

Towards a UK Digital Public Space

A Blueprint Report

November 2014



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Executive summary

Sero Consulting (Sero) was commissioned by the Strategic Content Alliance (SCA) in Summer 2014 to undertake research and consultation to produce a Blueprint report on the opportunities and barriers to creating a UK digital public space (DPS).

The term 'digital public space' can be understood as having a range of meanings, designating either a specific initiative, whether a platform or a public service, or alternatively an emergent sphere of online activity, enabled by common standards and practices. An extensive investigative and consultative process was carried out in order to examine both dimensions of a possible DPS.

This report summarises the current service environment and reflects the major perspectives surfaced in the consultation; it describes the problem space of a potential DPS, and illustrates its potential benefits by describing a range of possible use cases. The principal focus of the recommendations is on whether the SCA should take action in this space, and, if so, what that action should be. It notes that the essential idea underlying a digital public space is not new, but argues that the time is now right for decisive progress towards it to be made. In this context, it makes recommendations about how to plan and navigate a future direction of travel for the DPS by the SCA partners, acknowledging that this will necessarily include close relationships and active planning with many other organisations.

Mission

The study reveals that 'digital public space' is a phrase that has no single, well-understood meaning. One of the challenges of the work has been to pin down and scope the range of activities and services that DPS could include and the purposes it might serve, and so achieve some consensus about a possible direction of travel. Importantly, the study recognises that the DPS should be viewed as a cultural creation in itself, bringing together a range of different partners to focus upon the delivery of a shared objective, as much as a technical solution or platform.

The core mission of a DPS proposed in this report is to open up public funded content for wider purposes and audiences by

- Enhancing open discovery and access
- Enabling connections to be made between resources held in diverse collections
- Benefitting the work of key stakeholders and audiences
- Building critical mass of content and momentum of engagement
- Maximising the value of collaboration between the SCA members and other national collection holders
- Assuring the fundamental principles demanded of a public service.

Aims

Arising from the core mission, the consultation tested out which aims resonated most with those we consulted. These included:

- Creating of a source of trusted content, with clear provenance, which a general-purpose search engine cannot provide
- Ability to make and navigate connections between resources and thereby to discover unexpected connections
- Contextualisation and interpretation of resources by linking to related content
- Making resources buried in collections more discoverable
- Ensuring appropriate and clear rights management
- Encouraging the most feasibly permissive open licensing
- Opening up new business opportunities for the creative industries
- Creating a 'shop window' for the UK and encouraging cultural tourism.

It was also recognised that there is a close connection between this mission and the need to assist smaller organisations in creating and sustaining access to digital collections.

Audiences

The key issue in regard to the potential DPS audience was the extent of its scope. There are two fundamental, different but not mutually exclusive, propositions: that the DPS be a 'business to business' service benefiting the supply side, that is, those who hold content or are responsible for mediating it for end-users, or that it be a 'business to consumer' service directly to end-users themselves.

A minority saw no niche for such an overarching platform in the UK cultural and heritage space. Others thought that providing such a platform and service was too ambitious, financially unsustainable, and therefore doomed to failure.

Wide support was expressed for a business-to-business proposition enabling collection holders and mediators. These would include not just the SCA partners and other major national collections, but all rights holders for UK public funded and public realm content, curators in galleries, libraries, archives and museums (GLAM), aggregators in the UK and globally, and mediators and 'story makers' such as GLAM outreach staff.

On the other hand, there was interest among many of those consulted in a service to end-users, particularly teachers and lecturers, researchers of all types in arts, humanities, social sciences and public affairs, and (perhaps to a lesser extent) in STEM subjects, learners of all types and ages and the UK public at large, as part of informal learning journeys. Publics outside the UK were also seen as part of the audience but as a lesser priority. In general the DPS was not seen as a service for researchers who have other more specialist tools and services on which to draw. However, some strongly argued against the idea that the DPS should serve end-users directly.

The potential of the DPS will be unlocked if it can negotiate and balance these perspectives in drawing upon the strengths of its sponsors and partners. Careful action is needed in order to make progress with its ambitious mission and aims.

Recommendations

The concept of the DPS is ambitious and challenging, with complex technical, organisational and financial barriers to its realisation. The potential benefits to a wide range of stakeholders, including end users, content providers as well as the public purse, are however substantial. We recommend that the SCA build on the momentum around the DPS generated through the Blueprint consultation with the aim of forming a wider coalition around the core principles that form a digital public space.

In order to make concrete progress towards the DPS core mission, we propose that the SCA should engage in a “Proof of Concept” project that brings together existing initiatives and experience in the DPS space and key partners around a practical and constrained programme of work to develop and test out the DPS idea in a practical prototype, following which decisions can be made about the shape and feasibility of moving to a fully developed platform or service. In so doing, the SCA should keep in view the final destination of a DPS service, either as a platform for intermediaries or as a service to the general public.

1. Introduction

Background

Sero Consulting was contracted by the SCA in April 2014 to evaluate the scope and potential for initiatives to develop the idea of a Digital Public Space (DPS) in the UK. The remit was to:

- Analyse the model of the Digital Public Space from all angles
- Challenge and refine core ideas about its nature
- Explore current and future technologies that could sustain it
- Ask about its real value to creators, institutions and the public whom it is supposed to serve.

This report, which follows an investigative and consultative process summarised below, presents findings on the opportunities and barriers to creating a UK digital public space. The term ‘digital public space’ can be understood as having a range of meanings, and can be used either to describe an emergent sphere of online activity – where use of the lower case seems appropriate – or as designating a specific initiative, platform or service, in which case the words might be capitalised. Both dimensions were examined in the course of our work, along with the significance of each of the underlying components in each context.

The focus of our recommendations is on whether the SCA should take action in the DPS area, and, if so, what that action should be. However in considering the issues we have not restricted our considerations to action which the SCA partners themselves might take. The actions of a much wider range of organisations and individuals will affect the development of a digital public space, and we have also borne in mind that the SCA might engage in wider partnership activity around the DPS idea, as indeed it did through the consultative process.

The idea of a digital public space has been discussed and debated for some time. The term seems to have been coined and placed in the public domain by Tony Ageh of the BBC in a newspaper interview in 2010¹ although it builds on earlier work around the semantic web and linked data, and on contemporary initiatives such as Europeana, the Digital Public Library of America, Trove (Australia), Digital New Zealand, the Google Cultural Institute and others.

In this report and in the work leading up to it we have sought to learn from, but not be constrained by, this context, and to include the BBC as one (albeit significant) voice amongst others that are contributing to a debate in which there are diverging views from a wider range of stakeholders. In making our recommendations we are trying to suggest not only what the ultimate destination of a digital public space might look like, but also to map out a way to reach that destination that is both practical and inclusive.

¹ <http://www.theguardian.com/media/2010/nov/01/tony-ageh-interview-bbc-archive>

The consultation process

The methodology we adopted for the project was to engage in a consultative process with SCA partners, key experts and the wider cultural and heritage community, with the aims of:

- Being able to take into consideration the wide range of views that exist around the idea of a digital public space;
- Testing how consultees reacted to different prompts we put before them as to the shape a digital public space could take, alternative routes for getting there, priority aims and audiences, the content that could be included, and the end user experiences that could be created;
- Bringing together stakeholders beyond the SCA to talk together about the idea of a digital public space and so begin the process of building some coherence and consensus in this space.

To achieve this we:

- Held a series of Working Group meetings for SCA partners and a number of invited key experts. We established two working groups starting in May 2014, a Vision and Strategy group that met three times, and an Infrastructure group that met twice, concluding with a final joint meeting of both groups in September 2014
- Convened a larger day-long stakeholders workshop in July 2014 with invitations to over a hundred representatives from across the sector, with around forty people attending
- Undertook desk research including surveying the mission, partnership approach, and approaches to governance, legal and rights issues, and technology standards, of some thirty-plus comparator and exemplar initiatives in the UK and globally
- Conducted case studies of a selection of these initiatives, based both on desk research and in some cases interviews
- Conducted individual interviews with seventeen key informants and stakeholders, including Europeana and the Digital Public Library of America as well as a number of people from the UK.

Our approach throughout has been qualitative, attempting to pool and synthesise a wide range of creative and sometimes challenging ideas of what form the DPS might take, and ensuring that our report and recommendations capture and respond to the full range of viewpoints .

A summary of the interviews and case studies can be found in the appendices to this report, along with a full list of those who participated in one or more of the above activities.

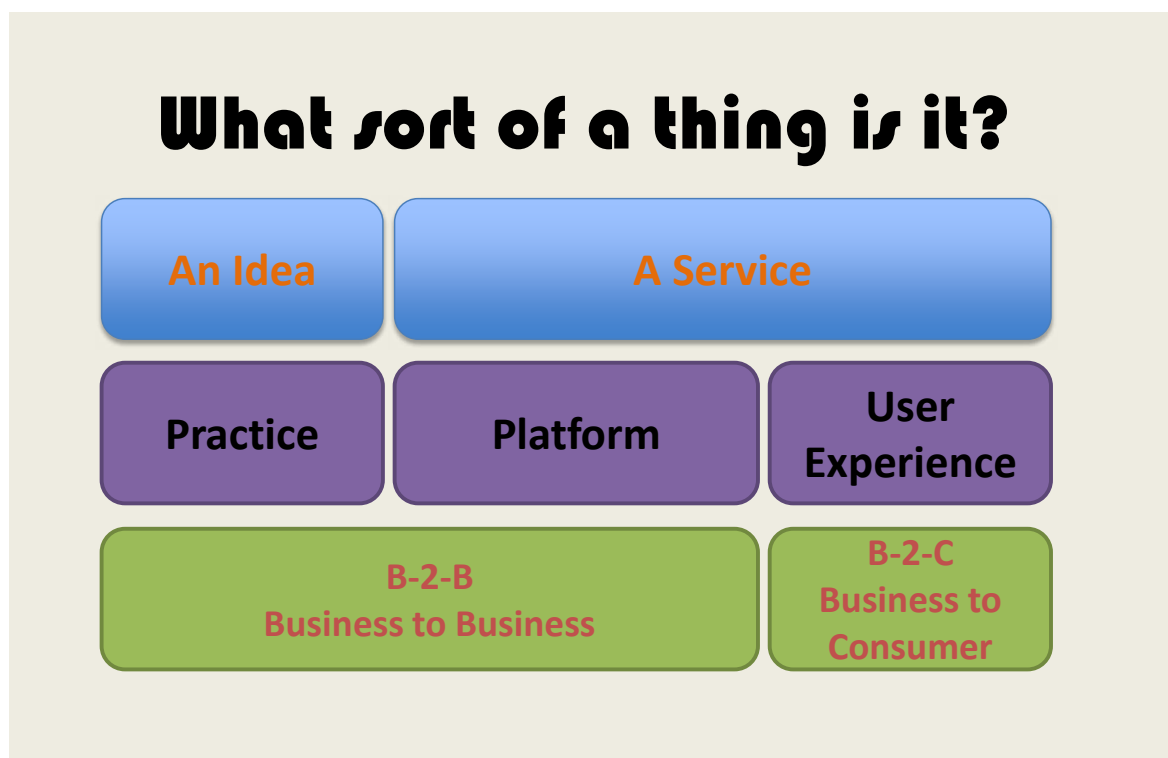
2. The problem space

What is a digital public space?

Potentially dangerous and open to misinterpretation, 'digital public space' is an euphonious phrase that has no clear or unambiguous meaning. One stakeholder defined it in broad terms:

"Imagine ... that much of the UK's publicly held cultural and heritage media assets could be found in a unified online space ... connected together, searchable, open, accessible, visible and usable ... in a way that allows individuals, institutions and machines to add additional material, meaning and context to each other's media, indexed and tagged to the highest level of detail ... This emerging vision of a free-to-everyone, open access environment for learning and creative endeavour has been referred to as a digital public space."

However this leaves open a wide range of options as to how this vision could be realized. A major part of our work has been to scope and narrow down this range of options, in consultation with the organisations whose participation would be essential to making any instantiation of the DPS work.

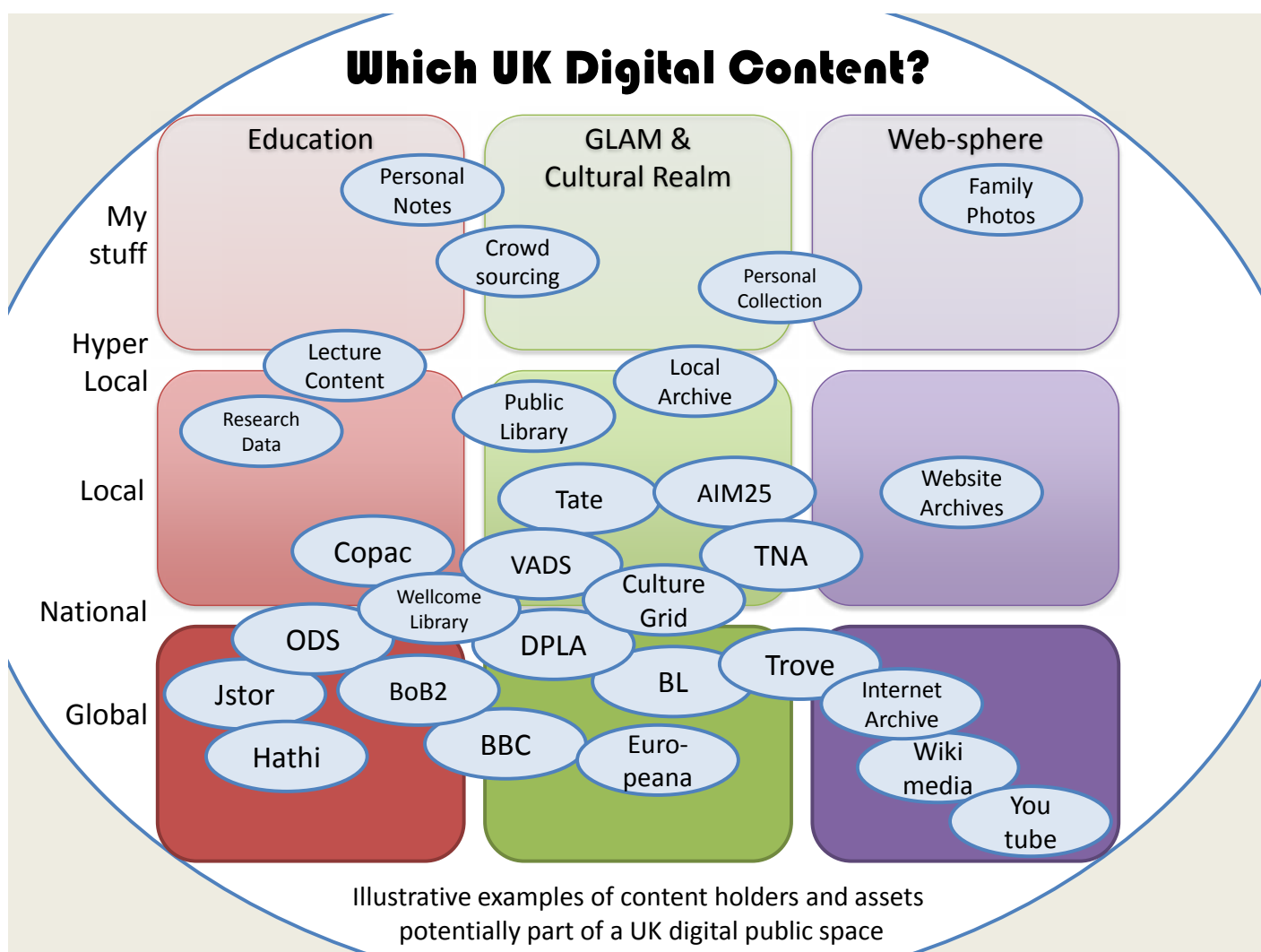


The context for a digital public space

The environment (or ecosystem) within which such a digital public space might exist is complex, potentially encompassing a wide variety of content and collections, rights holders and curators, users and use cases. Any proposition to make the DPS a reality must therefore speak to a spectrum of motivations and aspirations and must establish its mission and its boundaries with considered clarity.

However the challenge for any digital public space goes beyond such diversity, beyond choosing between the general and the specialist mission (between being Google and being Digital New Zealand or Gallica). It must also address the underlying tension and potentially increasing divergence between user expectation and the capability and capacity of curatorial entities.

Specifically, the UK cultural heritage space, which is central to the DPS vision, includes a large number of players with very different levels of resource, expertise and mandate. These include small archives for whom producing data in any digital format is a challenge, and institutions that are limited by their own collection management software, by rights arrangements or by revenue models which have often been inherited from a previous era.



Furthermore, through their work as mediators and animators these institutions are aware of the detrimental effects of curatorial silos. These silos are manifested in standards and technologies as well as in the management of rights and the presentation of the user experience, impacting each institution's ability to present their collections and to tell their stories in a useful and engaging way.

Meanwhile, online users range from highly specialised researchers to students of any age, not forgetting the wider UK public and global cultural audiences. Furthermore, regardless of user age and background, there is increasing awareness of the potential for social media and online tools (both personal and collaborative) to promote content, to make thematic connections, to automate recommendations based on personal behaviours and profiles and also to enable users to add value through a range of personal and shared contributions (such as ratings, annotations, lists).

In this setting, all parties (rights holders, curators, mediators, users) are to varying extents aware of considerable shortcomings in the opportunities discovery and access, reuse and contribution – relating not only to mechanisms controlled by galleries, libraries, archives and museums but also to the global search engines and other aggregations.

Core principles

A set of principles can be articulated that encapsulate the core issues of the problem space. These are not new, lying at the heart of the semantic web proposition set out by Sir Tim Berners-Lee, and having been validated by initiatives such as the Jisc Discovery programme (2011-13) and its Spotlight on the Digital Co-Design project (2013-14).

1. *Permanent*

Once published, assets (whether text, images, video, audio, or data) need to be permanently available using a persistent reference (URL, DOI). If an asset needs to be made inaccessible, the information about that asset must persist, including an up-to-date explanation of the restrictions.

2. *Described*

Metadata needs to be published for every asset. This should include information about the provenance and rights/responsibilities of use of the asset, as well any restrictions that apply (including time, payment, or licensing scheme membership).

3. *Free to find*

Assets need to be free to find, regardless of the attributes of the user. Even if access is restricted (for example, within the terms of specific licensing schemes or within commercial terms), users should always be able to determine what those restrictions are, and be able to access the resources once the terms of any restrictions are met.

4. *Built on open standards*

Digital assets and their associated metadata need to be designed, described and published according to open standards, and to be discovered and accessed by software and protocols that adhere to those standards.

5. *Navigable*

Open standards and common vocabularies should provide a basis through which interoperability and navigation can be achieved across institutions and over time, including with future platforms or through institutions (rights holders, curators, aggregators) that may not yet exist.

6. *Contextualised*

The facility to play well in personal and collaborative work flows, to be contextualised, is essential if assets are to reveal their fullest potential across a wide variety of curatorial and end user contexts ranging from a thematically assembled collection marking a public event to simply 'My Project List'.

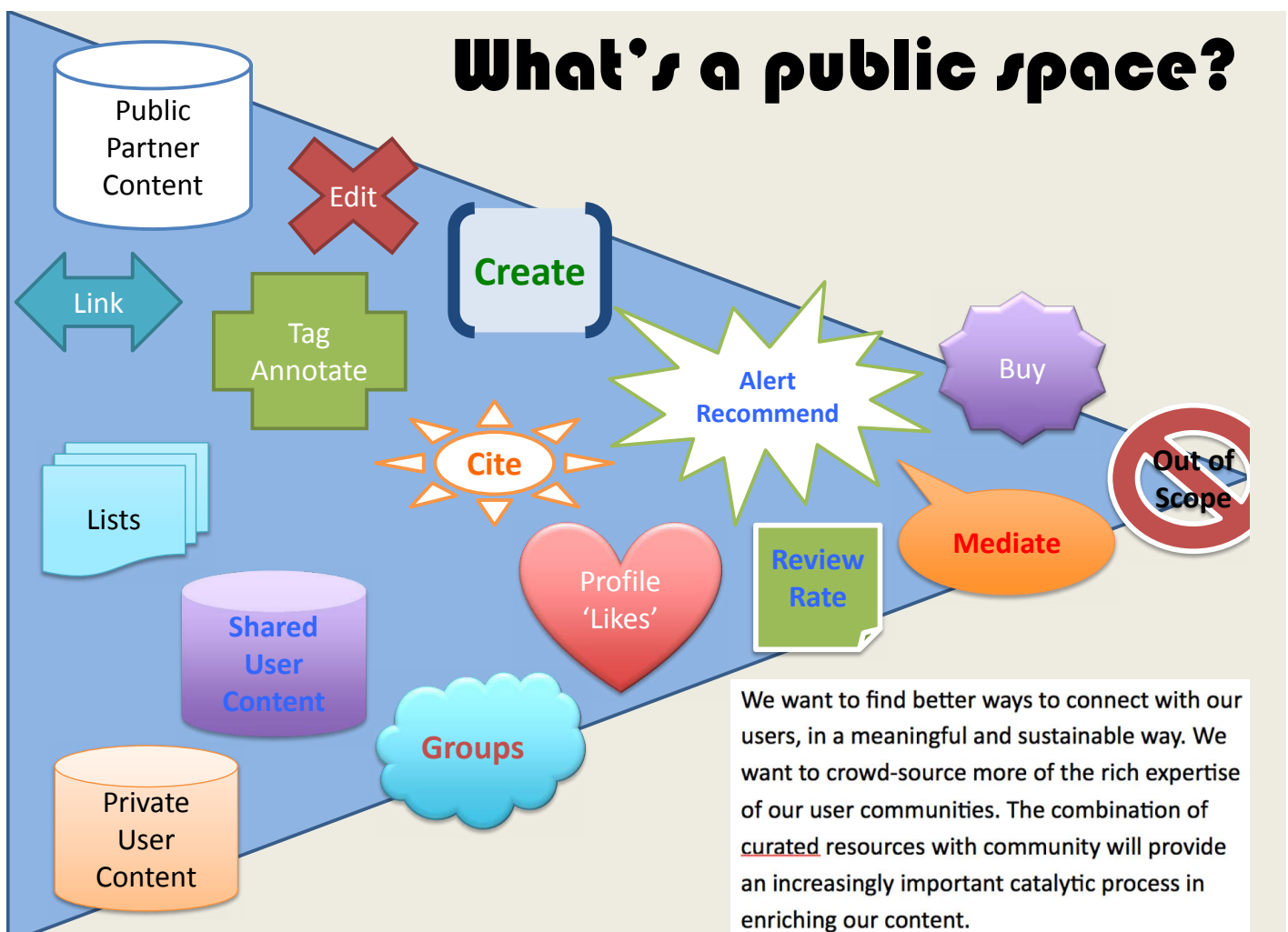
7. *Quality assured*

Whilst the relevance and quality of the asset itself cannot be warranted, there is a significant value in the assurance that the user experience will not be compromised or overwhelmed by the inappropriate.

8. *Trustworthy*

Collection and use of personal and activity data should be subject to informed consent, operating on the principle of data minimisation (only what is absolutely needed will be collected and used).

One simple definition of a digital public space might therefore be: what is created when you build online information services, both access and assets, based on these principles.



3. Use cases

The idea of a digital public space potentially suggests a vast and varied range of use cases, from the perspectives of organisational mission and of individual activity as well as delivering UK level motivations. Whilst it would be tidier to create a concise series of generic and perfectly themed examples, it seems more authentic and compelling to present the collection of 'user stories' as proposed by around 30 delegates from a variety of content holders, cultural and educational organisations at the DPS Stakeholder Workshop (21 July 2014).

Delegates were invited to express their 'user stories' based on the formula of 'someone who wants something for a reason, but may face challenges'.

