you are going to be liable for copyright infringement.

This is certainly a legitimate concern and one that needs to be taken seriously.

***The opportunity***, however, is that a digitisation project forces you to deal with these issues. They are existent issues anyway. They have just been lying dormant and not dealt with. A digitisation project forces you to clarify what has been a gray area.

So the first thing we suggest in a digitisation strategy is to start with your material that is out of copyright. This tends to be your older and more fragile material anyway. And at least it gets you going.

This also helps you to deal immediately with the issue of not having a donation policy and procedure in place to ensure that all donations from now on transfer rights to you to digitise and represent the content or actually transfer ownership of the content to you. It is quite possible to have agreements with donors where a share of revenue goes to them, but you really need to

have an organisation like Africa Media Online involved to manage that split and distribution of revenue if you are going to do that. It is far easier to have donors hand over all rights, after all, you are going to be going to the considerable expense over decades of storing and preserving what is being donated.

For the material that is not already out of copyright, or that is not about to be donated to you under your new donor policy (that clears all problems up), there is the opportunity to engage with them, find out who they are, get their permission to represent their content with a fair split of revenue, and who knows, perhaps that will go a long way toward them being willing to donate a whole lot more to you and so build your collection further.

***How we can help*** is that Africa Media Online has developed all the systems, contracts, processes, staffing, infrastructure and route to market to assist you in representing content to editorial publishing and broadcast markets and to ensure appropriate use. We have been doing this for over a decade with a very wide range of organisations in the heritage and media sector and we are the largest representative of heritage collections in Africa. Currently we represent collections from Museum Africa, Iziko, the Cory Library at Rhodes University, the Albany Museum, Ditsong, District Six Museum, Klerksdorp Museum, Ladysmith Siege Museum, National Museum Bloemfontein, McGregor Museum, Western Cape Museum Services, SAN Parks, Bailey's African History Archive, the University of Fort Hare, Natal Museum, Vukani Museum as well as a number of private collections.

## **CONCLUSION**

In conclusion, I would like to sum up. The digital era has arrived. The only real option is to engage and that means facing the threats and taking the opportunities. I have tried to make many of those threats and opportunities clear to you. The good news is that there are answers to every threat, and there are also lots of opportunities that are uncovered as you go forward bravely to venture on the digital ocean. If you learn to ride the wave, you and many others will greatly benefit.

Thank you for your time.

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