Someone	Wants something	For a reason	But faces challenges
Community project (e.g. HLF funded)	Share resources with others, make searchable	Promote project, satisfy requirements of funder	Lack of technical expertise, not aware of standards, short term funding
Museum (Local Authority)	Increase visibility of collection, make links with similar collections elsewhere	Increase number of visitors both online and physical	Unsure how to share. Curatorial descriptions not suitable for wide audience
Film archive	Local/regional/national heritage related to a particular film	Contextualising / historicising the film record	Lack of common metadata and thesauri; a great deal of metadata only with limited access to the digitised assets themselves
Digital developers	Work in a open creative and forward thinking environment	Increase job satisfaction and personal development	Ease of access to content
Record office	Connecting a family photograph album to other relevant material	Placing this album within the histories of community, place, period etc	No common metadata, material not yet digitised, and lack of this resource consciousness in place

Someone	Wants something	For a reason	But faces challenges
Curator	Create full picture of resources around specific topic or person	Core activity	Search results are dispersed
Archivist	Make full collection findable and accessible to external parties	Core activity	Lacks the staff and skills to open up via the web (or lacks management support)
Institutional business development	Invite ideas from external creatives / technologists around a collection	Increasing impact and reuse of collections	Does not have the network or the incentives to engage them
Local collection manager	Make local content visible and relevant across borders	Participate in global knowledge economy	Potentially wasting resources on internationalisation, inventing the wheel and duplicating effort
Family history hobbyist	Tracing details of family and looking for more than just names – photos, records	Personal interest, but also wants to share	Where is the content and what can I do with it?
Teenage active learner	Content from 'elsewhere' that will make them stand out from the crowd	Homework project	Use Google? Wikipedia? Competitive environment so does not want to share
English Heritage	Researchers to use our archaeological collections	Core purpose	Information about what is held is not widely available

Someone	Wants something	For a reason	But faces challenges
English Heritage	Create a temporary exhibition of real objects	Mark an event	Each museum collection has to be individually searched
Parent	Access a digital version of a UK literary classic, available in different versions	Help with homework.	Google Books is too limited
Digital practitioner	Create an anthology from UK digital content and reuse it	Create a product and make a profit from it	Aspects not readily available
Funder	All content funded to be discoverable freely and easily	Ensure content created with public funding is used (and preserved)	Nowhere reliable and sustainable to advise grantees to put content
Community group	Get people to see and use their content	They are proud of it and want to contribute to something bigger	Lack of skills, knowledge and place to do this. Systems change and disappear
Voluntary body with heritage assets	Make their heritage known, and possibly generate income	Worried about how they can sustain and exploit heritage which is not their core business	Same as above plus expectations of value of assets may not be realistic
British Library	Expose content	Increase use of collection/ meet user needs and expectations	Exposure on web with necessary rights and access management

Someone	Wants something	For a reason	But faces challenges
British Library	Relate our collection to others	Serve user needs	Semantic incoherence, identification of entities, access conditions across silos
British Library	Find new audiences	Serve user needs and retain relevance to stakeholders	Reaching non-users
British Library	Develop collection	Reflect trends in intellectual / artistic life of the nation	Connecting relevant assets
Student at any level	Structured content, contextual information, range of resources	Requirements of active learning and research	Where to look other than Google
Personal interest researcher	Open and serendipitous browsing	Gain knowledge, follow paths	Exposure of resources thanks to poor search engine optimisation
Professional researcher	Specialised and content driven (not organisation driven)	Acquire deep knowledge	Resources poorly exposed and in silos
HE researcher	Access UK cultural content and metadata	Synthesise knowledge, shape research outputs	Complex ecosystem of platforms and metadata standards
HE lecturer	Drawing together event related content	Make teaching resources (perhaps OERs)	Slow due to searching across collections / databases; uncertainties over rights and permanence

Someone	Wants something	For a reason	But faces challenges
Memory institution	Be able to contextualise collections	Enable better interpretation	Resources are scarce; existing linking and contextualisation only take you so far
School education	Overhaul current education delivery (currently too expensive)	Evidence links in changing delivery models to economic growth	Resistance to change, Unionisation. How can we capitalise on existing content to revolutionise delivery models
Public broadcaster	Share broadcast archive	Deliver value to licence payers	Wary of compromising income streams
DCMS and local government	Develop popular and useful value added services	Support local libraries to offset austerity measures	Scale and sustainability of any investment
Memory institutions	Demonstrate value to taxpayers	Justify continuing free entry	Cannot incur new costs
Government	Assert UK culture	Deliver citizenship agenda	Compliance with EU law
Dance company	Show its work online	Develop an online audience with a younger profile	Accessing the virtual spaces young people inhabit
Council run museum or gallery	Wants to put on themed show or open day	Bring in new audiences	Own collection is not digitised and / or supporting collections not accessible

Someone	Wants something	For a reason	But faces challenges
Entrepreneurs	Re-use public content	Business opportunity	Hard to make link between public content and business opportunity
Tourism sector	Promote the UK as a cultural destination	Engage and attract visitors	Content hard to identify with no single cultural portal as in France
Small archives	Confidence to push my stuff without comeback	Increase impact	Connecting with other content holders to add value and for mutual hand-holding
Collections holders	Access to other people's stuff	Storytelling where the whole is more than sum of the parts	Need some sort of aggregated or federated model
UK HE sector	Attract top researchers and grant income	Raise academic ranking and promote UK HE worldwide	Collections need to be easily discoverable and reusable in the ways that researchers want

4. Scope of a DPS

The core mission

One of the challenges in our work has been to try to pin down the range of activities and services a digital public space could cover and the purpose it might serve, and achieve a measure of consensus at least around the direction of travel.

We suggest that the core mission of a DPS is to open up public funded content for wider purposes and audiences by

- Enhancing open discovery and access
- Enabling connections to be made between resources held in diverse collections
- Benefitting the work of key stakeholders and audiences
- Building critical mass of content and momentum of engagement
- Maximising the value of collaboration between the SCA members and other national collection holders
- Assuring the fundamental principles demanded of a public service.

However such a mission statement leaves a number of questions unanswered, notably:

- Would the DPS meet a need that cannot be met by general search engines and the open web?
- Is all public funded content in scope? For example, does it include data or outputs from academic research as well as collections held by cultural and heritage institutions?
- And what is meant by 'public funded content'? Some content has been created through public funding, other content was created privately but is now publicly owned. Presumably both are within scope but this is not clear.
- Is public funding the same as state funding? What about collections that rely in whole or in part on fees paid by the general public, on donations, fund-raising, gifts and bequests, or crowd-sourcing?
- Are private collections out of scope? Is there a difference between small private collections and those funded by large commercial companies, and where is the dividing line?
- Is there a role for commercial activity in the DPS? A number of people have argued that the DPS could be a basis for new business opportunities for the cultural industries, much of which consists of small companies, both public interest and for profit.
- Should the DPS consist only of content that is freely available to all, or should it also contain or point to content that is behind a pay wall or to which access is restricted (e.g. by place of residence, such as whether or not you are in the UK)?
- Is only content that is in a digital format in scope?
- Is the DPS about metadata only, or should it store the digital objects itself?

These, and other questions, were debated through the consultation process; we have attempted to at least partially address them below, but it is clear that the key questions will recur as new parties engage with the DPS process.

In large part, however, these questions reflect that regardless of what form the digital public space may finally take, it will never be just a technical solution but will itself be a cultural creation, where the process of forming it brings together a wide range of organisations with different interests and perspectives. Debating out issues such as this is in good part how a digital public space in the UK will be made reality, as illustrated by the experiences in developing the Digital Public Library of America (DPLA). We note also that the Collections Trust is launching a major public review of its Culture Grid service, raising many of the same issues as have come to the fore in our work on the DPS (in which the Trust participated)² The recommendation that is proposed below is made with this context in mind.

Aims

Arising from the core mission we tested out the aims which resonated most with those we consulted. The purposes that came through most strongly as being served by a DPS included:

- Benefits to end users, in particular the creation of a source of trusted content, which a general-purpose search engine cannot provide
- The ability to easily make and navigate connections between resources and to discover unexpected connections
- Contextualisation of resources through providing richer related content and the ability to connect
- Making resources buried in collections more visible and discoverable
- Help to smaller organisations in digitalisation in the best formats
- Improving the quality of metadata
- Appropriate and clear rights management, and provenance, possibly linked to authentication and identity management
- Encouraging the most feasibly permissive open licensing while protecting necessary income streams and opening up new business opportunities for the creative industries
- A 'shop window' for the UK and encouraging cultural tourism.

² See the blog post by Nick Poole at <http://www.collectionstrust.org.uk/blog/culturegrid>

Audiences

The key issue in regard to potential audiences for the DPS was the extent of its scope. There are two fundamental propositions: that the DPS be a 'business to business' service to the supply side, that is, those who hold content or are responsible for mediating it for end-users, or that it be a 'business to consumer' service directly to end-users themselves.

Collection holders and mediating organisations were assumed by all consultees to be part of the audience, and these would include:

- The SCA partners and other major national collections,
- All rights holders for UK public funded and public realm content
- Curators in galleries, libraries, archives and museums (GLAM)
- Aggregators in the UK and globally
- Mediators and 'story makers' such as GLAM outreach staff

Some strongly argued against the idea that the DPS should serve end users directly. For some, this was unnecessary, and they saw no niche for such an overarching platform in the cultural and heritage space. Others thought that providing such a platform and service was too ambitious, financially unsustainable, and doomed to failure.

On the other hand, there was interest among many of those consulted in such a service to end users, particularly:

- Teachers and lecturers
- Researchers of all types in arts, humanities, social sciences and public affairs, and (perhaps to a lesser extent) in STEM subjects
- Learners of all types and ages
- The UK public at large, as part of informal learning journeys.

Publics outside the UK were also seen as part of the audience but as a lesser priority. In general the DPS was not seen as a service for researchers who have other more specialist tools and services on which to draw.

Content

Most participants had an inclusive view of the content that could in principle be included in a DPS, although there was a view that the SCA, together perhaps with other major national collection holders, needed to take a vanguard approach in opening up their content and constructing a DPS.

However some felt that university repositories and content held by research councils should not be included. There was also a view that content held by commercial rights' holders should be excluded. There was some debate as to whether the general public should be able to contribute content: there is a distinction to be drawn between collections that an individual might hold (e.g. family letters of historical interest), and user comments and ratings on resources provided by others. These would need to be distinguished and handled differently in a DPS.

Rights

There was wide agreement around some basic principles that should underpin the DPS:

- Publicly funded or publicly owned assets should be free to find (though not necessarily free to view in full)
- Licensing should be as open and permissive as possible
- Rights pertaining to content should be as transparent as possible, especially in terms of rights for access and reuse
- Permanence – assets should continue to be accessible under the same terms

User Experience

Clearly, with diverse interpretations of what a DPS might involve and indeed whether it is a platform or service at all, conclusions about a 'user experience' could be seen as premature. Nevertheless ideas around what users should be able to find and do can be useful in clarifying whether a new technical solution is needed.

The issues that loomed largest in this respect were:

- The importance of navigation – through use of semantic connections (such as person and place names) users should be able to navigate across the DPS landscape
- Some – but by no means all – felt that the DPS would need its own public discovery interface, while others (fewer but still significant in numbers) thought this was not what was needed
- Although public assets should be free to find at the metadata level, many felt that it was acceptable for some content to have restricted licensing
- Users should have the ability to download citations and metadata records, and to download assets themselves if the licence permits
- Some thought that users might need to be authorised to access some resources
- There was some support for users being able to save user generated content (such as searches, bookmarks, notes etc.) for their own later use, and for users being able to link to relevant items or collections
- There was little support for the DPS to include social activity such as public reviews and ratings, recommender services, or the formation of online communities of interest within the DPS itself.

5. Challenges

There are many and varied challenges to making the DPS vision a reality. This section describes the main challenges by applying a Political, Economic, Social and Technological (PEST) analysis.

The political and economic climate

It is clear that we are not living in an era in which large central government initiatives or funding programmes might be looked to deliver a digital public space. This is not necessarily something to be regretted given the sheer range and diversity of the cultural and heritage space, and the desire on the part of many we consulted that a DPS emerge as much from a bottom-up than a top-down process. Nevertheless engaging the interest and support of government could be an important factor in progressing and raising the profile of any work undertaken in a timely and concerted manner.

A related factor is how the idea of a UK DPS relates to the existence of a Europe-wide initiative operating in a similar domain, Europeana. Inevitably questions will be raised about duplicating resources and about potential UK exclusivism. The case for a UK-specific digital space needs to be articulated. Clearly a UK DPS would need to have a relationship with Europeana, in which respect we might learn from the example of the French Gallica initiative, which provides a public platform for digitised material from French library archives but also acts as an aggregator for Europeana.

There are options for funding that could be looked to for development or prototyping work, particularly in the technology innovation space, such as the Technology Strategy Board, which we discuss in our recommendations. However the critical consideration for the DPS idea is that it would need to be sustainable in the longer term, and this requirement might need to temper grander ambitions that require substantial external investment. The DPS needs to be conceived in a way that is appropriate to the current context.

We have examined the financial, governance and delivery arrangements at comparable initiatives across the globe. Some have required the creation of a new vehicle with its own staffing (e.g. DPLA), some are delivered within an appropriate national institution (e.g. Trove, in the National Library of Australia), and some emerge from a looser partnership. Matching the right governance structure to an appropriate delivery vehicle that can deliver the desired outcomes in an affordable and sustainable way will be a major challenge.

Social expectations

Increasingly, users familiar with online activity, whether highly specialised researchers, learners of all ages or simply interested members of the public, have expectations of value added functionality, involving social media and online tools (both personal and collaborative).

These types of expectations have been set and reinforced by global offerings in retail, entertainment and social media, as well as by specialised services geared to such as researchers, teachers and family historians.

Such expectations are likely to include:

- Associate user generated content with assets of interest (such as searches, bookmarks, annotations, links and lists) for their own later use
- Receive alerts and recommendations based on personal profiles and tracked behaviours
- Engage in social activity such as reviews, ratings and online communities of interest
- Share references and likes through general and specialist social media (e.g. Twitter, Facebook, LinkedIn, Mendeley)
- Participate in crowd sourced activity such as editorial input to enhance metadata, make links or improve OCR
- Upload their own assets

It is notable that such as Digital New Zealand and Trove have explicitly embraced a rich variety of such activity, which seems to have had a very positive impact on their levels of usage, its character and stickiness.

The immediate context

There are a number of initiatives which are of relevance to the DPS mission and which could be viewed as already delivering part of it, or as having the potential to do so.

Notably, these include Europeana; the Research Education Space (BBC/Jisc/BUFVC partnership); the platform under development by the Copyright Hub to resolve rights issues for cultural assets; the Open Discovery Space initiative to build a Europe-wide resource repository for schools and to connect schools to research centres, libraries and museums; and other initiatives such as Your Paintings and the Archives Hub. Many of the curators of large national collections have gone a long way towards developing the discoverability and usability of their own resources, including, for example, the British Library, the Imperial War Museum and the Tate, while there are examples of partnerships to develop connected collections around themes, most notably around World War One and, to a lesser extent, Shakespeare's 450th birthday.

Despite the work that has gone on, discoverability and accessibility of assets are still uneven, especially when considering the long tail of institutions and collections below national level. Moreover more could be done to connect up and enable navigation between assets and collections.

The challenge is to identify what a DPS could add to this complex picture and how it would relate to what already exists. Given their specific remits, is not as simple as building on existing entities: Europeana is clearly closely related to the DPS mission, but does not provide a UK public space; the RES may be an embryo DPS but is still in the early stages of development and has a model that is still relatively untested. So developments towards a DPS will need a balanced approach which supports existing efforts rather than cutting across them, whilst retaining its own clear focus.

Technological challenges

Capabilities of contributors

A major challenge for the DPS is the variation in the technological capabilities of institutions and projects that may contribute content to the DPS. In order to aggregate metadata or digital content from a wide range of contributors the DPS will need to define the mechanisms by which the material is made available for aggregation.

Some institutions may lack local technological expertise, projects that created digital content through one-off investments maybe not have the resource or expertise to support new mechanisms or ways of publishing data online. Similarly where content or metadata is stored in existing systems, it may not be possible to change how these systems make materials available for aggregation.

Comparable initiatives to the DPS (e.g. DigitalNZ, DPLA, Trove) support multiple mechanisms often including a 'lowest common denominator' format such as csv files or spreadsheets to enable participation from the widest range of contributors.

Aggregation

Aggregation of material from a wide range of sources offers a series of technology challenges:

- Keeping the data in the aggregation in sync with the data available from contributors
- Indexing heterogeneous data
- De-duplicating data and entities described within the data (e.g. recognising that "Newton, Isaac" in one source is "Sir Isaac Newton" in another)
- Moving and processing large quantities of data

There are well established mechanisms for sharing metadata in the cultural heritage sector, specifically the Open Archives Initiative Protocol for Metadata Harvesting (OAI-PMH); however this is unlikely to be supported by smaller institutions, or be available in the case of small scale digitisation projects. Newer protocols and approaches that might support effective aggregation, such as ResourceSync and Linked Data, are not yet widely supported.

Scalability

As noted above, the DPS has the potential of becoming a large aggregation, especially if it seeks to aggregate digital content as well as metadata describing the content. The technological approaches one might adopt for a large scale aggregation of digital content will differ to those adopted for smaller scale metadata aggregation and will lead to an impact on the required technology infrastructure. This would be particularly true if the DPS aggregated large quantities of audio-visual content.

Shifting technology landscape

The technology landscape in which the DPS will operate is subject to continuous change. The challenge for the DPS is to be agile enough to take advantage of new technology approaches that allow it to operate in an efficient and effective way, while providing a stable platform and supporting a consistent set of mechanisms for both contributors and consumers of the service.

Authentication and Authorisation

For some types of service the DPS would have to support mechanisms of authenticating individual users. This would require either support for a DPS specific authentication mechanism, or a way that allows external services to provide authentication for users.

In addition it is highly likely the DPS will require one or more mechanisms to authorise users - that is, to know what their rights are in relation to materials discoverable or accessible via the DPS. The exact requirements for authorisation will depend on the conditions related to the access and use of materials discoverable via the DPS, which may vary across contributors and change over time. In addition, some conditions may not be easy to link to established authorisation mechanisms. For example if there is a condition that users 'must be resident in the UK', it would be necessary to find a way of authorising users based on their residency status.

Legal issues

Depending on how the DPS idea is developed, a range of legal issues will be raised. They will cover

- Governance structure
- Licensing terms and conditions of content
- Terms of use for any platform that is developed, including the treatment of user contributed data

An initial review of some of key issues is contained in Appendix D. These will need to be pursued in more detail as the idea of the DPS is further developed.

Risks

The risk register that follows identifies headline risks and projects the evolution or mitigation of each risk over the potential DPS lifecycle using a simple Red, Amber, Green scale. This is illustrated in three columns:

- Now – risk assessment at the point of this report
- PoC – risk at the end of any subsequent proof of concept activity geared to address the risks identified
- DPS – risk at the start of any DPS service delivery

This high level assessment suggests that:

- Crucially many of the currently headlined risks could be mitigated through Proof of Concept activity - for example, risks 9 to 12
- A small number of risks are inevitably at their greatest at the point of service delivery – specifically risks 7 and 23 relating to reputation and take up
- Some risks will naturally persist as an undercurrent throughout the lifetime of such activity – notably risks 19 and 21

	Now	PoC	DPS
Risks arising from the DPS proposition itself			
1 Difficulty in agreeing on a clear and compelling set of objectives			
2 Lack of buy in from SCA member and key partner stakeholders			
3 Scepticism amongst the broader stakeholder community			
4 Lack of political appetite for a centralised service			
5 Perceived threat to core business			
6 Lack of leadership and authority			
7 Reputational risk from the proposal onwards			
8 Good idea but feels too hard – even for the core partners			
9 Seen as duplicating existing services			
10 Belief that technical developments mean it will happen anyway			
11 It's already too late – too much diversity in the sector's offerings			
12 Undue emphasis on cultural memory at expense of innovation			
Risks in making the investment			
13 Challenging cost benefit case regardless of take up			
14 Availability of funds to take it forward in a timely way			
15 Inability to resource the effort			
16 Requirement to become self-sustaining represents a distraction			
17 If there is real opportunity the commercial sector will do it better			

	Now	PoC	DPS
Risks in delivery			
18 Inability of core partners to deliver key content			
19 Lack of ambition leads to ineffective delivery			
20 Longevity of agreement between the key partners			
21 Poor take up / points of failure across the ecosystem			
22 Ongoing challenges re- alternatives, such as Google, Europeana			
23 Build a public platform and the public don't use it			

Benefits and opportunities

While the risks around a DPS need to be evaluated in taking the project forward, at the same time the development of the idea provides a range of opportunities for the cultural and heritage sector, including to:

- Strengthen the relationship between collection holders and the public, and engage new audiences
- Improve public access to content and providing sustainable access
- Improve the alignment of organisations in the sector and so achieve better value for money
- Play to public sector strengths of trust and openness
- Provide an infrastructure to support small, and sometimes vulnerable, organisations
- Encourage standardisation and transparency around licensing practices
- Create new knowledge communities and learning experiences
- Strengthen the profile of UK culture and heritage and promote cultural tourism
- Build a cross-sector coalition for change.

6. Options

Through the study nine options for a possible SCA activity in respect of the DPS evolved. These were tested out at the final meeting of the expert group and compared it with the evidence emerging from the case studies and interviews.

Clearly there is no unanimity of view in this area, and the recommendations we are making reflect that there are areas where we think it would be premature to reach firm conclusions. However we do think it is both possible and desirable for the SCA to make substantial progress towards the creation of a DPS.

Of the nine options we defined, four received little or no support and we recommend that they be rejected:

Option 1 - Do nothing – there is no clear need

There were some respondents who thought it at least possible that the SCA should do nothing in this space, and others who thought that while the DPS might be useful the case for investing time and effort into it was not sufficient. With the concept of a DPS itself being fuzzy it could be hard to see a clear business case, and some were tempted to see it as no more than another resource bank on which to draw. Others may have seen the DPS as something that will organically emerge without any co-ordinated initiative being needed. These were however minority views.

The 'do nothing' view is not to be dismissed out of hand. Our recommendation is to take concrete action, but within this recommendation we are proposing that there be a later decision point to assess whether at that time there is benefit from a continuing, and probably more major, investment of time and resources. The challenge that the 'do nothing' viewpoint poses is of being able to respond to it by more clearly articulating what a DPS would do, what value it would add to existing activities, and whether its emergence needs deliberate fostering. This position is a useful 'devil's advocate' challenge to the DPS concept and sight should not be lost of these fundamental questions as the DPS project progresses.

Option 2 - Do nothing – another party will deliver

There was little or no support for the view that an initiative is needed in the DPS arena but that the SCA should not take the lead, leaving it instead for some unspecified alternative organisation. In part, no doubt, this was because the SCA embraces many of the large UK content holders and representative bodies for content holders, and while it is not essential that all major collections of national significance form part of the DPS, it is hard to envisage an initiative of this kind that does not involve organisations such as the BBC or the British Library.

In the absence of these key players within the SCA taking the lead, momentum and ownership might be provided by either Europeana or a commercial body, neither of which (very different) alternatives meets up to the need to which the DPS agenda is responding. It seems unlikely that any existing organisation apart from the SCA members would be in a position to deliver the DPS (the option to set up a new organisation is dealt with separately).

Option 3 - Define and promote standards and good practice (but do not put resources into supporting implementation)

As explained below, defining and promoting standards and good practice to build the digital public space was clearly favoured in our research and features in the recommendations.

However the idea that focusing upon only defining and promoting standards would be sufficient to meet the DPS vision found limited support. Many content holders are small organisations with limited technical knowledge and skills and little or no technical staff capacity. The argument that without support for implementation, the standards and practices would largely remain a dead letter, and that change in the sector would be painfully slow, is persuasive.

Option 4 - Work with another party to facilitate

Option 4 is for delivery of the DPS to be carried out by another party but to work with them to encourage and influence the delivery. In this form this option was seen as no more appealing than simply leaving it to another organisation. It is unclear which organisation could take on the idea of a UK DPS, rather than simply continuing to develop existing services. Moreover this option would put the SCA in the position of wanting the DPS to happen but not fully committing to backing it, and so resigning itself to have only limited influence over its development.

Working with a range of other parties to develop a DPS was very clearly favoured by those consulted and is undoubtedly essential to the delivery of the DPS. However the weaker option of leaving another organisation in the driving seat is one that promises little return for little investment, and we suggest this should be rejected.

The consultation exercise proposed five other options, each of which found some support. These options are not mutually exclusive (and there are elements of more than one option present in the recommended option). The five options are:

Option 5 - Identify standards and good practice and provide advice and support for their wider implementation.

There is recognition that many of the smaller organisations in the cultural and heritage space need considerable help with the digitisation of assets and in making them discoverable and navigable in the ways envisaged in a DPS. Help is needed to provide clarity, tools, and implementation support. With this option, no single DPS platform is envisaged, though there may be multiple platforms that all adhere to the same set of standards and good practice, that will facilitate access and discovery. With this option, the DPS will be a digital public space with a softer and less focused remit and set of goals.

Option 6 - Cohere the efforts of UK partners active in this space

It is apparent that a number of initiatives already under way could constitute the building blocks of a UK DPS. These include Europeana, whose scope is broader than the UK and whose penetration within the UK is still limited; the BBC/Jisc/BUFVC initiative the Research and Education Space (RES), which is building what could be a prototype DPS platform but within the limited academic space; the Copyright Hub that is engaged in constructing a distributed architecture to resolve rights issues for digital assets; meta-discovery services such as the Archives Hub and Aim25; partnership initiatives such as Your Paintings, the Lives of World War One collection, and the People's Collection Wales; and the efforts of major national collection holders like the British Library and the Tate.

As yet all these efforts do not together equate to a DPS, but neither would creating another new and separate initiative that would sit alongside them. The way towards a DPS is through knitting together this patchwork of initiatives, not working around them.

Option 7 - Build on an existing operational platform

Option 7 is to select an existing operational platform that will provide a suitable starting point for the creation of a DPS platform. Through the consultation, there was little support for simply selecting one platform that already exists and building the DPS upon it, mostly because as noted above, there is no single platform or project that aligns well enough with the DPS core mission. However, neither was it felt sensible to start again from scratch. RES is testing out a way of building a digital public space, but it would be premature to assess its success. Those consulted did not feel that Europeana precisely met the need addressed by the DPS idea but it is clearly an important part of the solution. The work of the Copyright Hub is in its early stages but could be a key component of the architecture of a DPS. There is much here on which it will be desirable to build but it is not as simple as selecting one vehicle as the solution.

Option 8 - Develop and deliver a platform

This option is that the DPS should develop and deliver a platform to be used primarily by intermediary organisations, who could draw on it to enrich the services they provide to the public, and on which other organisations could be public-facing interfaces and services. This option was seen by all respondents as part of what the DPS should do, and for some was the final purpose it should serve. However for many respondents their ambition stretched further, to also include Option 9

Option 9 - Develop and deliver a service to the general public

The option to develop and deliver a new DPS service to the general public was one of the most contested and controversial of those discussed during the consultation. There were some participants who thought that this was an essential part of a DPS, but others who thought this was too ambitious, undeliverable and unsustainable, and possibly unnecessary too.

Options Appraisal

Based upon the extensive consultation exercise, our conclusion is that there is clearly a desire that a digital public space be developed to help cohere the existing efforts that are already contributing to a broadly-defined digital public space in an organic way. However, leaving the development of a digital public space entirely to emerge spontaneously is unlikely to result in a sufficiently full realisation of its potential, not least because the high technical and financial barriers to entry for many of the thousands of small organisations in the cultural and heritage spheres. Moreover, a 'laissez-faire' organic approach may result in too much control being given to commercial players resulting in a loss of public benefit. We conclude therefore that there is a case for the SCA, together with other organisations where possible, to take active steps towards the creation of a DPS.

However, we think it would be premature for the SCA to at this stage commit to the creation of a new DPS platform or service. There is not yet sufficient clarity or consensus among the key partners who would need to be involved in order to make this viable. In addition, it would be senseless for the SCA to ignore work that is already under way to provide what could be components of a DPS, or a DPS in embryo, some of which in any case involve some of the SCA partners themselves. As mentioned above, the formation of a digital public space is as much a cultural endeavour as it is the provision of a technical solution. We think that a decision by the SCA to create a new DPS service would at this time be likely to be unsuccessful.

It is also relevant to bear in mind that 2015 will be a general election year with all that implies about uncertainty over future political direction, reluctance to commit budgets, and the difficulty of obtaining governmental backing for new initiatives until after a new government is formed. There is a risk of losing momentum for the DPS idea if a new high-profile national initiative is proposed at this juncture.

We are therefore recommending an approach that allows the DPS concept to be further explored and discussed, while being moved forward by practical piloting and testing.

7. Recommendation

The concept of key cultural heritage organisations working together to create a shared place for public content is one that has been with us for some years, and in some contexts has become at least a partial reality. The SCA itself has existed in a number of forms over the last fifteen years, including its existence as the Common Information Environment, whilst pursuing a set of ambitions that are consistent with those of the DPS. One of the most crucial factors in the realisation of any complex project is that of timing, and in given the complexity of the DPS context, we might legitimately ask: is now the right time to pursue this worthy but challenging agenda?

Our conclusion is that this is the right time. The relevant technology has now matured enough to make the creation of a DPS in some form a practical reality, and there is sufficient current experience through other initiatives, such as the Digital Public Library of America, that the DPS can note and, we hope, avoid some of the main possible pitfalls. Crucially, the Research Education Space provides the starting point for the creation of some of the essential building blocks for a DPS platform, and will give a head start to the creation of the Proof of Concept platform. Most importantly, perhaps, the commitment of the SCA partners to the DPS vision is strong and there is a desire to make practical progress.

Taking the above into account, we recommend that the SCA maintain the momentum around the DPS that has been initiated through the current project and that it should build upon it, with the aim of forming a wider coalition around the core ideas that form a digital public space. This approach would keep in view the final destination of a DPS service, either as a platform for intermediaries or as a service to the general public, but without at this stage having to commit resources to building either – or needing to persuade others to do so. At the same time, it would allow the feasibility of a DPS service to be tested both by building relationships around the DPS idea among the key players who would need to be involved, and by working through the technology issues.

We therefore propose that the SCA should commission a “Proof of Concept” project that brings together existing initiatives in the DPS space and key partners around a practical programme of work to develop and test out the DPS idea in a practical prototype, following which decisions can be made about the shape and feasibility of moving to a fully developed platform or service.

Benefits

This recommendation would:

- Continue the process of providing public clarity and consensus around the technical issues which a DPS would need to address, and assess the issues around providing the functionality that is needed versus the challenges of inclusivity in the sector
- Continue the process of building consensus in the centre around the core ideas of a digital public space and what it involves
- Develop coherence among the various players who would need to be involved in a UK digital public space
- Build appropriate relationships with initiatives outside the UK, in particular Europeana
- Allow ideas around the need for a new DPS service to be more thoroughly tested in the sector
- Maintain momentum around the process of building a digital public space without requiring immediate investment of large-scale resources
- Maintain momentum during a general election year

Leverage

The recommendation recognises that this is an area of activity in which a number of UK players and their international counterparts are already involved, albeit in addressing only elements of the solution space or on an exploratory basis. With no readymade solution in the wings, our recommendation identifies value in staging the opportunity to bring together partners to explore, design and test the potential for a UK Digital Public Space. In engineering terms, there are a variety of useful working parts from which the machine might be designed and built. It is from these parts that the basis of a digital public space can emerge, if greater coherence between them can be achieved and gaps identified and filled.

This approach would therefore continue the process of building relationships among the key content holders and representative bodies in the cultural and heritage sectors around the idea of a digital public space, and the steps which each needs to take to enable that idea to take shape. By focusing on a practical programme of work it provides a purpose for collaboration around the building of a product that expresses the digital public space concept, so that rather than only talking about the idea there can be consensus on what needs to be done to give it flesh and bones.

This would offer key benefits in terms of practice, content and technology:

- Establishing a wider partnership
- Building on lessons learned
- Leveraging existing and currently committed investments
- Fast tracking proof of concept work
- Undertaking essential market testing

It would also have the potential to strengthen any proposal arising from this time-limited project on a future DPS platform or service by demonstrating value, mitigating risk and attracting attention from the variety of related funders and policymakers.

Scope

On this basis, we recommend that the project would be run on a time limited 'start and finish' basis. In order to determine the feasibility of the type of Digital Public Space recommended in this report, the project should be tasked to:

1. Adopt a proof of concept platform suited to testing the intended outcome
2. Test critical issues and options relating to technology and standards selection, metadata, content and user experience
3. Develop a service definition with the related technical and operational implementation plan
4. Define the supporting services that would be required or recommended
5. Engage and communicate with appropriate stakeholders

Based on the resulting proposition, if any, the project will define and adopt:

6. Name, mission and indicative brand
7. Scope in terms of aims, audience and content
8. Governance model and terms of participation
9. Long list the interested parties
10. Prospectus and business plan

Bearing in mind what needs to be achieved, this might reasonably be planned to run over no more than a 12 month period – for example in 2015, conveniently covering the period of the General Election and the implementation of the Europeana strategic plan, but reporting ahead of the BBC Charter renewal process.

Participants

The project should involve three groups of organizations – those governing the project, those actively involved in proof of concept work and also high impact alliance partners outside the UK.

Project Governance

It is recommended that the members of the SCA should take responsibility for the governance and the management of the project. Depending on other deliberations regarding the overall mission of the SCA, a Steering Group might extend beyond the six current SCA members.

For the purposes of this project it would be of value to consider, for example, the other UK national libraries, The National Archives, the British Museum and the Collections Trust.

Proof of Concept Development Partners

Development partners should be selected on the basis of their willingness to commit human resources and knowhow to the process and its timeframe.

It would be a priority to secure the involvement of:

- BBC
- British Library
- Collections Trust
- Copyright Hub
- Jisc - including such as Archives Hub and Media Hub
- People's Collection Wales
- Public Catalogue Foundation
- Wellcome Library
- A BFI regional hub
- A gallery or museum – notably the Tate
- A public library - notably Birmingham or Manchester
- A university – notably the University of Oxford
- Arts Council England and the Heritage Lottery Fund, through nominated data-related initiatives that can contribute to practical proof of concept development

It would be desirable to involve:

- AIM25
- British Museum
- BUFVC
- National Libraries of Ireland, Scotland and Wales
- RLUK
- University of Sheffield (notably Humanities Research Institute)
- University of Sussex (notably Mass Observation Archive and The Keep)
- Potential funders not already engaged, such as the Arts and Humanities Research Council, the Technology Strategy Board, or Nesta

Alliance Partners

At this stage, it will be important to engage with organizations outside the UK that bring both service experience and thematically relevant content at scale with the potential to be consumed by a DPS (and vice versa). On account of the strong cultural content connections, the following are headlined as potential Alliance Partners.

- Digital New Zealand (National Library of New Zealand)
- Digital Public Library of America
- Europeana
- Trove (National Library of Australia)
- Open Discovery Space

In addition, it would be desirable to engage in dialogue with major digital publishers to understand how they might use a DPS and the issues this would raise.

Whilst this project represents a contained exercise to demonstrate practical feasibility, it will be important to include engagement of the wider stakeholder community at a number of levels.

However engagement of a more general user community may best wait until after the proof of concept activity is concluded and a service vision is agreed with some visibility of an actionable plan (or the initiative is closed down).

Platform and technology challenges

We propose that the RES platform should provide the starting point for this programme of work, testing whether the RES approach can be scaled up to work on a broader canvas than the education space and deal with the wider range of rights and authentication issues that will be raised. At the same time this will enable testing of whether the problems of the capacity of the long tail of smaller organisations to contribute to a platform based on linked data, or to be supported to do so, can be overcome or whether a lower entry point is needed.

On the technology side, the envisaged project should address the following key issues and decision points.

1 - Approaches to Aggregation

To enable the widest range of contributors to participate in a DPS, the approach to aggregation should be to build existing practices and mechanisms. Publishing on the Web using HTML is the most common mechanism of making information available to the public, and the DPS should recognise and embrace this. However, in order to support richer description of resources the DPS will also need to support the provision of more detailed structured metadata. The DPS can achieve this by aggregation of data from the web at three levels:

- Crawl HTML web pages (and associated objects such as images) and index the unstructured content
- Crawl HTML web pages and use any embedded microdata (specifically including schema.org microdata)
- Crawl Linked Data published on the web and index the structured data retrieved

This approach offers a very low barrier to entry (simply publish information on crawlable web pages) while enabling contributors with the necessary expertise to offer rich, structured, descriptions of their resources.

2 - Metadata versus Resources

The approach to aggregation described above means that where resources are available on the web, these can be retrieved and indexed. The DPS should take advantage of access to full resources where available to index key information, but should not seek to store the full resources as a primary goal. It may however, decide to cache resources, or representations of resources (e.g. thumbnails) locally where necessary to ensure a high quality user experience.

This approach offers a balance between indexing of resources for discovery and the challenges of storing large quantities of data. It should be noted however that some potential use cases for a DPS (for example on-demand text mining across a large body of material) are not well supported by this approach.

3 - Accessing Resources

Access to the resources discoverable through the DPS should remain in the control of the contributing organisations. In some cases this will mean the user has to leave the DPS to view or fully access the resources.

However the DPS should also support a number of embeddable viewers/players to support access to resources within the DPS interface. This would require agreement on standards for delivering the relevant media to the DPS viewers.

As well as ensuring the relevant organisation remain in control of their resources, this approach also has the advantage of allowing organisations to track use of their resources without having to request such information from the DPS.

4 - Authentication/Authorisation Issues

In the first case the DPS will primarily use IP authentication and authorisation to determine if the user is accessing the DPS from a computer in the UK.

Alongside IP authentication the DPS could support authentication via widely used web services (e.g. Google, Facebook, Twitter), which would enable users to create local profiles in the DPS for any personalisation features the DPS wishes to support.

Further to this the DPS should investigate the possibility of working with UK public libraries to enable both authentication and authorisation for users by using the same username/barcode and password/PIN that they use to access digital services from their public library service.

Conclusion

The recommendation we are making maintains the momentum already generated around the idea of a digital public space and provides the twin benefits of continuing to build a culture of cooperation and collaboration around the notion, which we have identified in this report as a key component of making the concept a reality, while providing a necessary framework for further testing of the technology components and business models that would make up any longer term solution, and bringing a greater measure of coherence to those initiatives that already exist, using the RES as a starting point. It ensures that the major decisions to commit resources, effort and reputations around a DPS proposition will be taken on a more secure basis than is currently possible, and in a probably more settled post-election political environment. We believe that it provides the best way forward towards making the digital public space a reality.

An elaboration of our recommendation in the form of an initial project proposal, to give a fuller idea of how it might be approached, is provided in Appendix 5.

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Appendix 1 - Case studies

The purpose of the case studies undertaken for this project was to help understand how a DPS might support the efforts of those already responsible for engaging audiences with cultural and heritage content. In the complex content ownership and reuse ecosystem we wished to understand:

- Would organisations that have undertaken initiatives, on their own or in partnership, to make online resources available to their audiences, have benefitted from a more coherent approach at national level to opening up digital resources?
- What exactly are the barriers to making digital resources available to audiences in ways that make them easily findable and usable?
- What initiatives or services would be of use to the cultural, heritage and education sectors?
- Can we build on existing collaborations and moves towards openness to develop such a UK Digital Public Space?

The case studies were not meant to form a comprehensive survey but to examine a range of sample cases to inform the project. They were undertaken through a mixture of desk research and interviews with key informants, based around a common topic guide.

We undertook 15 case studies covering:

1. Birmingham City Libraries
2. Bodleian Libraries Digital Collections
3. British Library
4. Digital New Zealand
5. HistoryPin
6. Kings College London
7. Lives of the First World War Project (Imperial War Museum)
8. Manchester City Libraries
9. Open University
10. Public Catalogue Foundation
11. RCAHMS
12. Tate
13. The National Archives
14. Trove
15. UTC Sheffield

A summary of each case study follows. The content of each case study reflects the interpretation of the researchers and not the views of those who helped us in our research.

Birmingham City Libraries

Participants: Brian Gambles, David Potts

1. *What types of work do you undertake to reach audiences and to mediate / animate / contextualise content?*

There are a number of strands. First the website includes galleries and text descriptions, structured into 'Dozens' (12 themed items) and 'Trails' (linking places throughout the city to a single theme such as slavery).

Second there are projects, such as Connecting Histories, which created digitised content on diverse communities, a collaboration that included HE and was HLF-funded, and Learning Journeys. Target was disadvantaged communities. The volume of content required was tiny compared to the size of Birmingham's collections.

Third physical exhibitions include digital interaction and content, while the digital gallery offers a programmable physical space and digital signage rotates images and collection information.

Other projects mentioned include working with Creative England and the Google Cultural Institute ("a prestigious platform").

Funding is a major problem: a lot was achieved through the technology funding for the new building, which is now exhausted.

2. *What are the barriers to making digital resources accessible to your target audiences?*

There are manifold barriers: resources, knowledge of IPR of collections; defining and understanding target audiences; capturing the best way to engage with people (including contextualisation and narrative for the non-research communities); lack of skills in system applications.

3. *Do you seek to include content from collections from outside your own organisation? Why / Why not?*

There is very little inclusion of other institutions' collections: there is the danger of mission creep; the priority is very much their own (huge) collections.

However a lot of material is in the hands of the community, and there is a readiness/expectation of working with other community organisations.

4. *In what ways might you use external content? (e.g. Inform your own research, Fill gaps and extend scope of what you present, Enhance guides/finding aids, introduce other media such as paintings or film, Encourage further exploration)*

There would be value in linking to other national institutions and collections to contextualise existing collections such as the Shakespeare Library. However, again, the focus is on their own collections.

5. *Is there content held by the SCA partners or other organisations which you don't currently use but would like to? Give examples.*

No examples could be found – not an avenue that has been pursued.

6. *What issues and processes impact the possibility of using external content? (e.g. Discovering it, Making thematic connections, Rights visibility and clearance, Reliability of access, Problems with formats, Quality of descriptive metadata, Lack of technical expertise, Functionality of APIs, Lack of curatorial expertise)*

All examples are relevant, particularly APIs and IPR. There has to be a good case for making it worthwhile.

7. *If the DPS existed, what would make it useful / usable to you and your service?*

The Library sees itself as a gateway and as a learning resource. The DPS has the potential to add value to collections as a high-quality portal. It is seen as cognate to the purchase of online databases, which are seen as enhancing other collections. [Interesting contrast to HE libraries.]

8. *If the DPS existed, what difference do you think it would make to your work and to your audiences?*

It would potentially add value in pointing audiences to other high-quality resources. An aim is encourage 'valuable collisions' and an open-minded approach to learning.

9. *Are there existing collaborations and initiatives with which the Digital Public Space should be working? If so, why?*

Europeana. Society of Chief Librarians (contact Ciara Eastell, Devon) is working on a single digital presence for public libraries. Birmingham University's innovation laboratory for people interacting with content.

10. *What single initiative do you think would really make a difference in opening up the digital public space in the UK?*

Important to harmonise with a major event/moment (e.g. WWI – with IWM, Olympics).

11. *Would you like to make any further observations?*

None offered.

Bodleian Libraries Digital Collections

This case study is based on a interview with Michael Popham, Head of Digital Collections & Preservation Services at the Bodleian. The interview was carried out by Owen Stephens in October 2014.

9. *What types of work do you undertake to reach audiences and to mediate / animate / contextualise content?*

The key audience for Digital Collections at Bodleian Libraries is academics and researchers. The Bodleian library has around 60,000 registered academics from around the world, and will generally focus on projects which serve the needs of academics and researchers.

Where possible the Bodleian will try to create or publish digital resources in collaboration with academics. In other cases the Bodleian will participate in services that particularly reach out to academic audiences - for example services provided by Proquest to the research community. However this does not rule out participation in projects such as Google Books and Europeana which have a broader reach.

Generally the Bodleian finds it easy to consult with local (i.e. Oxford) academics, but it is much more challenging to consult & engage with more distant audiences.

10. *What are the barriers to making digital resources accessible to your target audiences?*

The demand for digital content constantly exceeds supply, with each successful project triggering requests for bigger and better resources. The Bodleian does not have a dedicated funding stream for digitisation, and so specific funding or grants have to be identified for any work in this area. This approach also creates challenges in relation to providing long term access to digital collections.

Despite these challenges the library treats digital the same as print in terms of assuming that once something has been made available digitally, it should remain available 'in perpetuity'. However, once a project to make some digital content available has completed there is unlikely there will be any significant further money available to develop the resource, or the mechanism by which the resource is made available.

Once content is available, then ensuring the relevant audiences can easily discover the content is also challenging. While projects may follow best practice when they are setup, they can become out of date in relation to strategies such as Search Engine Optimisation. In addition resources may have been made available based on the needs of a specific audience, and addressing discoverability for new audiences can have an implications for the metadata. For example, a collection of cartoons relating to the Napoleonic War are catalogued in such as way as to be relevant for researchers into the history of art, but not to those with a more general historical interest (e.g. the metadata will not necessarily specify who is represented in the cartoon).

11. *Do you seek to include content from collections from outside your own organisation? Why / Why not?*

The vast majority of content that the Bodleian makes available online is derived from its own collections. There are a few examples where the Bodleian is involved in projects relating to external content, especially in situations where the Bodleian is working with other institutions which hold relevant content. For example there is currently a project with the the Biblioteca Apostolica Vaticana to digitise incunabula³.

12. *In what ways might you use external content? (e.g. Inform your own research, Fill gaps and extend scope of what you present, Enhance guides/finding aids, introduce other media such as paintings or film, Encourage further exploration)*

The Bodleian itself is unlikely to use external content directly. However, there is often interest in using materials from elsewhere, potentially in tandem with content from the Bodleian. In these situations the Bodleian works as a provider of content and can provide support to the relevant academics or projects in their use of materials from the Bodleian and elsewhere.

13. *Is there content held by the SCA partners or other organisations which you don't currently use but would like to? Give examples.*

Some of the SCA partners hold content that is very difficult to that which the Bodleian would typically provide, and specifically the BBC stands out. If there was a way of enabling reliable access to high quality content then the Bodleian would take advantage of that.

14. *What issues and processes impact the possibility of using external content? (e.g. Discovering it, Making thematic connections, Rights visibility and clearance, Reliability of access, Problems with formats, Quality of descriptive metadata, Lack of technical expertise, Functionality of APIs, Lack of curatorial expertise)*

Any of the factors listed can impact on the Bodleian and the community it serves. However for the Bodleian the emphasis is on exposing its own content and encouraging its use by others. Fundamentally this is how the Library justifies itself - it is to provide the content and for that content to be used.

15. *If the DPS existed, what would make it useful / usable to you and your service?*

As a consumer the key aspects would be:

- High quality content which is some way selected for inclusion
- Availability of consistent metadata
- Support for a limited number of data formats
- Reliability and persistence
- Easy to track new content

3 <http://www.bodleian.ox.ac.uk/news/bodleian-and-the-vatican-libraries>

As a provider the key aspects would be:

- Attractive “shop window”
- Content easy to discover
- Joining a collection high quality content from trusted organisations
- Ability to track use of contributed content easily
- Any additional work required to get metadata or content ready to contribute (e.g. conforming to any frameworks or standards specified by the DPS)
- Ability to help providers demonstrate value of their collections

16. *If the DPS existed, what difference do you think it would make to your work and to your audiences?*

Contributing to DPS would support engaging with the wider public, opening up new opportunities for an organisation like the Bodleian. The DPS could offer more and better channels to reach both existing and new audiences.

17. *Are there existing collaborations and initiatives with which the Digital Public Space should be working? If so, why?*

The key existing collaboration to work with would be Europeana. If the DPS could build on Europeana it would be building on existing investment.

Having an additional aggregation to contribute to, with its own standards and mechanisms for contribution is more work and cost for contributing organisations.

18. *What single initiative do you think would really make a difference in opening up the digital public space in the UK?*

The single biggest issue is the licensing of content. The Bodleian want to share content in as straightforward and unconstrained way as possible. However, this is extremely challenging and concerns around IPR can lead to materials simply not being made available digitally at all.

Ideally legislation will become more sophisticated in this area, and offer some level of protection to cultural heritage organisations making materials available digitally. However, establishing a community of practice across the cultural heritage sector in the UK would also be a big step forward.

19. *Would you like to make any further observations?*

Just bringing together content from the SCA partners would be absolutely fantastic, but any project in this area needs to have bigger ambitions than building a basic aggregation. The DPS would need to be clear on exactly what content it was bringing together, with a focus on quality.

A UK DPS should seek to improve or make best use of things that already exist (such as Europeana) and not re-invent the wheel.

British Library

Participants: Jamie Andrews, Adrian Arthur, Roger Walshe.

1. *What types of work do you undertake to reach audiences and to mediate / animate / contextualise content?*

Over the years many bespoke micro-sites have been developed to support individual exhibitions. This legacy is difficult to manage, so BL has developed a standard architecture and approach to contextualisation, whether for a learning audience, the public or a research audience. This standard approach also provides a clear sense of how to progress from an individual object to a larger project.

Many ways of approaching objects are deployed, through search or narrative. Objects are contextualised by a well known face/voice. Primary audience is schools but this also benefits a much wider audience. The level of writing must be of interest to all prospective users, even specialist researchers.

The central idea is of a continuous user-journey, branching off to related articles or to primary material. "Like Wikipedia" there are no dead ends.

2. *What are the barriers to making digital resources accessible to your target audiences?*

Resourcing is a major issue even for an organisation of the BL's size, but on a large scale.

There is a large in-house digitisation operation, with staff and storage resources, but a large volume of work (including eternal work) goes through the studios and accompanying store and CMS. Creating contextualising material also requires skilled staff.

Progress has been made in the development of standard work-flows, benefiting large-scale digitisation projects. However there are still bottlenecks.

Good metadata are very important.

IP is a big issue, especially for the WWI project; the costs and time involved in clearing rights had not been recognised in advance. This is something that funders need to know.

Another example is the Sounds project, originally funded by Jisc, but, with rights cleared only for a particular audience, it cannot be made available world-wide. Renegotiating rights would be a huge task.

A further complication is that rights vary between jurisdictions: in many cases music may be played in Europe, but not in the USA.

The sheer mass of content (e.g. 100s of hours of oral history) can be a barrier; mediated excerpts are used far more by non-specialists. "For mass participation less is more. 90% of content is interesting to 10% of audience; 10% will satisfy 90% of needs."

Low usage relative to the mass of content has led to a decline in funding for digitisation. Some types of material are most efficiently exposed by exemplars; other types of material (e.g. for genealogy) need to be en masse. Mass also enables new types of usage such as text mining. Audience is the key factor.

3. ***Do you seek to include content from collections from outside your own organisation? Why / Why not?***

There are many examples of inclusion of content from other collections.

The WWI project brings together materials from four providers covering 7 countries, to give a European view.

The Shakespeare Quarto website includes 97 from the BL and the remaining 8 from other collections (e.g. NLS).

With the Discovering Literature website a conscious decision was made to involve other institutions, such as The Dickens Museum, in order to: a) fill gaps; b) explore aspects of lives not covered by BL; c) make comprehensible for the audience; d) provide capacity for smaller partners. The BL's mission includes outreach and technical support.

4. ***In what ways might you use external content? (e.g. Inform your own research, Fill gaps and extend scope of what you present, Enhance guides/finding aids, introduce other media such as paintings or film, Encourage further exploration)***

As above, but also to introduce other (non-print) media to bring collections alive.

5. ***Is there content held by the SCA partners or other organisations which you don't currently use but would like to? Give examples.***

All have material that would be useful. There is a close relationship with the BBC.

Other external content is used on a fairly large scale, e.g. from the UK Web Archiving Consortium (available in the Reading Rooms); Public Web Archive.

When prompted it was noted that there are "fraternal relationships" with TNA, touch points but no joint ventures.

6. ***What issues and processes impact the possibility of using external content? (e.g. Discovering it, Making thematic connections, Rights visibility and clearance, Reliability of access, Problems with formats, Quality of descriptive metadata, Lack of technical expertise, Functionality of APIs, Lack of curatorial expertise)***

BL is involved in "digital re-unification" projects – bringing together in digital form resources that are physically distributed across a number of institutions (e.g. *Codex Sinaiticus*). *Getting agreement by all can be problematic.*

There may be national differences of approach, and sensitivities where the holder is not the originator or is deemed inappropriate.

Commercial partners and finders may not be willing to fund/comply with the BL's Rolls Royce approach to digitisation and metadata (£5 per page). By contrast some partners have complementary expertise (e.g. OCR, zoning, Text Encoding Initiative).

Museum processes/practices may not map to libraries and archives.

7. ***If the DPS existed, what would make it useful / usable to you and your service?***

A mass of digital content could include very useful materials, accessible through a good API. One item may be used in totally different ways; e.g. the King James' Bible as an exemplar of printing and its impact, Bible studies, influence on English language.

This is particularly true of “canonical works”, such as the Bible. [One area for consideration/ recommendation?]

Large projects can have an homogenising effect. DPS could overcome this by functioning not as a destination but as a resource of building blocks for many organisations, small and large (see Shakespeare Quartos project in §3 above)

8. *If the DPS existed, what difference do you think it would make to your work and to your audiences?*

See 7 above.

9. *Are there existing collaborations and initiatives with which the Digital Public Space should be working? If so, why?*

Europeana, which is a good example of harmonising standards, interoperability and licences.

Past UK initiatives include the People’s Network/Culture Grid, Creative Spaces. Initiatives tend to die if they are not funded/ owned by an institution (e.g. National Museums Online Learning Project (NMOLP)).

10. *What single initiative do you think would really make a difference in opening up the digital public space in the UK?*

A “wholesale (not retail)” repository valuable for both small and large organisations. It would not need a brand because it would not be a destination. It could be a repository or a set of technical interfaces to distributed content.

The challenge is take-up by smaller institutions, which do not have capacity and skills. Technology to accompany the content could overcome this.

11. *Would you like to make any further observations?*

There are enough examples of how DPS could go wrong; must be really well thought through. However it is easier to get it right now than 10 years ago.

Other initiatives should be examined to learn why they have worked – e.g. Gallica (with a budget of €100m +?).

Digital New Zealand (DigitalNZ)

DigitalNZ is included as a case study because it represents a national level service with notable similarities in mission and scope to those under consideration for the DPS. This study draws on the published evidence, without an interview.

About DigitalNZ

<http://digitalnz.org.nz>

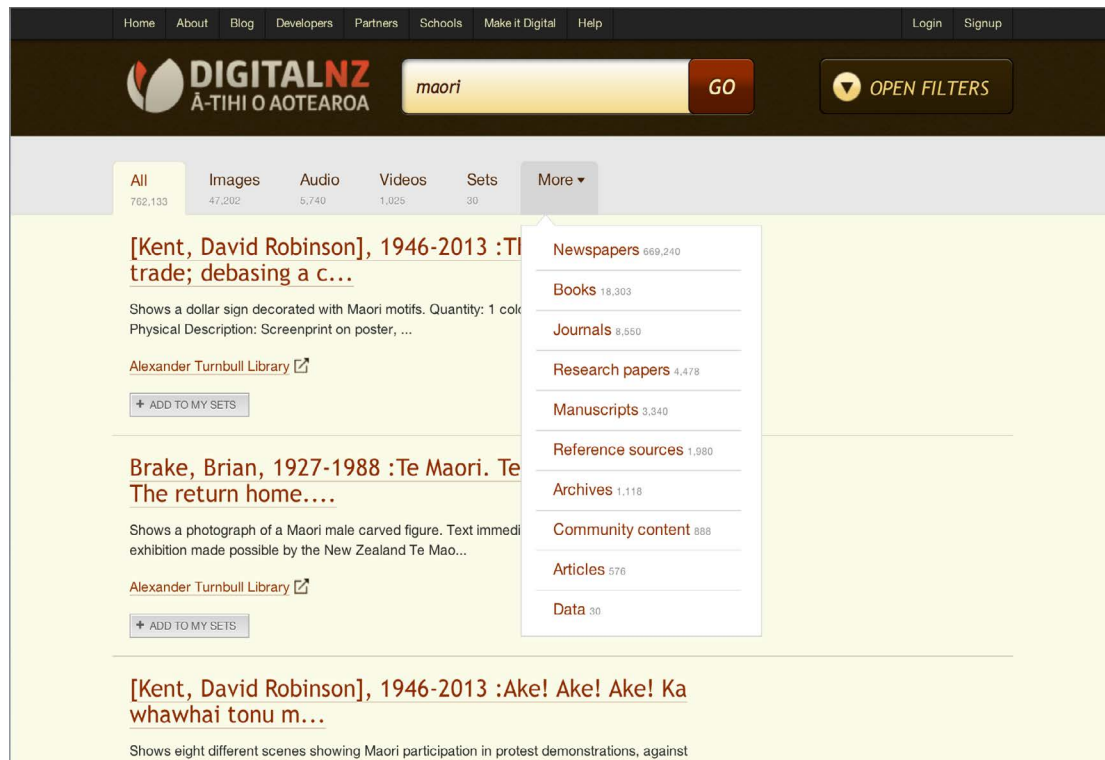


DigitalNZ is managed by the New Zealand Department of Internal Affairs through a team based at the National Library of New Zealand, and is guided by an Advisory Board.

It aims to make New Zealand digital content easier to find, share and use. To fit that mission, submitted content (always metadata and optionally digital assets) has to have a connection and relevance to New Zealand. So,

- It is about New Zealand, New Zealanders, or New Zealand subjects and issues, or
- It was created in NZ, or
- It was made by a NZer or a NZ community, or
- It has a connection to a notable NZer.

In October 2014 DigitalNZ contained over 28m items – each with metadata, mostly linked to a digital object. The search for ‘Maori’ provides an indication of the mix:

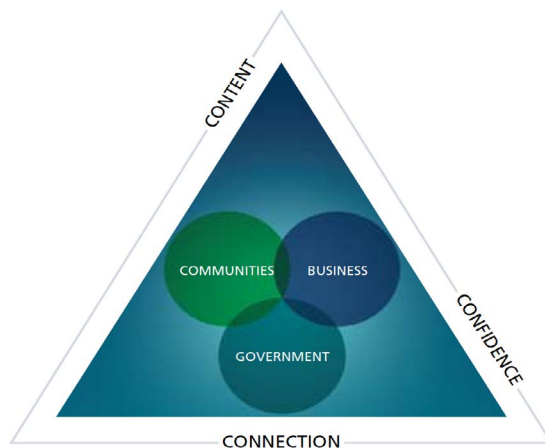


1. *Do we need a UK Digital Public Space? Is there more that the UK can and should do at a national level to build the UK presence in this space, and to make discovery and reuse of the UK national heritage and present day cultural activity easier and more accessible to a wider audience?*

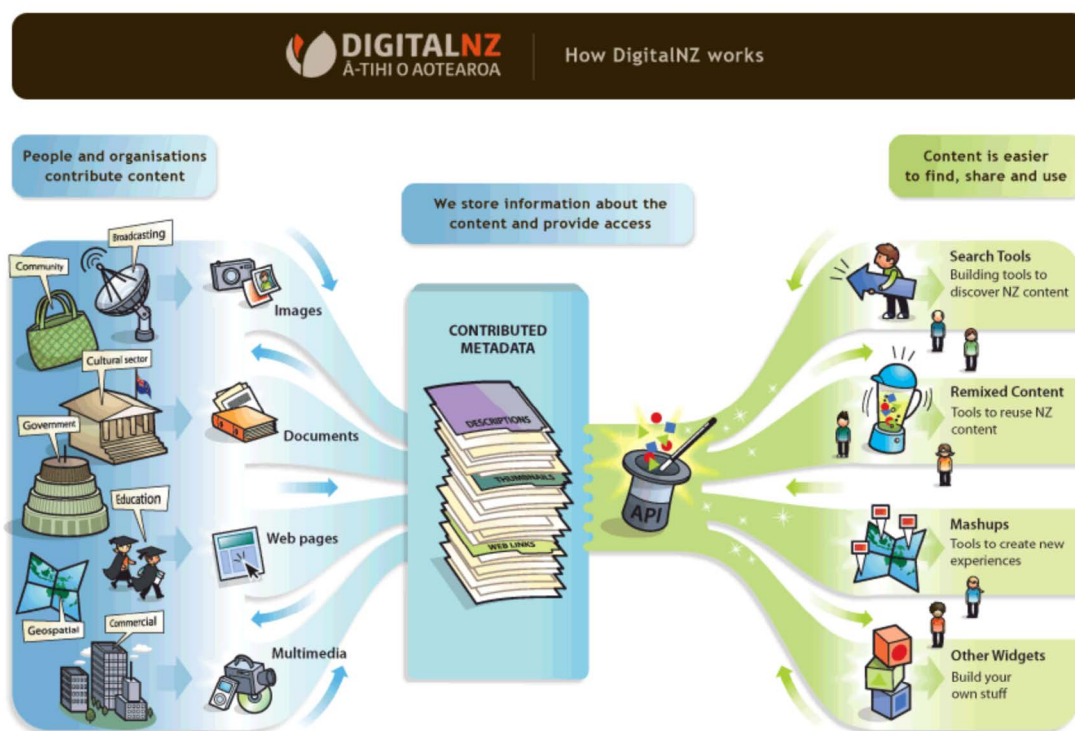
The UK should bear in mind the messages contained in ‘Creating a Digital New Zealand: New Zealand’s Digital Content Strategy’, published by government in 2007. (<http://www.itu.int/wsis/stocktaking/docs/activities/1211236218/DigitalContentStrategy.pdf>).

The strategy described itself as ‘the product of research, analysis and engagement about the things that are truly important to New Zealand in the digital content space. It exists in an environment that is changing so rapidly that a number of challenges identified in the draft strategy, released in late 2006, have been moved aside by newer and more vital ones. In this context, the major challenge overall for New Zealand is to keep up with the pace of change that is occurring in the digital world. The major task, for us as a nation, is to understand and act on the full potential of digital content in creating our digital future.’

The intersections of interests identified in the strategy, particularly between communities and business, are relevant to the wider considerations of any UK DPS:



Consider how this strategy has been translated into practice in the DigitalNZ service, as illustrated:



Much of New Zealand's rich content is hidden or buried. We're working on new ways to create, describe, licence, store, surface & share NZ digital content.

2. *What types of work do you undertake to reach audiences and to mediate / animate / contextualise content?*

A - Flexibility on ingest

The DigitalNZ Metadata Dictionary (loosely based on Dublin Core) describes the metadata fields and how they should be populated.

https://docs.google.com/document/pub?id=1Z3L_ckQWjnQQ4SzpORbClclXUheO-Jd4jt-oZFuMcoQ

Whilst Digital New Zealand generally expects data to be provided in an XML format, there seems to be considerable flexibility so long as fields can be mapped to the Metadata Dictionary.

Digital New Zealand can accept data through file upload, or gather it from RSS Feeds, OAI-PMH harvesting, via APIs, and through web crawling. It also offers direct data hosting for institutions without charge.

B - Development of services

DigitalNZ supports a public-facing web interface for searching across all indexed resources. The interface also supports viewing resources in some cases.

Meanwhile, the DigitalNZ REST API (which requires registration for an API key) enables both commercial and non-commercial third parties to build new applications and services on the DigitalNZ platform (see <http://www.digitalnz.org/about/terms-of-use/developer-api-terms-of-use>).

The API offers three principal functions:

- Search Records to query the DigitalNZ metadata search service
- Custom Search Records to query a custom service built with Search Builder
- Get Metadata for a specific record

Given the service objectives (broadly summarised as building connections between NZ people and stuff), DigitalNZ positively encourages commercial use. There are explicit terms encompassing Commercial Use Metadata, offering higher API call limits for commercial uses as well bulk download of metadata once this function is supported.

C - Engaging priority audiences

DigitalNZ promotes use by schools through a dedicated web page, and through integration with the National Library of New Zealand's broader 'Services to Schools'.

Nevertheless, taking, for example, the WW1 primary source gallery created by the National Library's Services to Schools (<http://schools.natlib.govt.nz/primary-source-gallery-first-world-war>) or recommended Anzac Day resources (<http://schools.natlib.govt.nz/resources-learning/high-interest-topics/anzac>), it does appear that DigitalNZ is by-passed in terms of identification as the national 'go to' portal.

D - Encouraging contribution, conversation and collaboration

No sign up is required to access content. However, users who sign up have the opportunity to create and optionally share lists, and to submit 'community content', as follows:

Community content records link to assets elsewhere, such as in local library collections – for example, <http://horowhenua.kete.net.nz/site/documents/show/2107-otaki-maori-landcourt-minutebook-27-april-1876>

Themed sets or lists of favourites, which can be designated public or private and may include a description of the 'user set' - for example, http://www.digitalnz.org/user_sets/52454ada8d2a4ed122000001. See introductory video at <http://digitalnz.org.nz/help/collect-share-with-digitalnz-sets>

Consumers can comment on resources via Facebook, and are offered the facility to share resources via Twitter, Facebook and Google+

Users can also create 'custom searches' which are searchable subsets of content based on selecting specific sources and keyword searches

E – Supporting good practice

Good practice across the wide ranging community of contributors is important to the DigitalNZ mission. In terms of dissemination of practice and delivery of support, DigitalNZ appears to have concentrated on documentation (notably good practice guides and case study exemplars) rather than through a service offer or availability of advisors. This is illustrated in the 'Make it Digital' digitisation support page.

F – Providing feedback

Organisations contributing content to DigitalNZ can access

- A 'Partners Analytics Report' with detailed information about how people are viewing and interacting with their metadata using a custom Google Analytics report.
- A 'Metadata Dashboard', a website to help contributors understand the quality and completeness of metadata they are contributing to DigitalNZ.



3. *Do you seek to include content from collections from outside your own organisation?*

A - Principles

DigitalNZ is a discovery portal directed at the general public that provides metadata plus digital assets where applicable. It is suggested that much of the content is from the 'deep web' and therefore not indexed by standard search engines. Therefore all content must be New Zealand-related, be digital, and have metadata: there are further principles used to prioritise work, set out at <http://digitalnz.org.nz/partners/content-scope-and-principles>

Digital assets may be

- Hosted by DigitalNZ
- Represented by previews with actual content hosted by contributors such as the National Library, local libraries or TV NZ
- Hosted elsewhere without a preview

B – Contributing Partners

All holders of such digital content, or content that could be digitised, are invited to be partners. Over 150 are currently listed at <http://www.digitalnz.org/partners/current-content-contributors>, ranging from government departments and publicly funded organizations to the private sector and community groups, including the likes of Te Papa, Papers Past, Alexander Turnbull Library and NZ On Screen as well as the National Library.

Given its mission, it is important for DigitalNZ to connect to assets above and beyond those curated within New Zealand or by New Zealanders. This requires engagement with a wide range of content and rights holders, not least those linked to New Zealand history, where such as the UK DPS might offer a key and mutual opportunity. For example, the current list of contributors includes The British Library and The National Archive as well as such as Wikimedia commons from the open web.

C - Permission

Re-use is a major objective that is encouraged through open licensing and an API provision. Being principally an aggregator of metadata rather than hosting the content itself, DigitalNZ relies on the contributors to check the copyright status of contributions and commit to openness and reuse. Within that context, DigitalNZ terms of use are at <http://www.digitalnz.org/about/terms-of-use>. All depositors of content are governed by terms and conditions set out at <http://www.digitalnz.org/about/terms-of-use/shared-repository-terms-of-use>. These include a non-exclusive royalty-free licence for all metadata and content, although access can be restricted. There are also two further sets of terms, depending on whether or not contributors want to make their metadata available for commercial use. Both are set out at <http://www.digitalnz.org/about/terms-of-use/metadata-contribution-terms>.

4. *What single initiative do you think would really make a difference in opening up the digital public space in the UK?*

Readymade attractors for audience building are invaluable. As with Newspapers in the case of Trove, DigitalNZ gained substantial early momentum through its connection to the 'Coming Home' WW1 commemoration in 2008. However it is observed that an event driven approach to audience development lacks the potential for continuity and participation offered by such as Newspaper OCR correction.

5. *Any further observations?*

The Name – Digital New Zealand is a powerful but problematic name in the online world and especially for search engines as high ranked hits include too many other similarly named initiatives, services and reports; for example <http://www.igea.net/2013/10/digital-new-zealand-2014/>

Sustainability – We cannot find any public discussion, evaluation or report on sustainability

Technical Architecture – We cannot find any public documentation

Developer community - DigitalNZ hosts a forum at <https://groups.google.com/forum/#!forum/digitalnz>

It is noted that in the first 9 months of 2014, the forum recorded 7 topics, 18 posts and 46 views. Whilst this is no measure of actual activity and may be a credit to the quality of documentation, it would be interesting to compare community approaches with such as, for example, BL Labs.

HistoryPin

This case study is based on a interview with Alex Stanhope, CTO We Are What We Do. The interview was carried out by Owen Stephens in September 2014.

1. *What types of work do you undertake to reach audiences and to mediate / animate / contextualise content?*

HistoryPin's approach is moving towards that of identifying audiences and designing experiences that deliver to a particular audience or community. HistoryPin needs to understand who the audiences are, where they meet, what tools they use at the moment.

HistoryPin is about contextualising functionality rather than content - the content is 'given' (i.e. already exists for example in the form of digital images/photographs)

An example is 'Putting Art on the Map'. This took existing digital images with some metadata already available and considered what content there was, but what information not surfaced well (e.g. location)

Overall HistoryPin is moving away from idea of 'find content' then 'find audience'. Increasingly the task is 'find and work with community' to create an experience to lets the community get excited about the relevant content.

2. *What are the barriers to making digital resources accessible to your target audiences?*

While there are some technology barriers, by far the single greatest barrier is licensing. The terms under which materials are available are often very restrictive. While Europeana has pushed on open licensing, the result is suffers from not including the underlying assets - leading to a very 'dry' experience for users.

3. *Do you seek to include content from collections from outside your own organisation? Why / Why not?*

HistoryPin is very dependent on content from external collections - once again "Putting Art on the Map" is an example of this.

However, HistoryPin supports the creation of content and can help communities both digitise content and host content on HistoryPin, so in this way HistoryPin starts to be a platform for content as well as tools around the content owned by others.

HistoryPin can also act as a mediator between (often small) projects and communities and larger organisations such as the British Library. For example, talking to the British Library about long term preservation of content created through HistoryPin. In this case HistoryPin can provide a single point of contact to work with thousands of projects in community archives etc.

4. *In what ways might you use external content? (e.g. Inform your own research, Fill gaps and extend scope of what you present, Enhance guides/finding aids, introduce other media such as paintings or film, Encourage further exploration)*

As mentioned above, external content is to some extent at the heart of HistoryPin. What HistoryPin can do is enhance that content further by aggregating contributions across many small contributors, and by focussing on the intersection of Place, Time and Theme in relation to the content.

A good example of this is material relating to WWI, where someone might ask a question such as “tell me what happened in this area, in time building to WWI, specially in relation to the regiment my Grandfather served in”.

HistoryPin brings consistency, homogeneity, single point of contact.

5. *Is there content held by the SCA partners or other organisations which you don't currently use but would like to? Give examples.*

It is worth singling out the BBC Archive. The quality of process that the BBC Archive team has over the last 30 years makes it stand out. The assets that are there are exceedingly well catalogued and organised, and even though there still remains a great deal to digitise, opening up what is there would be incredibly powerful.

The quality and rigour of process at the BBC means that the resources are ready to use. This is in contrast to data such as that released recently by Kalev Leetaru who has written software to extract images from digitised materials in the Internet Archive. While these largescale data sets are clearly of interest, the lack of metadata can make them difficult to use.

6. *What issues and processes impact the possibility of using external content? (e.g. Discovering it, Making thematic connections, Rights visibility and clearance, Reliability of access, Problems with formats, Quality of descriptive metadata, Lack of technical expertise, Functionality of APIs, Lack of curatorial expertise)*

The key issues are:

- Licensing of resources
- Metadata describing resources

While all the other issues mentioned are real, the availability of resources under appropriate open licenses is fundamental - and against this challenge, the other issues pale into insignificance.

7. *If the DPS existed, what would make it useful / usable to you and your service?*

If the DPS could lead a drive to open up content that would deliver the most benefit to HistoryPin. The other challenges (e.g. sourcing metadata etc.) are solvable, especially with HistoryPin's approach of community engagement.

This means that DPS could be political movement as opposed to a service or platform for access to content.

For HistoryPin the issue of rights and licensing is just at a different level to all other issues - without re-usable content, there is no service. If the DPS can help move to a situation where there is openly licensed and accessible content with persistent URLs, then that would serve the needs of HistoryPin and those using HistoryPin.

8. *If the DPS existed, what difference do you think it would make to your work and to your audiences?*

There could be a direct benefit to HistoryPin as a service, but more importantly there is a broader, and potentially huge, benefit to HistoryPin audience. This benefit is not in terms of their use of HistoryPin, but of their access to the content.

The vision is to move from multiple institutions publishing their own collections, to aggregations with consistent ways of addressing data enabling more services like HistoryPin spring up in this space.

9. *Are there existing collaborations and initiatives with which the Digital Public Space should be working? If so, why?*

There are many more powerful aggregators than HistoryPin - DPLA, Europeana, Library of Congress, etc. and these are all worth engaging with.

10. *What single initiative do you think would really make a difference in opening up the digital public space in the UK?*

Focus on Licensing and Rights, specifically to open up content that is currently inaccessible or can't be re-used.

11. *Would you like to make any further observations?*

To be sure of making substantial progress, DPS should keep it's focus to a small number of key aims - perhaps as few as just two. For HistoryPin one of these absolutely has to be around licensing and rights, including a drive for openly accessible and openly licensed content.

There is a danger of being distracted by solving technical problems, or building a platform for aggregating content. While these may be necessary, they should be seen as a means to an end and not distract from the key aims. Any work to build a technical platform should be kept to a minimum.

Finally, a project like the DPS is something that is worth being ambitious about - even if you fall short of those ambitions.

King's College London

Geoff Browell is Senior Archives Services Manager at King's College London and also plays a leading role in the AIM25 partnership of archives in the M25 area.

1. *Do we need a UK Digital Public Space? Is there more that the UK can and should do at a national level to build the UK presence in this space, and to make discovery and reuse of the UK national heritage and present day cultural activity easier and more accessible to a wider audience?*

Definitely - the debate about more effective discovery, whether through federation or aggregation, has been long running and overshadowed by the impact of such as Google. Nevertheless, I am convinced that there are major benefits to be derived through such a concerted effort. However taking the right technical and operational approaches and a focus on longevity will be essential. The key things, as I see it are:

- Archivists need to sell participation in something to senior management – they need the promise of more usage for stuff, people through the door, exciting initiatives etc that show the parent organisation in a good light and maybe pay for themselves. 'We are working with the BBC to deliver X, Y and Z for schools and voluntary groups' is a good news story; however, the vague promise of participation in a giant initiative will just raise eyebrows.
- Re-use of 20 years of digital content is important – getting the most from public investment. Use the crowd to make sense of old digitised data and let the archivists be mediators.
- Start small and local – 8 regional initiatives to test the viability of the concept – testing out a series of questions, which can then be pooled as the basis of going for further funding. They would allow personalisation, localisation and require the assembly of small consortia to test out cross-fertilisation of ideas from disparate groups – an archivist, a community volunteer, a scientist, a start-up person etc. Links to social capital, business efficiency, local regeneration, SME development, NEETs, etc would all link with government initiatives from non-DCMS departments. They would also align with HLF criteria and the BBC local agenda. Projects could be open to competitive application with real world tools or applications created – something for participants to take back to their management.
- Building communities is more important than another online tool; sustaining communities is the difficult bit – they need to become self-sustaining but would need support so peripatetic archivists, IT skills and hosting options are crucial. For example, a set of tools needing JavaScript knowledge will be useless to 99% of participants, so this support is invaluable
- If you do nothing else – access to 10 million items, totally rights cleared, persistent and available

2. *What types of work do you undertake to reach audiences and to mediate / animate / contextualise content?*

Archivists need to act as 'Story Makers', providing context around content rather than burying themselves in boxes and files. Making stories requires archivists to work with and beyond locally held collections, generating new information, extending core collections, creating new visualizations and analyses.

This also involves connecting people – good archivists need to build networks, facilitating relationships, creating research data pools through co-curation and building projects, bringing together IT developers, academics, researchers at all levels as well as crowd sourcing and working across curatorial boundaries.

Examples for King's include the history of dentistry and medicine more broadly and palaeography, as well as World War One.

3. *What are the barriers to making digital resources accessible to your target audiences?*

Of course, we are constrained by time and money – the effort of building and supporting a network is significant. However there are other barriers. We are limited by the quality of the past 20 years of digitisation and the variability of current efforts, where content is too often inadequately described and poorly organised. There is also the Issue of legacy, the sustainability of digital content in terms of ongoing preservation and contextualisation

4. *Do you seek to include content from collections from outside your own organisation?*

Content beyond our own collections is important in providing both context and breadth. Don't forget that we are only an archive, so we do not cover everything in a subject area. A digital public space could help by opening up significant collections of all types on a clear and reliable basis.

5. *In what ways might you use external content?*

As discussed already, all of those things – to inform our researchers, to fill gaps, extend scope and contextualise our collections, to introduce other media such as still and moving images and assets from such as museums.

6. *Is there content held by the SCA partners or other organisations which you don't currently use but would like to?*

In our specialist areas of medical and military history, Wellcome and the Imperial War Museum are key partners. In the UK context, the positioning of the National Archives 'Discovery' initiative and of the English Heritage image collection are very important.

7. *What issues and processes impact the possibility of using external content?*

Some organisations will not want to invest time in working with external content, being concerned with mission creep when resources are increasingly scarce. We should remember that archivists are often not senior players in their organisation so their ability to push for change is limited.

For those in favour, the major national collections are very attractive. In that respect, it would be a major encouragement if the conditions of reuse were transparent and ring fenced for the foreseeable future, along with a guarantee of persistence – that the assets will remain in place.

Archivists would typically advocate the basics of cataloguing to be more important. Therefore, even given keen interest, it is essential that the mechanisms for both contribution and access have to be right. Linked data is too far ahead for most practitioners. Whilst it is a good direction of travel, it will need actual practical help from real people, as we supported AIM25 practitioners working with ULCC. There is therefore a real role for DPS in providing active support.

From the point of view of mediation in general confidence about reuse and reliability over time is

essential. Reticence to go beyond familiar trusted sites is exacerbated by experiences of 404s, transient URLs and changing search logic. As illustrated by such as the recent reports on WW1 history teaching, the opportunities and inhibitors in schools are quite particular, working with trusted community sites with national curriculum links being the best option for building awareness and trust.

Finally, the downside of family history should be noted – that many resources with wider potential are discoverable and navigable only from the perspectives of name, place and time.

8. *If the DPS existed, what would make it useful to you and your service?*

I'm talking here from a broader AIM25 and national perspective:

- Providing an advisory service for approved practice, including use of such as LOD to create 'Linked Open Knowledge'; in universities this might help at research proposal and data plan level but would benefit others in differing ways. This might take the form of regionally or otherwise distributed peripatetic archivists, who provide advice, make connections and build communities.
- Acting as a 'workaround engine' for those who need an external content hosting and / or web publishing platform, as exemplified in the work of AIM25 and the Archives Hub
- Promoting collections to Google, as WorldCat and the Hub have done, would be a huge benefit
- Hosting conversations, connecting people who don't work together, crowd sourcing knowledge and effort

In all of this we should reject the idea that given the technical platform, someone else will make things happen – it will simply not happen; this mission needs human facilitation, not just provision of a facility. The approach should therefore be to start small and local and to build out from there based on the trajectory of success. The initial service should be underpinned from the start by the big national collections - notably BBC and BL from a popular perspective. Phase 1 should therefore focus on specific experiments involving local nodes to expose and develop beneficial use cases at local level (me investing) and national level (national investment).

9. *If the DPS existed, what difference do you think it would make to your work and to your audiences?*

Such a national initiative could address any combination of the challenges and opportunities identified in this conversation. However, we need to be realistic and to recognise that it cannot do everything and therefore to identify specific priorities. For us, the priorities would be to open up major national collections on a clear and reliable basis and also to put the digitisation of the past two decades on a better footing, as explored by the Jisc Spotlight study.

10. *Are there existing collaborations and initiatives with which the Digital Public Space should be working?*

DPS should take account of the Mellon Research Space work and the direction of travel in Research Data Management, especially as driven by funder mandates in the UK. There are also initiatives in specific domains such as schools, where it is essential to connect with the platforms used by teachers.

11. *What single initiative do you think would really make a difference in opening up the digital public space in the UK?*

I need to emphasise two dimensions. First, to enable unambiguous and reliable free access to the major UK collections – such as the BBC, BL, TNA and Wellcome – would have considerable promise. However, there should be no presumption that the people, including archivists themselves, across our community would understand how to use it technically or legally.

Second, to derive the latent potential from the very significant public investment in 20 years of digitisation would be hugely beneficial and would surely be politically attractive. The principles applied there would also provide a framework for current funders such as HLF, where funding recipients need a formula for the digital aspects of their projects and would hugely benefit from reusing standard approaches.

12. *Would you like to make any further observations?*

We haven't talked about the importance of and choice of vocabularies. Localisation could be important in this respect. I imagine that local research projects would want their own 'digital public space', not a separate platform but an opportunity for localisation, such as applying their own vocabulary.

Lives of the First World War Project (Imperial War Museum)

This case study is based on a interview with Carolyn Royston, an independent consultant who was previously Head of Digital Media at the Imperial War Museums. The interview focussed on Carolyn's experience of the Lives of the First World War project. The interview was carried out by Owen Stephens in September 2014.

1. *Do you seek to include content from collections from outside your own organisation? Why / Why not?*

The Lives of the First World War project used data from over 150 databases. Some of this was 'freely available data', and some not. When building a large project of this nature some consideration needs to be given to commercial benefits.

Building relationships is a huge part of including content from a diverse range of sources. Personal contacts are key to forming these relationships, and establishing trust between partners, especially where there may be concerns about potential misuse of materials.

What issues and processes impact the possibility of using external content? (e.g. Discovering it, Making thematic connections, Rights visibility and clearance, Reliability of access, Problems with formats, Quality of descriptive metadata, Lack of technical expertise, Functionality of APIs, Lack of curatorial expertise)

- Rights can be a big issue, although sometimes concerns over rights issues can be an excuse for not doing something.
- Quality of data from external services can be problematic
- Identifying the 'valuable stuff' is difficult

2. *If the DPS existed, what would make it useful / usable to you and your service?*

There is a danger that a service like the DPS delivers an online catalogue of resources which lack any context. A general audience doesn't get much from an 'online catalogue'. What is needed is context to make any materials meaningful. When you take (for examples) paintings out of a 'collection' and put into an environment that lacks any context you lose a huge amount.

The Lives of the First World War brought together data from many small partner organisations, and even from individuals. It is not clear that the DPS would encompass such small partners.

To offer real value, the DPS has to offer a clear business proposition to contributing organisations, and avoid dis-intermediating contributors from either consumers or businesses wishing to build on the content in the DPS.

3. *Are there existing collaborations and initiatives with which the Digital Public Space should be working? If so, why?*

- Collections Trust, to ensure that work is not being duplicated
- Public Catalogue Foundation

4. *Would you like to make any further observations?*

There is potential in the concept of a UK DPS, but the right approach has to be taken. The UK DPS should be approached in an agile way, tackling small parts of the overall problem, iterating rapidly, using prototypes and adjusting the approach as lessons are learnt through this work.

Work should start small and manageable and should endeavour to identify challenges and the value of overcoming those challenges and value to the public.

Key questions that need to be answered are:

- Is this (building a UK DPS) possible?
- What are the challenges?
- What would the public value be?
- How will success be measured?

Manchester City Council

Participants: Neil MacInnes, Kevin Bolton

1. ***What types of work do you undertake to reach audiences and to mediate / animate / contextualise content?***

There are two strands. First physical digital space in the new library (HLF funded) is used to animate rich content for a wider audience.

Second there is a major programme of digitisation to supplement traditional resources, of the using social media. 100,000 images are available on line; there is an e-book offering; exhibitions are aimed at the young audience; a huge collection of 12m family records has been digitised. More digitisation is planned for the Greater Manchester region.

Digital platforms are a useful window back into, for instance, resources that may be difficult to find embedded in the Council website (silos).

Open data is a key priority for the Council.

2. ***What are the barriers to making digital resources accessible to your target audiences?***

One major barrier is discovering what audiences want; HLF funding to support audience consultation has run out.

Digital is only part of the offering – need to take a holistic view approach. The aim is also to interest people in the story, and not focus on the institutional structures, and to not to over-inform.

There is a need to establish a range of entry points.

3. ***Do you seek to include content from collections from outside your own organisation? Why / Why not?***

A major aim is to offer wider social history resources covering the whole Greater Manchester Region (e.g. collections of the Jewish Museum), which relies on cross-institutional links, sharing content. An aspiration is to make information from the 11 districts (e.g. the library catalogues) available thorough one website.

One important barrier is the cost of licences.

Successful collaborations have been Archives+, across the region, and with the BL for a network of IPR and business centres.

4. ***In what ways might you use external content? (e.g. Inform your own research, Fill gaps and extend scope of what you present, Enhance guides/finding aids, introduce other media such as paintings or film, Encourage further exploration)***

The emphasis is very much on exploiting and exposing the Council's **own** collections. External content is used to supplement these in-house collections.

5. ***Is there content held by the SCA partners or other organisations which you don't currently use but would like to? Give examples.***

TNA and BL hold collections that are of great interest to the residents of Manchester; however licensing can be a problem.

The aim is to make collections freely available to residents outside the academic sphere, and to overcome inequalities (e.g. by collections being London-centric). A project with TNA in 2009 was massively popular, demonstrating demand.

6. *What issues and processes impact the possibility of using external content? (e.g. Discovering it, Making thematic connections, Rights visibility and clearance, Reliability of access, Problems with formats, Quality of descriptive metadata, Lack of technical expertise, Functionality of APIs, Lack of curatorial expertise)*

Problematic are: licensing constraints and costs; staff resources to identify and develop potential collections.

Again, the priority is the Council's own collections. There was a strong feeling that the SCA has to lead on developing strategy and offers.

A way of layering to present local content (as BBC News does) would be welcome.

7. *If the DPS existed, what would make it useful / usable to you and your service?*

Freedom of access and the ability to plug in Manchester's collections easily.

Attracting wider audiences was vital – as a means of converting digital experience to physical footfall and hence revenue.

8. *If the DPS existed, what difference do you think it would make to your work and to your audiences?*

Broader awareness of the collections and a more rounded offer to site visitors.

9. *Are there existing collaborations and initiatives with which the Digital Public Space should be working? If so, why?*

It is important to capture the UK offer, and to develop the layering mentioned in §6.

10. *What single initiative do you think would really make a difference in opening up the digital public space in the UK?*

A themed initiative aimed at a "captive" audience group (e.g. resources for teachers geared to the national curriculum *[NB example applies only to England]*) is more likely to succeed than a massive project.

Examples are Cottonopolis and The Glasgow Story.

11. *Would you like to make any further observations?*

None offered.

Open University

Informant: Caroline Ogilvie, Head of Broadcasting, Open University. Also member of RES Advisory Board and trustee of BUFVC

1. *What types of work do you undertake to reach audiences and to mediate / animate / contextualise content?*

Work in partnership with the BBC to produce TV and radio programmes for peak-time viewing. This serves two further purposes beyond the first broadcast:

- the OU re-uses the broadcast content in its teaching materials
- to help deliver the OU's social mission of encouraging and enabling learning journeys along a spectrum from informal to formal learning

2. *What are the barriers to making digital resources accessible to your target audiences?*

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3. *Do you seek to include content from collections from outside your own organisation? Why / Why not?*

The OU only commissions content that is relevant to its curriculum, including additional content to that which is broadcast.

However it also has a reciprocal rights arrangement with the BBC around their archival content. And it also clears rights to reuse third party content for teaching and learning.

4. *In what ways might you use external content? (e.g. Inform your own research, Fill gaps and extend scope of what you present, Enhance guides/finding aids, introduce other media such as paintings or film, Encourage further exploration)*

As above. Five per cent of the OU's course materials are freely available on its Open Learn site.

5. *Is there content held by the SCA partners or other organisations which you don't currently use but would like to? Give examples.*

RES has the potential to open up new possibilities, starting with the BUFVC content. But it may be a utopian concept.

6. *What issues and processes impact the possibility of using external content? (e.g. Discovering it, Making thematic connections, Rights visibility and clearance, Reliability of access, Problems with formats, Quality of descriptive metadata, Lack of technical expertise, Functionality of APIs, Lack of curatorial expertise)*

Rights clearance can be difficult. And use must be limited to education, otherwise the OU would have to pay prohibitive commercial rates for licences.

7. *If the DPS existed, what would make it useful / usable to you and your service?*

A DPS that was a platform on which other organisations could draw, rather than being an public-facing service, sounds a promising idea in which the OU would be interested. But it would need to be sustainable financially and in terms of human resources.

8. *If the DPS existed, what difference do you think it would make to your work and to your audiences?*

A DPS would need to be distinctive from existing content providers. And it may need to look different for different types of content rather than being a single fix.

9. *Are there existing collaborations and initiatives with which the Digital Public Space should be working? If so, why?*

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10. *What single initiative do you think would really make a difference in opening up the digital public space in the UK?*

Opening up BBC archives to allow syndicated use by a wide range of organisations.

11. *Would you like to make any further observations?*

An issue to be addressed would be that of staff skills. There is a skill to successfully integrating AV material into teaching and learning and libraries need to take a lead in developing these pedagogic skills in academic staff. Over time MOOCs may have a positive impact on this as well.

Public Catalogue Foundation

Informant: Andy Ellis, Director, Public Catalogue Foundation, jointly responsible with the BBC for the Your Paintings website

1. ***What types of work do you undertake to reach audiences and to mediate / animate / contextualise content?***

Your Paintings - joint project with BBC <http://www.bbc.co.uk/arts/yourpaintings/>

"Your Paintings is a website which aims to show the entire UK national collection of oil paintings, the stories behind the paintings, and where to see them for real. It is made up of paintings from thousands of museums and other public institutions around the country."

2. ***What are the barriers to making digital resources accessible to your target audiences?***

Many of the collection holders were not already digitised and the PCF had to do the digitalisation for them. This is a constraint on expanding the service.

3. ***Do you seek to include content from collections from outside your own organisation? Why / Why not?***

Your Paintings is a gateway to collections held by others not the BBC or PCF

4. ***In what ways might you use external content? (e.g. Inform your own research, Fill gaps and extend scope of what you present, Enhance guides/finding aids, introduce other media such as paintings or film, Encourage further exploration)***

The greatest need is to expand Your Paintings to include other media eg watercolours, sculpture. HLF funding for this is possible but the task will be huge.

The appeal of the service lies not only in the art as such but also in the subject matter of the paintings, e.g. historical portraits. Therefore linked data is important to enable connections to relevant material in other formats to be made.

5. ***Is there content held by the SCA partners or other organisations which you don't currently use but would like to? Give examples.***

60% of collections have other digitised material which is not online – it is on disc or in local databases. Much more could be done to make this more widely accessible.

Particular interest in linking film content – BFI and Arts Council.

6. *What issues and processes impact the possibility of using external content? (e.g. Discovering it, Making thematic connections, Rights visibility and clearance, Reliability of access, Problems with formats, Quality of descriptive metadata, Lack of technical expertise, Functionality of APIs, Lack of curatorial expertise)*

Digitisation in the first place – PCF had to take the images for 90% of the Your Paintings content itself.

Getting content already digitised but in small collections online.

Issue of ingesting and maintaining data which is already digitised – could be made easier.

Standards for metadata and for rights information – Getty metaschema, LIDO, DPedia IDs

7. *If the DPS existed, what would make it useful / usable to you and your service?*

As a way for organisations to more easily share content (primarily metadata) between them they can mediate for their audiences. Would need to be easy to use especially for small organisations.

8. *If the DPS existed, what difference do you think it would make to your work and to your audiences?*

Easier import of data, and linking to relevant resources. Also a way to share back to contributing organisations.

9. *Are there existing collaborations and initiatives with which the Digital Public Space should be working? If so, why?*

DBpedia knowledge base for extracting structured information from Wikipedia

Getty metadata standards

Categories for the Description of Works of Art (CDWA)

10. *What single initiative do you think would really make a difference in opening up the digital public space in the UK?*

The SCA and other big players – the 10-20 leading institutions - taking a vanguard approach, setting the standards for others to follow.

11. *Would you like to make any further observations?*

Surveys conducted for Your Paintings show that 40% of viewers of online images want to see the physical original, and 14% actually make the journey.

Key selling points of a DPS:

- The economic benefits of the cultural tourism it would encourage
- Benefits to creative industries
- Simplification and leadership to improve efficiency in the sector.

RCAHMS

Participants: Rhona Gilmour (project manager perspective); other perspectives solicited but not received.

1. ***What types of work do you undertake to reach audiences and to mediate / animate / contextualise content?***

Main component of expertise and work is mapping interfaces to different sites and ages and technologies; use open layers of technology.

Crowd sourcing and user-generated content are of growing importance. Collaborate with English Heritage and RCAHM Wales for public to add data to maps (Britain from Above). Scotland's Past another example. Mapping Edinburgh's Social History allows comparison of maps over time.

2. ***What are the barriers to making digital resources accessible to your target audiences?***

Historic data a barrier – need to update data structures, getting data into the right format.

Copyright and licensing an issue – IPR valued as an income stream, but need to make stuff readily available to the public too.

3. ***Do you seek to include content from collections from outside your own organisation? Why / Why not?***

Very much so – offers greater benefits to users. Successful examples are Scotland's Places – which users love because they can go to one location and find out everything about an area – and Britain from Above. Reach new audiences.

4. ***In what ways might you use external content? (e.g. Inform your own research, Fill gaps and extend scope of what you present, Enhance guides/finding aids, introduce other media such as paintings or film, Encourage further exploration)***

"In any way that appears to be useful to the project." Long-term aspiration is to enable semantic access to the data, but need to keep control of copyright.

5. ***Is there content held by the SCA partners or other organisations which you don't currently use but would like to? Give examples.***

No examples – have concentrated in own collections. Internal project overload a factor.

6. ***What issues and processes impact the possibility of using external content? (e.g. Discovering it, Making thematic connections, Rights visibility and clearance, Reliability of access, Problems with formats, Quality of descriptive metadata, Lack of technical expertise, Functionality of APIs, Lack of curatorial expertise)***

Issues include reliability of access, formats, quality of metadata, reliance on others to deliver data.

7. *If the DPS existed, what would make it useful / usable to you and your service?*

Increased findability and accessibility; offering content to different audiences; different routes to and means of interacting with and making sense of the data. Opportunity to combine with other organisations' data would be of great benefit to the cultural sector as a whole.

8. *If the DPS existed, what difference do you think it would make to your work and to your audiences?*

See 8 above.

9. *Are there existing collaborations and initiatives with which the Digital Public Space should be working? If so, why?*

Mapping Edinburgh's Social History, Historic Scotland (merging next year?).

10. *What single initiative do you think would really make a difference in opening up the digital public space in the UK?*

Consistency of data.

11. *Would you like to make any further observations?*

None offered.

Tate

This case study is based on a interview with John Stack, Head of Digital at Tate. The interview was carried out by Owen Stephens in September 2014.

1. *What types of work do you undertake to reach audiences and to mediate / animate / contextualise content?*

Tate is already quite mature in its approach to audience engagement. Tate already has a fully digitised art collection with thousands of images available online and is in the process of digitising other materials such a letters and sketchbooks.

Using these digital materials Tate then produces secondary resources such as teaching packs, multimedia resources and scholarly articles. The shift for Tate is from a focus on 'get it digitised' to a focus on 'get it accessible', then 'contextualise'.

Tate currently super-serving audiences that are already aware of Tate or have a good knowledge of art (approximately one third of the audience). However Tate is currently under-serving audiences with less specialist knowledge of art.

Tate has found that 'researcher' audiences will work quite hard to find what they need and if they don't find what they are looking for at their first attempt they will look and look again Generalist audiences are much less likely to exhibit such persistence.

2. *What are the barriers to making digital resources accessible to your target audiences?*

There are no substantial barriers to creating and sustaining a digital collection. Tate has already digitised its collection, and in doing so has developed core competencies in relation to digitisation and making materials available online. Tate has built digital workflows into its operational work and its digital collection is sustainable.

The focus is now ensuring that the online collections are accessible and usable by different audiences. Current work to make Tate archive available online has highlighted the need to present materials in a way that is meaningful to those using the collections.

One challenge that can arise is when audience requirements point towards the need to add new metadata to large numbers of digital resources. It is more challenging to identifier dedicated funding or resources for this type of work.

3. *Do you seek to include content from collections from outside your own organisation? Why / Why not?*

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4. *In what ways might you use external content? (e.g. Inform your own research, Fill gaps and extend scope of what you present, Enhance guides/finding aids, introduce other media such as paintings or film, Encourage further exploration)*

Tate wants to tell stories through its collections, and some those stories cannot be told purely with content in Tate collections.

To tell these stories and to contextualise art history you need to start using assets from other collections - often international collections.

To achieve this in the physical gallery space you would have 'loans' to tell the story within an exhibition, but the mechanisms for doing this online don't currently exist or are not well established.

In terms of Tate requirements, curators will usually know where the relevant materials are held, so the challenge is to get access and agreement to use content, not 'discovery' of new materials.

However for the audience, Tate is often a starting point for research, due to Tate's national and international reputation. This means finding content in Tate's online collections can be the starting point for further exploration.

5. ***Is there content held by the SCA partners or other organisations which you don't currently use but would like to? Give examples.***

The BBC archive would be a very rich resource and in recordings of artists would be of particular interest. Tate knows that hearing artists talk about their work in their own words is something that audiences really like and is very engaging.

There are undoubtedly many of contextual resources in libraries & archives that Tate can use to tell stories. For example, Getty funded a project on the Camden Town Group which attempted to explore scholarly cataloguing in a digital age, creating not just a short historical piece on each art work, but surrounding each work by contextual essays, films of Camden, recordings from musicals, newspaper extracts. These things are incredibly important to how Tate want to approach 'scholarly cataloguing', and any collections that either complement or contextualise Tate content would be valuable.

6. ***What issues and processes impact the possibility of using external content? (e.g. Discovering it, Making thematic connections, Rights visibility and clearance, Reliability of access, Problems with formats, Quality of descriptive metadata, Lack of technical expertise, Functionality of APIs, Lack of curatorial expertise)***

The costs related to intellectual property rights are a big challenge. Short term projects may be able to pay the costs to include materials where there is a fee involved. However, once the project finishes there is no further budget to pay licensing fees, and materials have to be removed.

Organisational capacity to carry out technical work is also challenging. While Tate is in a good position to carry out such work and has the expertise to do so, there is still a cost involved and such work has to fit into other priorities. For example, there is some interest at Tate in using materials from the Yale collections that have been made available online, but there will be a cost to doing the initial technical development and then ongoing costs to maintain any software etc. built to exploit content from Yale.

7. ***If the DPS existed, what would make it useful / usable to you and your service?***

A service such as the DPS could support Tate in two ways:

Supporting the creation of handcrafted content such as learning resources (e.g. PDF), films, scholarly essays through:

- Being able to discover resources
- Knowing an image is available at an appropriate resolution for the desired use
- Knowing the image can be used in perpetuity

Supporting the exploration of digitised collections by:

- Supporting searching across collections in the UK and abroad
- Offering an API to explore digitised collections

8. *If the DPS existed, what difference do you think it would make to your work and to your audiences?*

It could provide an additional channel for Tate content, although an organisation such as Tate already has a strong online presence and is seen by many as a starting point for exploration.

There could also be concerns that an aggregator can take traffic from the site that originated the content, so DPS should bear this in mind.

In addition to providing a new channel for existing audiences there may be specific audiences for large-scale aggregations that cannot be served by any single institution.

9. *Are there existing collaborations and initiatives with which the Digital Public Space should be working? If so, why?*

- YourPaintings
- Google Art Project

The DPS should also consider how it can work with smaller collections that are unlikely to be able to get their collections online without support. Making these smaller collections available online would be incredibly valuable.

10. *What single initiative do you think would really make a difference in opening up the digital public space in the UK?*

The ability for cultural organisations to feel that their collections were part of a larger national collection and that their collections could be used and re-used in that context.

Tate is a big organisation with a mature online collection. Being able to pull in resources from other collections automatically without having to handcraft links would be incredibly valuable.

11. *Would you like to make any further observations?*

A service such as DPS has a problem in terms of trying to address all types and levels of audience. If you have a very specific target audience (e.g. schools) you have very specific things you can do and approaches you can take. This is not true when you wish to address a very broad audience.

The DPS has to answer the questions of who it is for, and what they (the target audience) need. In this context the use case for a service that enables discovery and sharing of open content and allows people to build on it seems more achievable. Given such an aim it would also be easier to measure success in comparison to measuring success in addressing the needs of an extremely wide audience.

The National Archives

Participant: Mary Gledhill

1. *What types of work do you undertake to reach audiences and to mediate / animate / contextualise content?*

The aim of reaching as many people as possible is a core part of TNA's role. A lot of work is done on ensuring that the website appears at the top of search results and lists. TNA is a very good high-profile brand.

Genealogy sites are very useful for reaching a large audience.

TNA is stepping up building general awareness, for instance through WWI records, on-site workshops with the War Horse team.

The dedicated educational team does on-site classroom sessions, remote teaching through a virtual classroom; it also works with teachers on lesson plans to include TNA resources.

2. *What are the barriers to making digital resources accessible to your target audiences?*

Cost is a major barrier: funding has been cut by 25% over the past 4 years.

Online cannot be totally free, however catalogue information is free, and it is expected that born-digital resources will probably not be charged for. Digitised material is charged for, and provides income by charging and working with partners.

Rights may be another barrier: a lot of the material is Crown copyright. Other organisations (e.g. the BBC) have different constraints when forming cross-sectoral projects.

Standardisation of description of rights in metadata would be very useful.

3. *Do you seek to include content from collections from outside your own organisation? Why / Why not?*

This happens on a small scale now (e.g. with BBC).

However the catalogue (Discovery) has been expanded to include the metadata of over 2500 other archives, giving a high level of coverage across the UK in terms of record offices, HEIs, business and charities. Discovery is viewed as a major achievement, adding value without holding content, providing linking and sophisticated searching.

4. *In what ways might you use external content? (e.g. Inform your own research, Fill gaps and extend scope of what you present, Enhance guides/finding aids, introduce other media such as paintings or film, Encourage further exploration)*

Footage from the BBC could be used in engaging and in giving context.

Finding aids need to be updated.

5. *Is there content held by the SCA partners or other organisations which you don't currently use but would like to? Give examples.*

The BBC has a lot of good material (film and video) for inclusion in educational materials.

The BL is a major partner and has complementary collections (e.g. for the Shakespeare anniversary).

It is relatively easy to build momentum with big organisations – however small organisations can be problematic. Clear standards around rights were mentioned again.

6. *What issues and processes impact the possibility of using external content? (e.g. Discovering it, Making thematic connections, Rights visibility and clearance, Reliability of access, Problems with formats, Quality of descriptive metadata, Lack of technical expertise, Functionality of APIs, Lack of curatorial expertise)*

Discoverability tools are vital, for the “unknown unknowns” and to overcome silos in different [and the same] organisations. Combined metadata enables usage and reveals overlapping content sets. [Lesson to be learned from HE – EBSCO Discovery etc.?)

There is the problem of competing platforms (e.g. Google Cultural Institute, Europeana).

Project funding is often focused on the one-off, stand alone, which can lead to failure when the funding finishes. Too little attention is paid to sustainability, strategy and co-ordination - a role for SCA?

There may be a problem in maintaining reliability of access over time, as links may disappear.

7. *If the DPS existed, what would make it useful / usable to you and your service?*

Discoverability; clarity on rights.

8. *If the DPS existed, what difference do you think it would make to your work and to your audiences?*

TNA's focus has been on the record. The education team has done very good work with schools, but is now looking to expand outreach to non-formal education and to research. DPS may well be of use here.

9. *Are there existing collaborations and initiatives with which the Digital Public Space should be working? If so, why?*

RES, Google Cultural Institute, Europeana.

There is also the TNA collaboration with other archives to bring metadata into Discovery.

10. *What single initiative do you think would really make a difference in opening up the digital public space in the UK?*

Moving away from concentrating on the platform towards standardisation (e.g. of rights/licences) and discovery tools.

11. *Would you like to make any further observations?*

It is not clear what the aim of the DPS is – increasing availability? Creating a critical mass of stuff? It is potentially addressing very diverse content and audiences.

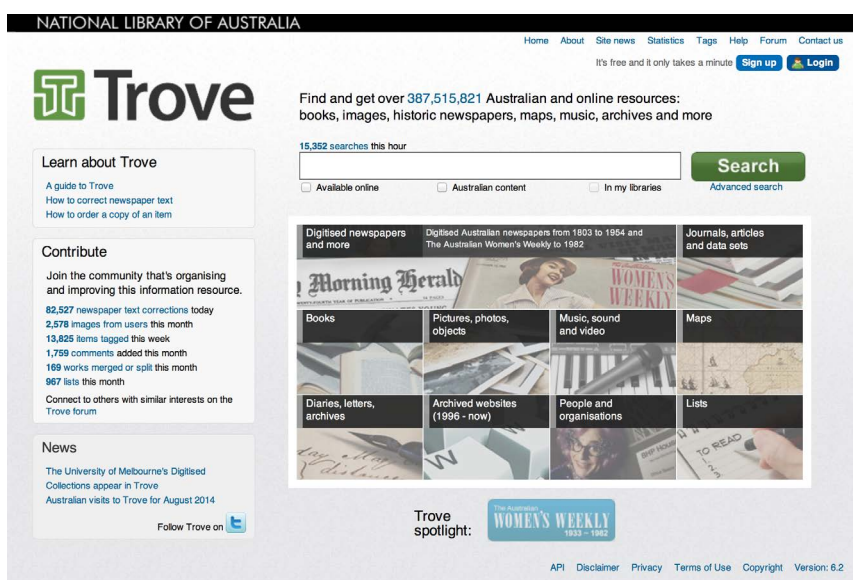
Trove – ‘The Search engine for all things Aussie’

Trove is included as a case study because it represents a national level service with notable similarities in mission and scope to those under consideration for the DPS. This study draws on the published evidence, including the observations of Rose Holley⁴, who acted as project director under the executive leadership of Warwick Cathro (Assistant D-G at NLA to 2011). Ms Holley was unavailable for interview at the time of this study.

About Trove

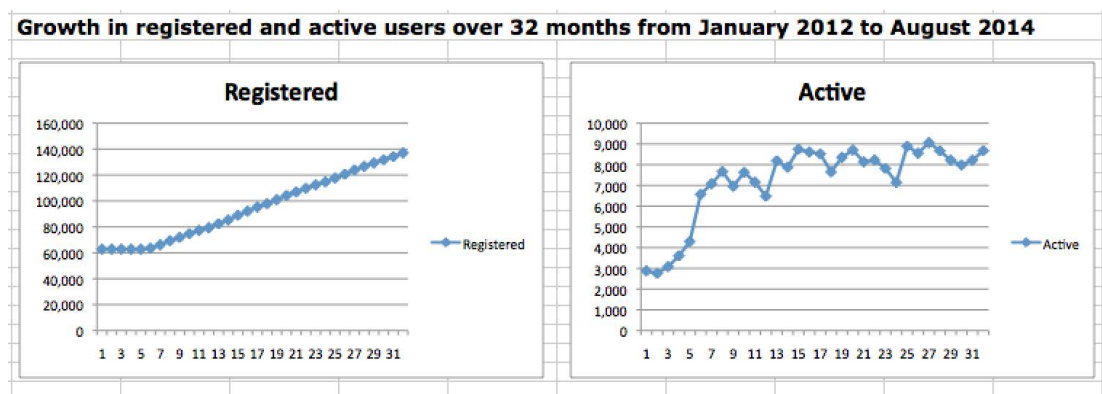
<http://trove.nla.gov.au>

<http://help.nla.gov.au/trove/using-trove/getting-to-know-us/trove-is>



Initially launched in 2009, Trove is the National Library of Australia's discovery service. Billed as 'the search engine for all things Aussie', it links Australians to resources available online, and in Australian libraries, cultural institutions and research collections, often in locations not readily accessible to external search engines. Building out from the existing audience for the national newspaper collection, by 2012 Trove had an average of 25,000 unique visitors a day and has since attracted month on month growth of unregistered and registered users and of numbers of active registered users.

4 Notably <http://www.ariadne.ac.uk/issue64/holley> (July 2010)



Daily UVs of 60,000 plus are now usual, with searches per hour frequently exceeding 20,000.

Do we need a UK Digital Public Space? Is there more that the UK can and should do at a national level to build the UK presence in this space, and to make discovery and reuse of the UK national heritage and present day cultural activity easier and more accessible to a wider audience?

The UK should bear in mind that Australia seems to have benefitted significantly from the Trove journey:

- The journey itself has enabled major curatorial institutions to review and develop their approach to discovery – notably the national library and the national archives
- A wide range of libraries are engaged as metadata contributors, thanks to a flexible approach to collection mechanisms
- Trove has developed practice in the area of user contribution (ranging from tagging to editing), especially crowd sourcing in areas otherwise out of budgetary reach
- Whilst the newspaper collection has been central to engagement, generating very large numbers in terms of access and effort, the statistics demonstrate significant end user interest on a broader basis⁵

It is also of interest to note that:

- Trove has not only valued but also implemented many of the aspects of user experience identified in DPS consultation – for example, contextualised navigation, statement of copyright status, reliability of citation.
- The story-telling mantra (Collaborate-Communicate-Connect) is central to Trove and has driven user features similar to DigitalNZ (e.g. personal and shared lists)
- Holley has highlighted the following critical success factors:
 - The long history of collaboration across cultural heritage institutions in Australia,
 - Usage of common standards across the sector and the shared understanding that data should be open and accessible wherever possible
 - The National Library's leadership role in demonstrating a shift in strategic thinking
 - Giving users freedom and choices to interact with the data and each other, to create their own context within the information, and add their knowledge and content to it.

5 <http://trove.nla.gov.au/system/stats?env=prod&redirectGroupingType=island#links>

1. *What types of work do you undertake to reach audiences and to mediate / animate / contextualise content?*

Holley states that 'finding and retrieving instantly information in context; interacting with content and social engagement are core features of the service.'

Trove aggregates metadata records for material collected by over one thousand Australian institutions and links to more than 380 million items, including full-text books, journal and newspaper articles, images, music, sound, video, maps, websites, letters, archives, and biographies of prominent Australians. It also adds context – notably using zones.

2. *What are the barriers to making digital resources accessible to your target audiences?*

The barriers have largely been on the supply side – the ability of potential contributors to deliver metadata through a single standardised mechanism, notably OAI-PMH. That applies to large university libraries as well as to small archives. The flexibility of approach described below was therefore essential to achieving widespread engagement.

3. *Do you seek to include content from collections from outside your own organisation?*

Trove addressed three NLA strategic objectives for 2009-11, each of which required NLA to go beyond the boundaries of its own collections:

- To collect and make accessible the record of Australian life – bearing in mind that a wide variety of cultural heritage organisations hold unique Australian data ('the gold in the Treasure Trove');
- To explore new models for creating and sharing information and for collecting materials, including supporting the creation of knowledge by users;
- To collaborate with a variety of other institutions to improve the delivery of information resources to the Australian public.
- In the words of Warwick Cathro, such collaboration 'requires a change of mindset. In particular it requires a willingness to examine services from a perspective which does not place one's own institution at the centre.'

DPS should take note of the services outside Australia that Trove is working with in order to enrich its Australian content, as similar sources might be integral to the DPS mission:

- International sources including the Open Library, Hathi Trust and OAISTER.
- Relevant information from other Web sites which have an open API and can therefore be added to Trove as targets: Google Books, Amazon, Wikipedia, Flickr and YouTube.
- Furthermore DPS might draw on Trove itself; for example, the Australian Newspaper collection (1803-1954) could be very relevant, covering a range of UK cultural and human connections.

4. *In what ways might you use external content?*

Not applicable

5. *Is there content held by the SCA partners or other organisations which you don't currently use but would like to?*

Not applicable

6. *What issues and processes impact the possibility of using external content?*

Trove has employed several methods of data collection. Although its preferred method is by using the Open Archives Initiative Protocol for Metadata Harvesting (OAI-PMH), very little data are actually collected this way. This is because many libraries and archives are still unable to implement OAI. Because of this the service now recognises that more flexibility is required with data collection, such as using an API, crawling Sitemaps, using FTP or HTTP.

However, given access to the data, the strength of cultural heritage institutions has been in common data description schemas. In this respect Trove is the realisation and result of many years of working towards common standards (such as MARC, Dublin Core and EAC).

7. *If the DPS existed, what would make it useful to you and your service?*

It is possible that Trove would wish to selectively harvest DPS resources for the Australian collection that it is committed to representing.

8. *If the DPS existed, what difference do you think it would make to your work and to your audiences?*

For Trove, DPS ought to become another of the offshore sources that might be harvested - see Q7

9. *Are there existing collaborations and initiatives with which the Digital Public Space should be working?*

The external sources included in Trove should without exception be considered by DPS – see Q3. In so doing, DPS will need to take account of the necessary technical flexibilities.

10. *What single initiative do you think would really make a difference in opening up the digital public space in the UK?*

There is a clear argument that availability of the database of digitised newspapers from 1803 to 1954 hosted by the National Library of Australia, which is free of copyright, has been pivotal in the success of Trove to date.

In addition, it is not easy to imagine Trove's relatively steep take-up profile without the dimension of participation, envisioned from the outset in the manner articulated by Charles Leadbeater⁶ and driven by the ongoing collaborative newspapers endeavour.

The key observation is that a component with magnetic appeal (i.e. a ready made digitally able audience) might be considered essential for kick starting an endeavour such as Trove or DPS⁷.

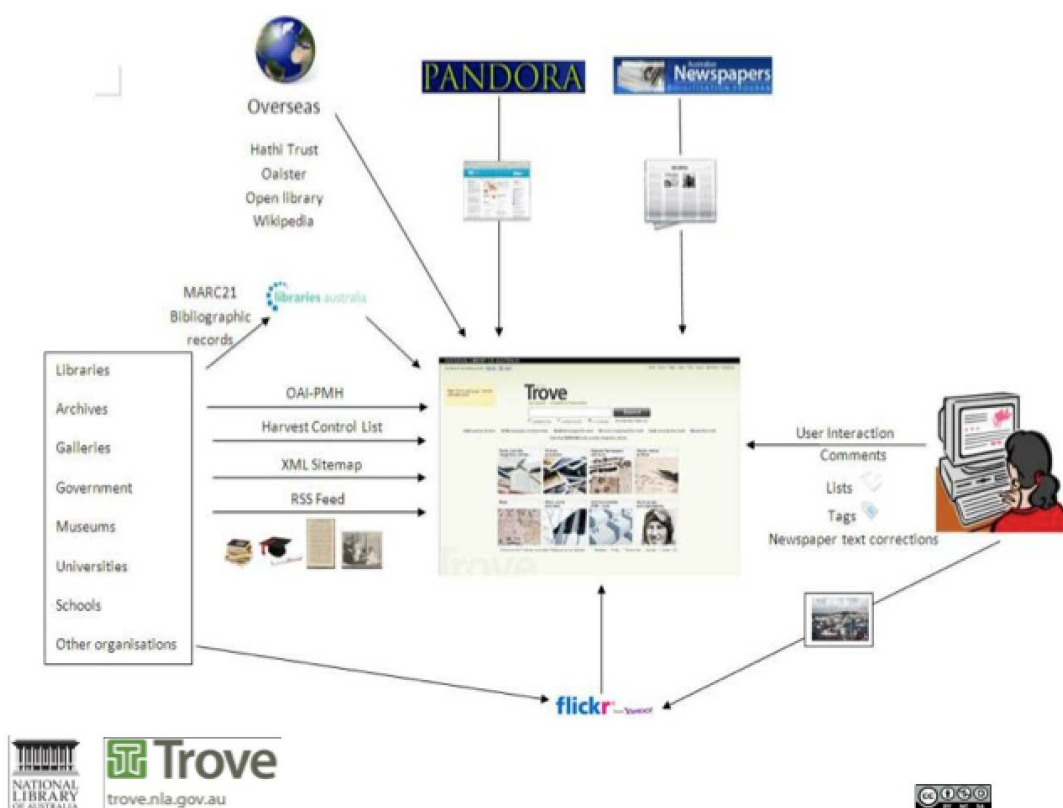
6 <http://www.cornerhouse.org/art/art-media/the-art-of-with-essay>

7 We might reflect on similar experiences with Digital New Zealand (www.digitalnz.org) with the galvanizing Anzac Day commemoration and also the Live Music Archive (<https://archive.org/details/etree>) with the Grateful Dead community

11. *Would you like to make any further observations?*

The Trove architecture should be of interest to DPS considerations

<http://www.nla.gov.au/trove/marketing/Trove%20architecture%20diagram.pdf>



UTC Sheffield

Informant: Brigidin Crowther, Assistant Principal and Creative and Digital Media Curriculum Lead, UTC Sheffield

1. *What types of work do you undertake to reach audiences and to mediate / animate / contextualise content?*

Lead a team of teachers designing and delivering a creative and digital media curriculum for 14-19 year olds.

2. *What are the barriers to making digital resources accessible to your target audiences?*

Lack of a trusted source for relevant content. School internet providers (Y&H Grid for Learning) blocks too much. On the other hand on the open web it is hard to find the right resources, and there is an issue about content adjacent to what you want students to see.

3. *Do you seek to include content from collections from outside your own organisation? Why / Why not?*

n/a

4. *In what ways might you use external content? (e.g. Inform your own research, Fill gaps and extend scope of what you present, Enhance guides/finding aids, introduce other media such as paintings or film, Encourage further exploration)*

Resources are needed for teaching, but also students need to be able to find relevant resources in a project-driven curriculum. Looking particularly for issue-based material and for film and video clips.

5. *Is there content held by the SCA partners or other organisations which you don't currently use but would like to? Give examples.*

Knowing what there is is a problem – tend to use Google but there are many gaps in coverage. Particular demand for film and video clips so BBC archive relevant, BFI and other film archives.

Access to University course materials especially in Graphic Design would also be a help.

6. *What issues and processes impact the possibility of using external content? (e.g. Discovering it, Making thematic connections, Rights visibility and clearance, Reliability of access, Problems with formats, Quality of descriptive metadata, Lack of technical expertise, Functionality of APIs, Lack of curatorial expertise)*

Rights issues – claim educational use but fuzzy about whether this is a sufficient cover-all.

Discoverability – Google not enough

Safeguarding without being over-protective

7. *If the DPS existed, what would make it useful / usable to you and your service?*

Trusted source for relevant material with good coverage

8. *If the DPS existed, what difference do you think it would make to your work and to your audiences?*

Need a middle way between the Wild West of the open web and the swimming lane of school filtering of internet. A DPS as a trusted source could provide it – freestyle swimming within the pool (not the unbounded ocean or the single roped-off swimming lane)

9. *Are there existing collaborations and initiatives with which the Digital Public Space should be working? If so, why?*

In Sheffield local companies such as Studios of the North and the Showroom & Workstation

10. *What single initiative do you think would really make a difference in opening up the digital public space in the UK?*

For the education space, a trusted portal

11. *Would you like to make any further observations?*

A DPS could provide for student curation of themes for contribution and engagement.

Appendix 2 – Interview report

A DIGITAL PUBLIC SPACE

SUMMARY OF INTERVIEWS CARRIED OUT BY DAVID BAKER

OCTOBER 2014

Introduction

This document aims to summarise the discussions held with representatives of key UK organisations that are likely to have an interest in the proposed digital public space (DPS). A total of 17 interviews were completed, the first of which was a pilot, carried out to inform discussion at the SERO-HE team meeting on 12 September, 2014. A full list of interviewees is given at the end of the document. Text in quotation marks are verbatim anonymous comments from interviewees.

Background Documentation

All the people interviewed (with the exception of the pilot interviewee, who received an earlier version) were sent David Kay's updated document *A Matter of Rights – Blueprint* (12 September, 2014). The first three sections of the paper were used as a checklist of points to be covered with the interviewees, who were also offered an opportunity to comment on other aspects of the propositions described in the *Blueprint* paper and to add to the draft mission and aims of a DPS. Some interviewees noted that there were contradictions and conflicts in the discussion with some of the things being listed as outside the scope of a DPS (eg p6) being contrary to some of the stated aims earlier in the paper. One felt that the final document would need to avoid the use of 'insider terms'

Mission

There was broad support for opening up 'public funded content for wider purposes and audiences'. Most interviewees thought that a DPS was desirable rather than essential, though the situation 'could change very quickly', given the 'increasingly chaotic' nature of delivery; an opportunity will be missed if nothing is done. 'In the 21st century there is the technology that can get you anywhere and everywhere totally seamlessly. All is possible in a DPS that can guarantee access. It is an active place where you can re-imagine dialogue and democracy.

Many other comments were made about the need for a DPS:

- 'What does the public get out of a DPS? Will it provide them with value for money? It has to make sense to people. This all needs to be clearly articulated if the DPS is to be a success'
- The opening up of content in a trusted environment has the potential to be a key selling point of a DPS, especially in the context of resource discovery. The trust should extend to the technological environment
- 'A lot of amazing stuff is being done, but there is little connectedness – the DPS could do a lot here'

Appendix 2 – Interview report

- There is such a vast array of material available. A DPS should be about the things that benefit the public, brought to them ‘frugally and effectively’.
- A DPS could be of particular benefit to smaller institutions if it helps to avoid duplication of effort and cost-effective provision of access to quality content
- There is a need to provide users with access to stuff that they don’t currently get [easy] access to; can the DPS provide this?
- ‘DPS’ is the wrong name ‘it suggests things that may or may not be doing’
- ‘SCA is not an attractive name; could it be called something else?’
- ‘SCA members seriously want to be trusted partners; the DPS could give them a vehicle for being that’
- ‘Will the whole be greater than the sum of the parts if the SCA members work together on a DPS? Will it be more cost effective than working individually?’
- ‘Could the DPS create a wave of interest like the Olympics did?’

A number of issues were raised:

- What is meant by ‘public funded’? The divide between public and private is increasingly blurred, including through crowd-sourcing and funding. It may not therefore always be appropriate or possible to share content freely, as for example when a commercial agreement has been entered into by the content owner, even if the owner and the content was publicly funded originally. There will be pressure to monetize DPS content and services. Business cases will need to be developed. FutureLearn was cited, where there is ‘a mixture of public and commercial values’
- Where does academic content fit in? Is this publicly funded or not? A lot of academic content should be in the DPS but it is not necessarily publicly-funded
- Does it have to be just UK content? Why not wider than that? What about the ‘British diaspora’ for example?
- A UK only view of material is inappropriate. The Internet transcends geography
- Maximising the benefits available from public content needs to be balanced against the overhead needed to make that possible and the extent to which value for money (for the taxpayer) and return on investment (for the organisation) can be calculated and demonstrated; how will the DPS be delivered?
- Providing quality metadata is key to success; the first and top priority is to ‘align all the catalogues’ of the SCA members. This is where public investment should be concentrated. ‘Bring all the raw materials together; people will develop/invent things on top’.
- It is not sufficient to open up the content; access needs to be improved and the content needs to be contextualised if it is to have real benefit and impact for users. If the DPS does not provide contextualization, it should at least facilitate others’ contextualizing. Ultimately, the content needs to be useable, not just accessible

- Many commented that more work needs to be done on what the DPS will actually look like – both in the short and longer terms- and how it will demonstrate ‘real pragmatic value’. As one interviewee put it, ‘what is the magic ingredient that will make the DPS an absolute necessity? Is it being in the right place at the right time? Is it critical mass?’ Another asked ‘where is the shared purpose?’ And another queried the need for a DPS – ‘who is asking for this?’
- The SCA partners already provide a quality brand and hence trusted access to their content: what is the added value of a DPS? Will it be able to give the necessary quality assurance that the SCA partners individually already give? Will it be a one-stop shop? Is it just about the ‘big players’? What about the ‘long tail’ of content providers?
- ‘Is the DPS a hub or a network? Both Europeana and the DPLA are networks as much as they are hubs’
- Should the DPS operate as a ‘shared service’?

Aims

The key aims listed as supporting the DPS mission were discussed in detail with the interviewees, who did not feel that they were all of equal importance, though there was broad support for them, with the exceptions and comments noted below. Several interviewees stressed that it was important to fulfil the aims ‘in the right order’;

- The concept of the DPS should be formulated based on what people are doing, what they want
- ‘A use case should be created that legitimizes the aims – without that the case fails’
- The DPS should create a place; others should do the aggregation
- Enhancing open discovery and access in order to reach the widest possible audience was seen as by far the most important aspect of the DPS’s work.
- If all the DPS did was to provide good quality access to trusted content, then the DPS would have fulfilled an important role. The DPS was about satisfying ‘a universal right of access’
- There will be a tension between ‘egalitarian’ provision and the pressure to monetize the content; a balance will have to be found; the DPS will have to ‘engineer for a time when there is no public subsidy’
- Many thought that the DPS should be more about discovery than delivery – which could/should be left to others
- Building critical mass of content and momentum of engagement was also seen as important, though some queried what ‘critical mass’ meant. Discussion centred on the possibility of achieving a tipping point where the DPS became a place of first resort because it had achieved a critical mass in at least in terms of content (‘a place of first resort’), if not access and service, as some thought that the DPS should focus on the content rather than services above the content. Many emphasised the need to build critical mass on a subject-by-subject basis
- Benefitting the work of key stakeholders and audiences was seen as an outcome of enhancing discovery and access and building critical mass rather than an aim in its own right
- Assuring the fundamental principles demanded of a public service was seen as ‘a good thing’, to be achieved ‘as far as possible’

- Maximising the value of the SCA collaboration was not generally seen as part of the mission but a spin-off benefit of the DPS
- 'The DPS should be more than the DPLA – which is too much of a political construct driven by OA'
- The DPS will have four key drivers – Research, Education, Business, Culture – and it must meet all of them'
- The challenge of copyright is more about education than the law. People – the public and content owners need to be educated out of old customs and practices and into new behaviours and expectations. Owners' should be made to realise that 'their content is not as valuable in monetary terms as they think it is'. This will make the need for changes in the law redundant. Editorial principles regarding libel and slander will of course need to be adhered, but otherwise education is the key

Elaboration of Mission and Aims

Interviewees were then asked to comment in more detail on the proposed key aims of a DPS.

A – Opening up public funded content for wider purposes and audiences

- Encouraging investment in digitization and description and ensuring appropriate rights management were seen as the two priority aims if the DPS is to be successful in terms of not only opening up the content but also ensuring that it is widely used
- The first of these two aims was best achieved in the short term by focusing on a trusted body of content such as that already held by SCA partners in the first instance: 'better to work with what you've already got'
- Regarding rights management, it was suggested that the DPS could adopt Europeana's rights framework (as the DPLA was doing); 'copyright should not be a battle'
- Ensuring equity and continuity of access, including through the encouragement of the most feasibly permissive open licensing was seen as a worthy aspiration, but not deemed wholly realistic.
- Reference was made to the 'need for major public sector organisations to cope with reduced state funding and therefore a need to monetize their collections and services'. There was both risk and an opportunity here: a DPS would need to take cognizance of future economics, and facilitate the creation of new business models and a greater diversity of funding streams

B – Enhancing open discovery and access

- Connecting and contextualizing content across collection boundaries and increasing visibility on the open public web were identified as the two most important priorities. Reference was made by educators interviewed to the importance of these aims in the context of life-long learning
- As noted under A, enabling ease of access and reuse through clear rights management was also seen as important in order to deliver the other key aims, above
- Some felt that the quality of the metadata – and improving it from a low base in some instances – was crucial to the success of the DPS.
- The ability of end users to contribute to the enhancement of content (as for example through user generated metadata) needs to be considered as the DPS is developed

Appendix 2 – Interview report

- Facilitating mediation and digital story making and enabling network and community building were not seen as important overall. Unless a significant investment was made, it would be better to let others develop these areas. There were already plenty of third-party tools that could be used to assist. Instead, priority should be given to the content
- Similarly, there was little support for the DPS being a development platform. There is 'already sufficient capability on the Net – let the content do the work'

C – Benefitting the work of key stakeholders and audiences was seen by some as being 'more about how the DPS is structured' as the aims listed below 'all wrap around the core DPS function'

- Engaging the public directly was seen as crucial to the success of the DPS by all those who felt that the DPS should be a business-to-consumer service (see below). This response inevitably shaped respondents' views regarding the core beneficiaries of a DPS and the concomitant shape and nature of the space. Some noted the growing importance of 'citizen' involvement and the need to take account of this: 'community participation can really take off'
- Facilitating mediation for education and community projects was seen as an area where the DPS could make a difference as 'people struggle'. How can users be helped to 'use content better?'
- Whether or not the DPS should be engendering creative business opportunities was seen as being open to debate. As noted above, there is increased pressure to monetize the content and services of public sector bodies and a DPS that supports increased viable business opportunities could be very attractive, but this proposal 'needs to be thought through'
- Encouraging cultural tourism by making contextual connections and presenting a shop window on UK cultural content were two aims where there was a difference of views, though even where there was support (notably from HE representatives), nobody thought that they were top priorities. The British Council will no doubt have a view on these areas, and that should be canvassed.
- Offering a platform for personalization was not seen as a priority, the argument being that there are already many relevant tools available. The SCA would get bogged down if it spent time on personalization tools within the DPS. 'In any case, all engagement is personal' said one interviewee'
- Promoting a vanguard practical approach to standards should be undertaken by a DPS, provided no-one else is in the lead here. Some institutional representatives felt that if the DPS led a practical approach to standards adoption would be a beneficial service to UK institutions in the field. The DPS/ SCA could/should be in a position to 'make a persuasive case for using standards'

D - Building a critical mass of content and momentum of engagement – the aims were broadly supported and appropriate critical mass is seen as vital, if the DPS is to be the place of first resort. The comments and caveats below should be noted:

- The DPS will have to operate at a UK level if it is to be successful, not least given the origin of much of the likely content (NB the proposed aim of 'Building on the substantial foundations of SCA partner content'). 'Linking up is needed'.
- The most important critical mass is of people. If enough people want a DPS and expect things of it, it will happen

- The content will need to be 'packaged' before it is put out (eg in 'ready meal' format for use by teacher and learners), but this work does not need to be done by the DPS. Content needs to be 'repurposeable' within a blanket licensing agreement as far as possible.
- Critical mass is not sufficient on its own to make the DPS attractive. Educators – and people more generally - need a highly granular approach – 'not just a book, but a page of a book'. 'The more granular the DPS is, the more discoverable content will be'
- Supporting approaches inclusive of all levels of public rights holders will be essential if the DPS is to be successful. 'Integration will be the challenge'
- There needs to be a coherence to the content made available by and through a DPS – scope and breadth are important, but the DPS should not just take anything and everything
- If the DPS is to promote a 'vanguard practical approach' then it must in any case share practice and adopt common standards.
- It was not clear from discussions whether linking with government objectives and funded investment should be part of the DPS's remit where the space could be, say, a platform for funding, though funding via the individual SCA members might be a more realistic proposition
- The provision of advisory services was not seen as a high priority. It was suggested that such services could only be provided at a price, and should only be offered when the DPS had achieved credibility, when business models would need to be developed in order to ensure cost-effective provision. Providing a directory of advisory services was a possible role for the DPS
- Providing a home for orphaned digital resources was not seen as a priority by most of the interviewees. Rather, the DPS should always focus on quality content, which might include orphaned material as part of an active accessions policy. There was a fear that a DPS could get 'dragged down' by orphaned works. A couple of interviewees, on the other hand, thought that providing a home for orphaned digital resources was a key aim for the DPS. But where will the funds come from? One said the DPS should focus on 'at risk legacy resources which are valued'

E – Maximising the value of the SCA collaboration was commented on less by interviewees, except those who had a connection with the Alliance. Many felt that this was something 'internal to the SCA' and not part of a public strategy document: 'this is a consequence rather than an aim'

- The SCA members should combine their most successful activities to create one large, successful interoperable entity
- Expanding the partnership / coalition of the willing was seen as important by those representing SCA organisations, though it really does have to be made up of 'the willing'. The existing partners should carry out a gap analysis to see which additional members would most benefit the development of a DPS
- Organisations such as FutureLearn and RLUK members would be keen to get involved in either the development of the DPS or its subsequent repurposing and the development of add-on services
- One interviewee commented: 'what is the point of the SCA? It has to do something big or it is not worth continuing; the DPS offers an opportunity...to create a shared purpose, especially where it is more cost effective to work together.'

- Another stressed that one SCA member (the BBC?) would need to take the lead in the partnership if the DPS were to succeed, at least in the short to medium term
- Enhancing the economy and effectiveness of Aggregators was seen as important: 'lots of people rely on aggregators and a successful DPS will need to take account of this as a priority
- Providing a platform for public memory projects excited some as a proposal, though this was a lower priority ('too much hard work' said one respondent) than expanding the SCA partnership, if that expansion delivered the DPS mission
- Being well placed for an unknown digital future and sharing and exploiting ground breaking undertakings were seen as important by those who commented, though this was in the context of a clear articulation of requirement and rationale for investment. One interviewee stressed that the future was not unknown but 'dynamic' and the SCA/DPS should be shaping that future
- Some interviewees felt that the word 'innovation' should feature prominently in the aims in general and this aim in particular with the provision of sandpits to try out pilots using the shared expertise of SCA members. This led some to support the notion of the DPS 'sharing and exploiting ground-breaking undertakings'. Many felt the key attribute in terms of responding to the future was to remain flexible, and not to restrict the DPS to particular solutions, given the difficulty of forecasting the future
- 'The SCA should have a positive open philosophy, but should embrace commercial models alongside'

F – Assuring the fundamental principles demanded of a public service (as noted below) were all endorsed

- Protecting the rights of all parties will be important in ensuring that the DPS has credibility, though concern was expressed at the extent to which this was consonant with the other aspirations and aims of a DPS
- Promoting content from trusted sources, connecting and contextualizing content, and adopting judiciously selected standards were all seen as laudable aims, but, again, questions were raised as to how realistic it was to achieve all this, without a significant allocation of resources
- The aim of 'ensuring reliability' was queried; do we mean sustainability?

Who should a digital public space benefit? Stakeholders & Audiences

The DPS was seen as being both a Business to Business and a Consumer proposition by all the interviewees, though a clear majority said that it had to be a Business to Consumer organisation ('that is where the market is greatest'). Two stressed that the DPS should be only a Business to Business organisation and that dealing with consumers should be left to others – including the individual members of the SCA. Some of those who supported the B-2-C model stressed the need for a DPS to 'push traffic' towards key stakeholders such as the OU and individual SCA members. The B-2-B model would need to demonstrate significant potential to potential business customers.

Interviewees were asked to comment on the lists of stakeholders and audiences below.

On the supply side

As a 'business-to-business' service, it was generally agreed that a UK DPS should benefit:

- SCA partners (the coalition of the willing) – this was stressed by those representing SCA members; the DPC should be involved at an early stage
- UK rights holders for public funded and public realm content – taken as read by most
- Other public and private sector bodies, which will want to use the content
- UK aggregators – seen as important by some, given the comments about aggregators noted earlier
- Curators in Galleries, Libraries, Archives and Museums (GLAM) – taken as read by most

On the demand side

As a 'business-to-consumer' service, it was generally agreed that the following audiences should directly benefit:

- UK Mediators – teachers, GLAM outreach staff and those involved in the development of curriculum, learning content, events and exhibitions
- Researchers of all types in arts, humanities, social sciences and public affairs
- Learners of all types and ages
- Cultural tourists
- Creative industries players (incl. small businesses) working with digital assets; some felt that this could be a major benefit of the DPS – cf the business development since OS maps were made available digitally
- All of the above elsewhere in the world (see below)
- The UK public at large – some felt this was crucial, especially if advisory services (including technology advice) could be provided
- Technologists – if the DPS has a technology layer; learning technologists should be consulted about developments and needs

Is UKDPS likely to be less clearly / directly beneficial to others?

- The DPS was seen as being also of benefit to a global public at large. If the DPS is truly open, then there is nothing to stop international usage, despite the possible complexities of licensing; language constraints were seen as less problematic, given the universality of English and the availability of translators
- Whether or not the DPS would be of benefit to university teachers and researchers in STM remains to be determined. Most thought that it would not, but a few felt that the 'door should be left open' to STM users.

Other

Governance

A number of interviewees commented on the way in which the DPS might best be governed

- Initially, the DPS could be governed within existing frameworks, but in the longer term, it will depend on how big the space becomes
- It will need significant machinery as it scales up, but much of the management if not the governance could be outsourced, say to some other public/private/grant-funded organisation(s). Alternatively, the SCA could transition the DPS to a separate shared organisation or community-based company
- Reference was made to the increasing pressure to monetize digital content and the many opportunities to do so, even if the content was originally publicly-funded. Any governance model would need to take account of possible funding models, including via subscription (cf Jisc)
- One interviewee suggested that the SCA should look at the Finnish equivalent as a possible governance model (<https://www.finna.fi/?lng=en-gb>). Another suggested that the SCA take a look at LIBER's governance structure
- One Interviewee suggested that Jisc could take the lead in developing the DPS
- Another suggested the JANET governance model

Development

Interviewees commented on how the DPS should best be developed. A stepwise approach was largely preferred, beginning, say, with a 'simple shared platform providing economies of scale' giving a 'shared service for cultural content' based on collaboration between [existing] partners'.

'Doing demonstrators to get things started' was suggested as a way forward, as was 'building a minimum viable version of a DPS and then build a body of knowledge (cf Digital Art). 'Getting the DPS up and running for the UK' was stressed (cf OpenLearn). A piece of work was needed as an early deliverable to understand what is already going on in order to harness developments and avoid duplication of effort'. Many stressed the need to develop business cases, operational plans and clear deliverables before the DPS got too far under way. A balanced scorecard approach was suggested by one interviewee.

Where will the money come from? A DPS could well benefit from major philanthropy at one end of the funding spectrum and crowd-sourcing at the other. Attention was drawn to the recent BIS consultation on long-term capital investment in science and research (<https://www.gov.uk/government/consultations/science-and-research-proposals-for-long-term-capital-investment>). EU structural funds was another possibility.

Appendix 2 – Interview report

There are five ways of bringing the DPS to fruition:

- The government brings the DPS into being (cf clean air, roads), through taxation
- Organisations like the SCA are compelled open up their content for public use (cf BT)
- An institution like the BBC – or the SCA altogether – is funded to do this work
- A brand new institution is created (as the BBC was in the 1920s) to do the work
- A combination of a-d: the SCA is unlikely to be able to do it all on its own

The advantage of digital is that you don't need to choose a single way forward; go for a combination of public and private approaches. Pump priming with public money should stimulate commercial activity.

NAME	AFFILIATION
Tony Ageh	BBC
Paul Ayris	UCL
Jan Booth	UK Treasury
Caroline Brazier	British Library
Robert Darnton	Harvard University
Alastair Dunning	The European Library
Lorraine Estelle	JISC Collections
Martin Hall	Salford University
Nick Kingsley	The National Archive
Nick Poole	Collections Trust
Mike Mertens	RLUK
Justin Spooner	FutureLearn
Ronan O'Beirne	Bradford College
Andy Robertshaw	Independent Military Historian
Andy Westwood	GuildHE
Nicky Whitsed	OU
Caroline Williams	Nottingham University

Appendix 3 - Technology considerations

Aggregation

The DPS as described in this report is essentially a vertical search engine⁸ for the UK Cultural Heritage web.

The DPS should be able to gather data from the web at three levels:

- Crawling HTML web pages (and associated objects such as images) and index the unstructured content
- Crawling HTML web pages and use any embedded microdata (specifically including schema.org microdata)
- Crawling Linked Data published on the web and index the structured data retrieved

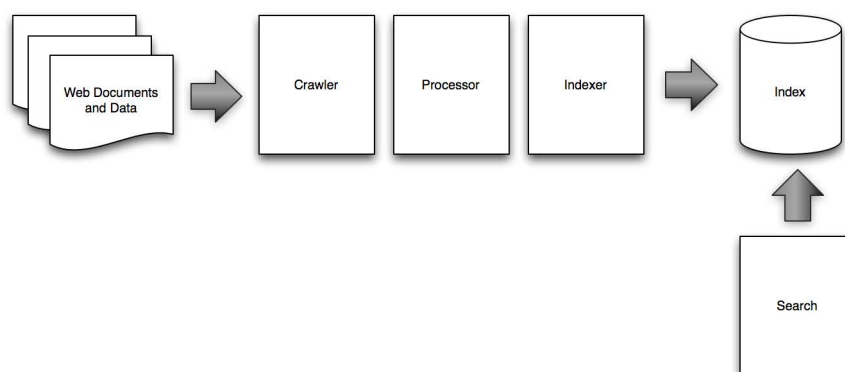
The content retrieved will then be processed and indexed.

This approach offers:

- Extremely low barrier to entry (publish HTML web pages)
- Support for sophisticated resource description (through Linked Data)
- An approach that is inline with that taken by existing web search engines

The high-level technical architecture for web search engines is well established. The key components for a web search engine are:

- A crawler component which can retrieve the relevant documents or data from the web
- A processor component which can process content retrieved by the crawler and extract relevant data for indexing
- An indexer which writes data to the index
- An index
- A search interface which interacts with the index to return results for users



8 http://en.wikipedia.org/wiki/Vertical_search

There are existing open source implementations of web search engines such as Nutch⁹ and OpenSearchServer¹⁰. Specific considerations for the DPS that may not be part of existing implementations are:

- Crawling should be limited to specific domains which represent cultural heritage data
- Some materials to be crawled by the DPS may not be publically accessible on the web so mechanisms for requesting and granting access for the DPS crawler will need to be supported by the DPS and contributors with non-public content
- Specialist processing components may be required to parse typical representations of cultural heritage resources on the web (e.g. HTML catalogue records)
- Combining data from rich structured linked data sources with data from unstructured HTML sources

Discovery to Delivery

In some cases the DPS may act like a traditional search engine which provides the ability to discovery resources, but does not offer direct access to those resources. In this case the user follows a link to the full resource if they wish to access it.

This approach offers simplicity for the search engine provider and ensures that any usage of a resource is directly countable by the content provider. However, it also leads to a more fragmented user experience.

The DPS should therefore support mechanisms for viewing content directly within the DPS interface, while ideally still allowing the contributing organisation to collect usage information. The key media types that the DPS is likely to need to support are:

- Text
- Images
- Audio
- Video

In terms of offering direct access within the DPS, different approaches may be required for different resource types. For example, it may be possible to display images in the DPS interface through straightforward use of an HTML IMG element pointing at the image on the contributor site. Other resource types, especially audio and video resources, are likely to require agreements on standard formats support viewers that can be embedded in the DPS interface.

⁹ <http://nutch.apache.org>

¹⁰ <http://www.opensearchserver.com>

Appendix 3 - Technology considerations

Authentication and Authorisation

As the DPS may make searchable content that is not part of the public web, it will use IP authentication and authorisation to determine if the user is accessing the DPS from a computer in the UK to limit access to such content to those within the UK.

While IP based authentication and authorisation has significant shortcomings (for example, it can be easily bypassed by users outside the UK through the use of proxy servers or VPN services to obtain a UK IP address) it is a well established mechanism for limiting access to content and is the method used by the web based BBC iPlayer to limit access to people in the UK¹¹.

Where full content is only accessible through the content provider, any authentication or authorisation required to view the full content will be fully controlled by the content provider and outside the remit of the DPS.

This in turn suggests that the DPS can only provide access to content directly where the content is publically accessible, or where the content provider is happy to accept IP based authentication and authorisation.

Integration with other services

The DPS may wish to consider some integration with other services. In particular the following are worth serious consideration:

Authentication via widely used web services

Many sites offer authentication through third party services such as Google, Facebook and Twitter. Supporting authentication through such services would enable users to create local profiles in the DPS for any personalisation features the DPS wishes to support.

Authentication and Authorisation via UK Public libraries

Users of UK public libraries will typically be issued with a username and password to access digital services from their public library service. While there is no common standard used for the authentication of users across public libraries, as there are approximately 200 library authorities in the UK¹², and many of them will use the same underlying software, it would not necessarily be a huge task to integrate with the authentication/authorisation mechanisms for each library service.

¹¹ http://iplayerhelp.external.bbc.co.uk/tv/watch_outside_uk

¹² <http://www.publiclibrariesnews.com/about-public-libraries-news/information>

Appendix 3 - Technology considerations

Licensing and Usage rights through the Copyright Hub

Once a resource has been discovered through the DPS, a user may wish to make use of the resource in another context. In some cases the options to reuse content may be made explicit by the contributing organisation through the use of machine readable licences. However, in many cases content may not be clearly licensed, or the user may wish to make use of content in a way not covered by the available licence.

The Copyright Hub is a service that is designed to make it easy to establish what use you can make of a resource, or to put a potential user in contact with the relevant content owner to negotiate the appropriate use of the resource.

Integration with the Copyright Hub may be possible in one or more of the following ways:

- Contributors to the DPS could register identifiers or domains with the Copyright Hub
- The DPS could query the Copyright Hub for information on usage and licensing as it crawls, processes and indexes content
- The DPS could query the Copyright Hub for information on usage and licensing at the point it presents content to users

Appendix 4 – Legal and governance issues report

Aim of Report

The aim of this report is to provide an overview of the Information Law and licensing issues associated with aggregating, linking and/or reusing content and making it publicly available on the internet via the DPS. This report makes broad assumptions prior to further decisions about what the DPS is likely to be and do

Based on this, the following assumptions have been made which reflect the types of content users would expect to find via the DPS, and which are well represented in the holdings of publicly funded bodies:

- The material will be multimedia.
- It will include both in-copyright and public domain material.
- There will have to be some form of content aggregation centrally – this could range from metadata and thumbnail images to hosting content centrally and offering services around the content.
- If the DPS is open to all publicly funded institutions it may well have to hold and / or link to many varied types of content from manuscripts through to scientific data, Gold Open Access content through to photographs of collection items and films.

It should also be noted that if the DPS becomes a content aggregator, it appears to bear many similarities to Europeana¹, and is therefore likely to face many of the same licensing and Information Law issues already faced by Europeana.

What are Intellectual Property Rights?

Intellectual Property Rights regulate original creations of the mind (and sometimes labour expended in producing the creations too). This can include inventions, literary and artistic works, designs, symbols and images. Intellectual Property Rights usually give the creator an exclusive right over the use of her / his creation for a certain period of time.

Intellectual Property Rights fall into two broad categories:

1. Copyright and Related Rights. Copyright protects literary and artistic works, including musical notations, computer programmes, films etc for a minimum period which in the European Union is life + 70 years. Also protected are so-called related or neighbouring rights which include performance rights, sound recording rights and a broadcast signal. Due to recent changes in EU law the duration of related rights is now very complex.
2. Industrial Property. One area of industrial property that is protected are “distinctive signs” such as trademarks, designs and geographical indicators. The other types are designed to stimulate industrial innovation often by companies such as patents and trade secrets.

Appendix 4 – Legal and governance issues report

The following broad categories of IPR are likely to be important to the DPS:

- Copyright
- Related Rights such as performances, sound recordings, broadcasting and sui generis database rights
- Trademarks
- Design Rights

What is the Digital Public Space from an Intellectual Property Rights (IPR) perspective?

Digital assets, such as those found in publicly funded organisations have a mixed and varied history, based upon their provenance and depending on the type of organisation. The provenance of these assets and their copyright status is important because it will determine what can be done with them, and what needs to be negotiated in order for them to be included within the DPS, if the DPS becomes directly or indirectly a content aggregator/reuser.

The types of bodies that may contribute to the DPS include:

- Universities
- Libraries
- Archives
- Broadcasters
- Museums
- Galleries

Given the many different types of potential contributor to the DPA the broad types of content held by these institutions would fall into the following types of categories:

- Public Domain
- Orphan Works
- Proprietarily owned content
- Open licensed content e.g. Gold Open Access articles
- Crown Copyright
- Parliamentary Copyright
- Related rights (performances, sound recordings, broadcasts etc)
- Software Material covered by the sui generis database right
- Data that contains no copyright (e.g. A museum / library / archive catalogue)

Appendix 4 – Legal and governance issues report

In terms of the creation of a web infrastructure the following new IPRs may also be created by the DPS:

- Copyright in the text / design on the website
- Sui generis database rights in the arrangement and selection of content on the website.
- Trade mark in a logo
- Literary right in any software that is created

Special IPR Issues and University Repositories

Please note that in regards to university repositories it is very important to understand that whereas in an open access environment repositories are often talked of as being synonymous with some form of open access this is not really the case. Institutional repositories, as opposed to subject based repositories are essentially a digital store of the digital outputs from a university and will therefore potentially contain any form of document ranging from content that a university can share to its staff and students under a CLA licence, through data tools to presentations and papers that have been submitted by a member of staff. In terms of open access also, the term has limited utility given the unclear and unknowable rights status of Green Open Access material. To avoid copyright problems if the DPS hosts scholarly content it should only ingest materials that have a clear rights status such as articles that come licensed with a creative commons licence.)

Information Law Overview Copyright and Related Rights

If the DPS reuses creative content, it will therefore have to deal (directly or indirectly) with the clearing and reuse of rights. By doing this it will be engaging in acts regulated by copyright law and therefore it is important that the DPS has a solid understanding of its activities as they relate to copyright law and therefore what potential risks and liabilities it exposes itself to.

In legal terms giving access to in copyright content is subject to copyright law and involves two separate acts that need permission from the rightsholder before undertaking – one is “reproduction”, the other is “making available”³ (a subset of the communication to the public right.) Where permission has not been sought and granted it will be one or possibility both these rights that the DPS will have infringed. This is important to understand as it is not only these rights that need to be cleared, but it will be these rights that are infringed and therefore create financial and reputational liabilities for the DPS.

The ability, time and resource to clear rights can vary immensely depending on a number of different factors such as the particular copyright status of the work (orphan work, crown copyright etc), the age of the material, the type of work, and whether the rightsholder is organised and represented by a rightsholder or not.

Many works will have underlying or embedded rights so the more embedded / underlying works there are in an in-copyright work, the more complex it can be to clear rights and get permission to use the work. At one end a manuscript with one author only is relatively simple, while a film (which will often include literary, musical, dramatic, artistic works, film, performance and sound recording rights) may be very difficult to clear.

Why do Intellectual Property Rights matter to the Digital Public Space?

If the DPS becomes a content provider nearly everything the DPS creates, gives access to, and allows reuse of will be subject to one if not more intellectual property rights. This is important for the DPS for the following reasons:

- The DPS will create IPR assets that have a financial value. e.g. The DPS brand (design right / trademark), the online platform / publication (copyright, design right, sui generis database rights), software and applications (literary right). *Who owns and controls this will be important and require clarification.*
- The DPS will acquire rights via a licence that have a financial value. The value of this will depend on a number of factors including duration of rights, exclusivity of rights, whether they exist or are utilised elsewhere, whether aggregated or not etc. e.g. The DPS is likely to license content such as software, metadata, content etc. *How this is managed and who manages this will require clarification.*
- The DPS will host and give access to material that is subject to a third party intellectual property right – mainly copyright. The DPS will therefore be subject to financial and reputational liabilities if it (or its partners) do not abide by the rights and permissions they have been given by rightsholders. The penalties for infringing intellectual property rights can be extremely high as can also include legal fees². Given the international nature of the web, and the content likely to be hosted by the DPS, there is also no guarantee that any legal issues would be pursued through UK courts. (N.B. The cost of legal fees in other countries can be extremely high.) *Ensuring there are clear roles, responsibilities and policies regarding this will be important.*
- As the DPS will be facilitating access to works that are covered by IPRs even if it itself has not infringed, it could be subject to proceedings for facilitating infringement for the actions of third parties who have used content from the DPS and done something unlawful with that content. e.g. Using an item for commercial use that was marked non-commercial, infringed the moral rights of the author by doing something inappropriate with the content. *How users can engage lawfully with DPS content must be communicated clearly.*

Is there anything in UK copyright law that could help the DPS?

In terms of limitations and exceptions there are two new provisions relating to crown copyright and literary works that form part of a public record that could help digitising materials and putting them on the web.

S.47 and S.48 allow the digitisation and putting on the web, subject to a number of provisos, of certain in copyright works open to public inspection on a statutory register or required to be publicly available, as well as in-copyright works that have been supplied to the government as part of public business.

The new orphan works legislation could help digitisation projects, if a diligent search is performed for rights holders and works believed to be orphan are approved or registered with the government and / or the Commission. The Orphan Works Directive (transposition required into Member State law by October 2014) allows publicly funded libraries, museums, archives, public broadcasters and educational establishments to use orphan works online for non-commercial purposes (advertising probably allowed) after a diligent search and having registered the works on a centralised European database. (Please note that stand alone artistic works are not allowed to be used under the Directive).

Appendix 4 – Legal and governance issues report

The UK own orphan works licensing scheme requires the same level of diligent search as the Directive, including embedded works, but allows commercial use and the use of photographs etc in return for a fee. This will be operated by the Intellectual Property Office and the licence duration is only for 7 years in the UK only.

The UK government has also introduced a Scandinavian type of licensing called extended collective licensing that allows a collecting society who has permission from the Secretary of State to offer a licence that covers not only members, but non-members too. This may help the vision of the Digital Public Space however structural problems with the introduction of Extended Collective Licensing at this point appear to be that i) A collecting society has to exist in order to extend its licences to cover non-members (problematic for non-broadcast film, unpublished works etc); ii) A collecting society may not want to offer an extended licence to participants in the digital public space; iii) a licence is only for 5 years with no guarantee of renewal which provides challenges to those investing public money in digitising, hosting etc.

S.35 of UK copyright law allows educational establishment to make, or have made for them, broadcast material. This exception only operates when there is no licensing scheme, and as a result of this provision the Education Recording Agency (ERA) was established that represents many UK broadcasters. Rightsholders not represented by ERA (mainly foreign rightsholders who are not members of ERA) therefore are covered by the exception. While the exception allows an educational establishment to have a broadcast made for them, it is far from clear that the exception would allow the DPS to push recordings to them on an on-demand basis unless the educational establishment had requested the recording to be made. In this sense there is perhaps a gap between the aspirations of the DPS and the exception, though this could be bridged perhaps by discussions with ERA.

Please note that even if licence based that as all the above provisions are some form of limitation and exception on the exclusive rights of a copyright holder in copyright law they will have the following jurisdictional restrictions. That is to say use of the items will only give legal protection / be lawful in the jurisdictions stated below:

- Orphan Works Directive Within the EU
- Orphan Works Licence UK Only
- Extended Collective Licensing UK only
- s.35 UK only (this should be checked with ERA)

Licensing Overview

In order to put in-copyright content on the internet the intellectual property rights that lie within the work will have to be cleared. This can be very time consuming and complex though there are certain categories of pre-licensed material that are free and licensed but provide certainty and no rights clearance is necessary:

- Crown Copyright: Material produced by employees of the crown in the course of their day to day duties.
- Parliamentary Copyright: Material produced in the course of parliamentary business.
- Creative Commons Licences: There are six Creative Commons licences and one rights waiver (CC0) that set out clear terms of reuse.
- Open Licences: Open Data Base Licence, GNU licences etc.

In terms of licences that are available “off the shelf” from collecting societies that cover what is known in copyright law as the act of “making available” there are a few that are available, though they are not particularly comprehensive given that the Digital Public Space will by definition be multimedia in its offering.

It is worth noting that even if the DPS sucks up content that is already licensed openly, such as Creative Commons material, it will need to either reuse and/or reflect back the terms to users of the specific Creative Commons licence that has been selected and/or choose a base line Creative Commons Licence for permitting reuse. An exemplar for the former is the Jisc funded Jorum open access repository.

Broadcast

As outlined above s.35 / ERA allows educational establishment to record broadcasts. To what extent this would allow the wholesale recording of broadcasts to be pushed on demand to educational establishments is unclear, but is something that perhaps could be licensed from ERA if they operated in an extended mode under ECL at some point in the future.

Artwork

The Design Artists Collecting Society, who represents fine artists, have a licence that allows artworks to be put online for an annual fee. See DACS website – Digital Engagement Licence for Museums and Galleries.

Music

Sound Recordings PRS for Music have a transactional licence that covers the underlying works in a sound recording (i.e. musical and literary works) to be put on the internet, though this is limited to UK only. This licence for the underlying copyright works is called the Limited Online Music Licence.

Appendix 4 – Legal and governance issues report

Sound recordings and performances

In terms of rights clearance for performance and sound recordings, other than where embedded within a programme, rights would have to be cleared directly with each recording label. This would mean that any post 1962 recordings would require direct rights clearance whereas nearly all pre 1963 recordings could be provided in the UK under a PRS licence.⁵ If the DPS is interested in giving access to sound recordings in the UK only it would be relatively easy for the DPS (or the holding institution) to apply for a Limited Online Licence.

Text Based Works

Other than the pre-licensed open content outlined above there are no collective management solutions to putting in copyright text based content online. i.e. Literary and dramatic works and musical notations. As outlined above Extended Collective Licensing may offer an opportunity but will take time to embed itself post 2014 and is hampered by a 5 year maximum period for the length of the licence it can offer.

Please note that there is no collective licence available for the use of unpublished text based works, documentary photos, films and sound recordings.

However the UK is at the forefront of the Gold Open Access in the UK and over 2013–14 has invested over £13 million in the publishing of articles available under predominantly a Creative Commons attribution licence (CC BY). This body of content presents the DPS with a significant body of material with clear intellectual property rights / rights of reuse, that could be aggregated and surfaced in a way that currently is not being done coherently or consistently.

In the Open Access world the following types of creative commons licence are mainly on offer from journal publishers:

- CC BY Creative Commons Attribution (Wellcome mandated)
- CC BY NC Creative Commons Attribution Non-Commercial
- CC BY ND Creative Commons Attribution Non-Derivative
- CC BY NC ND Creative Commons Attribution Non-Commercial Non-Derivative

Other Bodies of Information Law & Copyright Law relevant to the DPS

Putting materials on the web means that the body that publish the content, or copies the work in order to publish it on the web are subject to a number of different bodies of law. These include:

Privacy

Privacy law is a rapidly developing body of law in the UK as a result of the introduction of the Human Rights Act in 1988, and the ongoing legal and societal concerns that we are seeing in the light of the Snowden revelations. The right for an individual to have a private life is something that is likely to affect certain bodies of content being supplied to the DPS and in terms of the law is something people are likely to be increasingly sensitised to in the “post Snowden world”.

Appendix 4 – Legal and governance issues report

Data Protection

The Data Protection Act 1998 (DPA) defines personal data as any information relating to identifiable, living individuals. Much copyright content holds information relating to living individuals so the DPS / partners will have to ensure that data protection laws in the UK are appropriately applied. A Data Protection Regulation is currently being negotiated in Brussels, and again as with privacy law is a body of law that the DPS will have to be aware of and involved in.

Libel

By republishing libellous works the publisher will potentially be in breach of UK libel laws so this is another field of law that the DPS will have to monitor and be alive to the issues.

Moral Rights

Moral rights exist entirely separately to copyright law in some senses, and exist in order to protect the reputation and standing of the author in regards to the work they have produced. It covers most types of works with a few notable exceptions.⁶ Moral rights have become a controversial and hard fought issue, particularly by photographers and journalists in the context of the UK government introducing orphan works and extended collective legislation.

Reuse of Public Sector Information Law and the DPS

As a result of the amendment to Reuse of Public Sector Information Directive in 2013, bringing publicly funded libraries, museums and archives into scope, these institutions will have to give access to their own copyright or public domain collections on level playing field terms. The Directive states that these publicly funded bodies shall be non-discriminatory for comparable categories of reuse. This means that any licensing of public domain items, or items where the institution holds copyright, will have to treat end users on a like for like basis in regards to the same content. This will require the institution who has given access to that digital object to apply the same access terms and conditions for the same type of end user for the content on the web (through the DPS for example) as well as any other access points to the same digital object. The PSI requirements are therefore something that the DPS will have to be very aware of and work with the contributing organisation to ensure that content supplied to the DPS, that is in scope of the PSI Directive, is giving the same types of end users the same types of rights through the Digital Public Space as well as through any other channel.

What is the legal status of the DPS?

The Digital Public Space would have to decide how it dealt not only with copyright law but these other bodies of law also. This would involve deciding the legal nature of the DPS itself, how that legal status relates to the contributing entities, what it would seek to do in regards to the content (host, link, mine, aggregate, allow reuse by third parties etc), what rights it would seek to acquire via licence, what services it would provide etc. *How the DPS is structured, what services it offers and therefore in sum what its potential liabilities are vis a vis the contributing bodies in the event of legal action is something to which close attention should be paid at the start of the project.*

Recent Case Law That May Be Pertinent if the DPS is just linking to content rather than aggregating/reusing

Svensson Case (C-466/12)

This case that relates to hyper-linking, and whether linking constitutes an act of communication to the public. Communication to the public is a restricted act in copyright law that relates in part to giving access to in-copyright material across the web. The decision which found against Svensson, (a Swedish journalist) is interesting in that it found the defendant not guilty because all the defendant was doing was linking to material that people already had access to on line. From this one can draw the conclusion that a hyperlink that links to material that certain people had not had online access to before would be an infringement of the act of communication to the public. This would be pertinent to the DPS where it was simply linking to material that was found to be an infringement, even if the material was being hosted on a third party website.

NLA v Meltwater / Infopaq

There have been a number of UK and European Court of Justice newspaper related cases recently that turn on whether the reproduction of even a small number of words (a snippet, a headline etc) is an infringement of copyright. The Infopaq case, which reflects historical British cases relating to newspapers, found that even the reproduction of as few as 11 words could be a copyright infringement. This again has potential repercussions where small snippets or even catalogues are being produced and shared.

13 - Issues That Need to Be Resolved Upfront

1. Who will own / how to license the “new IPRs” created?

A large online project such as that envisaged for the DPS will create new copyright, trademarks, registerable designs, database rights etc. In the formation of the DPS it will be important to decide who owns the new intellectual property. Once this is known it would be important to agree how to license this material. Questions that should be resolved include: Will it be proprietorially licensed? Will it be available under an open licence? If an open licence, which open licence?

Appendix 4 – Legal and governance issues report

2. *What actually is the DPS?*

Considerable investment in infrastructure, staff, licences, etc are needed to realise a Digital Public Space. Whether this is shared as part of existing public sector resources or whether a separate legal entity is required will have to be decided. The legal structure will affect many things including notably where legal liabilities lie.

In addition to this it may affect how to undertake licence clearances. For example in the case of transactional licences such as the Limited Online Music Licence it would probably be more cost effective for this to be taken out by the DPS, rather than by multiple contributing organisations. (The ability to do this may in turn affect where the content is hosted and whether the DPS needs to be a legal entity itself).

3. *What information law and licensing expertise does the DPS have?*

The public sector has varying levels of understanding and experience of managing effectively intellectual property and other information laws. The ramifications of this are significant ranging from costs of not managing their IP assets effectively, not doing rights clearance properly, effectively or not at all, not labelling or mislabelling the rights status of objects etc all which creates risk for the institution. When this is multiplied across a number of organisations it would create potentially quite significant liabilities for the DPS which is interacting with the provided content.

As the stated aim of the DPS is to allow individuals and potentially companies to actively use the content as a bare minimum the DPS will have to create a strict digital rights system in order to communicate the rights status of an object to users. It would also have to be decided whether the DPS becomes involved in the rights clearance, licence negotiations etc in order to ensure that the appropriate rights are being sought and therefore reduce the DPS's own financial and reputational liabilities.

4. *Who will own / how to license the “basic content” supplied to the DPS by contributing parties such as metadata, thumbnail images, sound and film previews etc?*

In order to function the DPS will have to have some level of content that it is free to reuse without having to renegotiate / clarify the rights associated with the object or the rights that have been passed on to DPS. Given the large number of organisations that have to be negotiated with it would be advisable to have a standard agreement with standard and unequivocal rights statements / digital rights structures expressed therein. For example Europeana has standard agreements that give it clear rights to use metadata and thumbnail images for any purposes of their choosing. e.g. Europeana use CC 0 for metadata.

Of course by acquiring intellectual property assets in this way, not only will the DPS reduce its own overheads by not having to go back to contributors to ask for permission to do things with this body of content, it will also create financial assets for the DPS in the form of the data it has licensed and that it can freely use.

Appendix 4 – Legal and governance issues report

5. *How to license and give access to “full content” that is being made available to the DPS by contributing parties (this could include both institutions as well as user generated content)?*

As stated above the DPS will have to have a well-formulated rights infrastructure that allows users to understand what they can do with a digital object they find. In addition to this depending on how the DPS is structured (i.e. whether the DPS hosts locally or links to content hosted elsewhere or a mixture of the two) a rights protocol will have to be developed and adhered to by contributors to ensure that the DPS can categorise submitted content into the appropriate category of rights. In turn the DPS will have to communicate this to its users.

If the DPS is to host user generated content it will also be vitally important to ensure that appropriate licensing terms are applied to this content by the DPS so the DPS as well as users are clear about the terms and conditions of reuse associated with this content. Stewardship and management of the type of content uploaded is also recommended to ensure that any offensive material is removed.

6. *How to make clear to users of the DPS what rights they have to reuse the content they find?*

(Wikipedia for example is best practice on this point as everything is clearly labelled public domain or CC BY SA).

If central to the vision of the DPA is the ability to reuse the content. this will require a well thought through rights model that contributors have to abide by and has to be actively monitored by the DPS. If this is not well monitored and applied to the metadata, downstream partners will be reusing materials that they have no right to. This will create liabilities for not only the partner but the DPS who will have facilitated any infringement by a third party.

In order to achieve this vision the DPS will have to not only have a system that displays rights information clearly to users, but have the rights information appearing consistently in metadata otherwise any API will not be able to operate.

7. *How will any IPR policies relate to similar initiatives such as Europeana, PubMedCentral, Digital Public Library of America, OpenAire etc?*

As outlined above there are many similarities between this proposal and other pre-existing web content offerings. It should be decided to what extent interoperability / standardisation at a technical and intellectual property rights level is required, necessary or desirable.

8. *What level of intervention and resource is required to ensure that the following bodies of law are not traversed?*

- a) Intellectual Property (copyright, database, trademarks etc)
- b) Privacy Law
- c) Data Protection
- d) Traditional Knowledge / Cultural Sensitivities
- e) Reuse of Public Sector Information Law
- f) Libel.

As a website giving access to content, or connecting to content that is hosted elsewhere, and facilitating others to extract and reuse content the DPS will be subject to many differing bodies of law, and where these information laws are traversed either infringing itself, or facilitating a third party to break the law.

Appendix 4 – Legal and governance issues report

Given that any publicly funded initiative should be as mindful as possible of not breaking the law a number of questions need to be answered as to the interplay between the roles and responsibilities of the DPS and the roles and responsibilities of partners and end users.

The different sectors involved have relatively little experience of publishing processes including rights clearance, digital rights database management, licensing etc. Combining this lack of experience and therefore inevitable legal risk into one centralised gateway such as the Digital Public Space compounds the overall level of risk exponentially. If this premise is accepted it would therefore be prudent for the DPS to decide:

- What level of financial liabilities can it bear?
- What level of risk does it feel it is able to take?
- What risk reduction strategies is it able to afford?

Risk Reduction

As a matter of course the DPS should implement a Notice and Takedown Policy and procedure. Depending on where the content is hosted different actions may have to be taken, and coordination with participating partners agreed if appropriate, but the ability to remove infringing / legally questionable material as quickly as possible is extremely important. Exactly how best to do this will depend on the final structure of the DPS and where the content is actually hosted.

It would be helpful if the DPS (linked to the Notice and Takedown procedure) develops terms of use that reflect the types of material that it will be hosting. User generated content for example requires its own type of specific treatment. If the material hosted contains material of a potentially controversial or sensitive nature (traditional knowledge, religious, ethnographic etc) it is strongly recommended that a statement explaining the sensitive nature of the content is developed and displayed alongside the material to which it relates.

To what extent the DPS is effective in promoting the reuse of content is integrally related to the rights status of the content, the communication of the rights status to users, how well these activities are done, and in turn what level of legal liability the DPS exposes itself to. The better and more rigorously rights are cleared, displayed correctly the more successful the product offering will be and the less legal liability the DPS will face.

In terms of efficacy of the project and minimising legal risk therefore the following questions are apposite:

1. ***Will the DPS limit content to only those types that have a clear rights status such as public domain or pre-licensed content?***

e.g. crown copyright or gold open access content under a creative commons licence.

This reduces the need for rights clearance, and creates for contributors and the DPS a simple rights and data model, however, it will severely limit the scope and impact of the DPS.

Appendix 4 – Legal and governance issues report

2. *Who will do rights clearance?*

If the DPS does the rights clearance it will ensure that in-copyright material is cleared correctly and displayed correctly within the rights management system thus reducing legal liabilities. If done by numerous organisations then the accuracy and usefulness of the work will be varied, and therefore exposing the DPS to varying and probably unquantifiable levels of risk. As highlighted above centralised rights clearance may also reduce the cost of licences as one licence taken out by the DPS may be cheaper than multiple organisations applying for the same licences.

3. *Who will take responsibility for handling or managing any legal issues?*

This in part will relate to how the DPS and its contributors structure the service, and how such issues are covered off in contracts but it is an issue that should be clearly thought through at the start of the project. Legal issues could range from those relating to copyright or data protection, through to complaints under the soon to be established complaints procedure relating to the Reuse of Public Sector Information Directive.

Conclusion

The DPS potentially faces many legal challenges from many different quarters – ranging from different bodies of law that can be infringed through to how best to approach licensing and rights clearance. In turn how the DPS is structured vis-a-vis its content providers will affect how great these liabilities are and how the DPS will need to structure any mitigation or legal action that are required.

In summary the following observations can be provided:

- A clear and precise rights model is required if DPS is aggregating, reusing, mining content and high level principles if merely linking
- An information law and licensing expert is needed to manage this
- A high level of rights clearance expertise is required if in-copyright material not pre openly licensed is to be involved
- The project needs to be aware of all information law issues and not just copyright.
- A risk assessment will need to be carried out to ascertain the legal issues and possible liabilities associated with the selected Governance model.

Appendix 4 – Legal and governance issues report

Notes

- 1 See SCA paper Digital Public Space Initiatives – Mission, Governance, Partnership and Licensing
- 2 Please note that there is some high profile litigation in this area particularly in the US with Google and the Hathi Trust.
- 3 The reproduction right relates to the right held by the copyright owner to authorise the copying of their work. The making available rights in the context of the internet relates to the right held by the copyright owner to authorise it being communicated to members of the public at a time or place of their choosing.
- 4 <https://www.dacs.org.uk/licensing-works/price-lists/public-galleries-museums-cultural-organisations/digital-engagement>
- 5 Please note that until PRS for Music applies to operate an Extended Collective Licence technically it is only legally able to offer a licence on behalf of its members, and composers that it is able to represent as a result of the licences it has with collecting societies in other countries.
- 6 The Copyright, Designs and Patents Act 1988 creates a few exceptions to moral rights in regards to the authors of a computer programme, type font and something created by a computer. Moral rights also do not apply to publications in newspapers, magazines, periodicals, encyclopaedia, dictionary, other works of reference and crown, parliamentary copyright and material produced by international organisations.

Appendix 5 – “Proof of concept” project proposal

The report recommends that the next step for the SCA is to commission a “proof of concept” project and sets out the rationale, scope and key participants for such a project. These are repeated here along with a more fully developed project proposal to illustrate more fully what would be involved, and as a starting point should such a project actually be initiated.

5.1 – Rationale

The recommendations of this Blueprint Report point to an area of activity in which a number of UK players and their international counterparts are already involved, albeit in addressing only elements of the solution space or on an exploratory basis. In engineering terms, there are a variety of useful working parts from which the machine might be designed and built.

Therefore, whilst there is no readymade solution in the wings, Option N identifies value in staging the opportunity to bring together these partners to explore, design and test the potential for a UK Digital Public Space.

This would offer key benefits in terms of practice, content and technology:

- Establishing a wider partnership
- Building on lessons learned
- Leveraging existing and currently committed investments
- Fast tracking proof of concept work
- Undertaking essential market testing

It would also have the potential to strengthen to any proposal arising by demonstrating value, mitigating risk and attracting attention from the variety of related funders and policymakers.

Initiatives that might be part of this effort include (alphabetically):

- Copyright Hub
- Europeana
- My Paintings – Public Catalogue Foundation, BBC
- The Research and Education Space project – BBC, BUFVC, Jisc
- Semantic web developments – British Museum, RLUK, Tate

5.2 – Project Scope

On this basis, we recommend a ‘Proof of Concept’ project (hereafter referenced as ‘the project’) that would be run on a time limited ‘start and finish’ basis. This would be tasked to

Appendix 5 – “Proof of concept” project proposal

In order to determine the feasibility of the type of Digital Public Space recommended in this report, the project will

1. Adopt a proof of concept platform suited to testing the intended outcome
2. Test critical issues and options relating to technology and standards selection, metadata, content and user experience
3. Develop a service definition with the related technical and operational implementation plan
4. Define the supporting services that would be required or recommended
5. Engage and communicate with appropriate stakeholders

Based on the resulting proposition, if any, the project will define and adopt

1. Name, mission and indicative brand
2. Scope in terms of aims, audience and content
3. Governance model and terms of participation
4. Long list the interested parties
5. Prospectus and business plan

Bearing in mind what needs to be achieved, this might reasonably be planned to run over no more than a 12 month period – for example in 2015, conveniently covering the period of the General Election and the implementation of the Europeana strategic plan, but reporting ahead of the BBC Charter renewal process.

5.3 – Participants

The project should involve three groups of organizations – those governing the project, those actively involved in proof of concept work and also high impact alliance partners outside the UK.

To keep this process agile and tightly focused, stakeholder representation from such as SCONUL and the Society of Chief Librarians are positioned separately under engagement.

Project Governance

It is recommended that the members of the SCA should take responsibility for the governance and the management of the project. Depending on other deliberations regarding the overall mission of the SCA, a Steering Group might extend beyond the six current SCA members.

For the purposes of this project it would be of value to consider, for example, the other UK national libraries, The National Archives, the British Museum and the Collections Trust.

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Proof of Concept Development Partners

Development partners should be selected on the basis of their willingness to commit human resources and knowhow to the process and its timeframe.

It would be a priority to secure the involvement of:

- BBC
- British Library
- Collections Trust
- Copyright Hub
- Jisc - including such as Archives Hub and Media Hub
- People's Collection Wales
- Public Catalogue Foundation
- Wellcome Library
- A BFI regional hub
- A gallery or museum – notably the Tate
- A public library - notably Birmingham or Manchester
- A university – notably the University of Oxford
- Arts Council England and the Heritage Lottery Fund, through nominated data-related initiatives that can contribute to practical proof of concept development

It would be desirable to involve:

- AIM25
- British Museum
- BUFVC
- National Libraries of Ireland, Scotland and Wales
- RLUK
- University of Sheffield (notably Humanities Research Institute)
- University of Sussex (notably Mass Observation Archive and The Keep)
- Potential funders not already engaged, such as the Arts and Humanities Research Council, the Technology Strategy Board, or Nesta.

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Alliance Partners

At this stage, it will be important to engage with organizations outside the UK that bring both service experience and thematically relevant content at scale with the potential to be consumed by a DPS (and vice versa). On account of the strong cultural content connections, the following are headlined as potential Alliance Partners.

- Digital New Zealand (National Library of New Zealand)
- Digital Public Library of America
- Europeana
- Open Discovery Space (EU_wide resource repository for schools)
- Trove (National Library of Australia)

In addition, it would be desirable to engage in dialogue with major digital publishers to understand how they might use a DPS and the issues this would raise.

5.4 – Stakeholder Engagement

Whilst this project represents a contained exercise to demonstrate practical feasibility, it will be important to include engagement of the wider stakeholder community at a number of levels.

However engagement of a more general user community may best wait until after the proof of concept activity is concluded and a service vision is agreed with some visibility of an actionable plan (or the initiative is closed down).

The communication plan should emphasise engagement with:

- Institutions that might contribute or consume content within the UK GLAM community
- School and post-compulsory education and open educational content developers Enterprises involved in creative media production
- Recipients of relevant grants from the Arts Council and the Heritage Lottery Fund
- Agencies involved in promoting UK heritage and tourism.
- Organizations representing leadership groups such as SCONUL and the Society of Chief Librarians

This project represents a steppingstone to a publicly shared undertaking and therefore recommended channels might include:

- Website, blog, newsletter
- Focus groups
- Open publication of relevant project documents
- User interface development competition

Appendix 5 – “Proof of concept” project proposal

5.5 – Project Work Plan

The following work items encompass the requisite activity.

Work item	Key deliverables
W1 - Define scope	PID, Web presence
W2 - Establish management and governance	Project plan, Steering Group, Project management
W3 - Agree terms of participation	Agreement document
W4 – Define and address issues and exclusions	Initial and ongoing log (Technical, Content, User Experience issues), collaboration tools
W5 - Recruit development and alliance partners	Signed agreements
W6 - Run stakeholder communications and engagement	Comms plan and actions, Stakeholder relationship management
W7 - Adopt POC service platform	Technical platform (for example RES)
W8 - Prototype service 1 - Technical track	Issues resolution, prototype development
W9 - Prototype service 2 – Metadata and content track	Issues resolution, content testing
W10 - Prototype service 3 - User Experience Challenge	Vanilla web interface addressing key areas, Competition to demonstrate opportunity
W11 - Develop service definition	Service definition covering technology, supporting services, contributors and users – for Day 1 and subsequent phases
W12 - Assess options	For each option - Outline business case, Costs, Implementation plan, Governance, Risks
W13 - Develop prospectus and business plan	For selected option - Full business case, Capital and revenue costs, Implementation plan, Governance, Terms of participation, Risk, Indicative brand values
W14 - Review and communicate progress	Bi-monthly public reports from the Steering Group

Appendix 5 – “Proof of concept” project proposal

5.6 - Project Funding

The Proof of concept project could be approached on the basis of each partner funding its own part (Option 1). Alternatively SCA partners could approach a funder such as the Technology Strategy Board with a rolling commitment to technical innovation (Option 2).

In either case it should be recognized that dedicated effort at centre will be required in two respects:

- Project Management including the key deliverables identified in Work Items 1-6 and 11-13
- Technical Coordination, including iterative development effort, which might be led by one partner, as required in Work Items 7-10

It is suggested that a more immediate start and a better longer term funding response (e.g. from such as TSB) will be achieved through undertaking initial work on a good will basis (Option 1). This might also provide a stronger test of participant commitment and less cause to compete for allocation of funds. For example, it is clear that for organizations as diverse as BBC, Jisc and Tate, there is an internal rationale for pursuing this practical line of enquiry under clear constraints.

Appendix 5 – “Proof of concept” project proposal

5.7 – Initial Issues Log

Based on the Blueprint study, the issues and exclusions log at start up should include the following headline items: (examples to be replaced in later draft)

Technical	
T1	Will success be hampered by an exclusive commitment to Linked Data? If so, what other supply methods could be supported?
T2	Will the service ever store content?
Content	
C1	Should the service take responsibility for rendering the content itself?
C2	Should the service be open to metadata only assets, for which no digital content is available, bearing in mind that large catalogues may imbalance the service experience?
C3	Should the service be open to metadata assets for which the content is behind an access restriction or pay wall?
C4	How should the service interact with controlled authorities for people, places and dates?
C5	Will the service support user / crowd editing of content?
C6	Should the service provide a home for ‘orphaned’ content where its prior curators are not in a position to host it?
UX	
U1	Should personalization be supported in forms such as ‘My Lists’?
U2	Should shared interactions be supported, such as reviews, ratings, lists, links and other annotations?
Rights	
R1	Should the service use electronic rights expressions to control access or just to inform users?
R2	Should the service link to rights management services where the content is not openly licensed?

Appendix 5 – “Proof of concept” project proposal

5.8 - Project Risk

The key risks for the Proof of Concept project (as distinct from the Digital Public Space itself) are identified as follows.

Risk	Severity	Likeli- hood	Total Score	Mitigation
1 - Lack of interest from development partners	5	2	10	Blueprint stage interviews and case studies indicate likely buy-in
2 - Lack of active commitment from development partners	5	3	15	Formal up front engagement process for ‘key’ players at senior levels
3 - Issues of principle become stumbling blocks (e.g. quality, licensing, technology)	4	3	12	Set principles out up front in Blueprint report and in engagement process
4 – Work delayed or derailed by major technical or operational issue	4	2	8	So long as it is not a matter of principle, the mechanisms exist for the type of work involved
5 – Critics develop a negative profile	3	3	9	Design engagement to preempt accusations through transparency and clarity of purpose
6 – Project scope cannot be contained	4	3	12	Clear PID with active project management and governance
7 – Positive outcome cannot be converted in to an operational reality	5	4	20	This will always be the biggest risk, which can only be mitigated through the skillfulness and connectedness of the leadership group
8 – Reputational risk arising from any of the above	4	2	8	The whole project approach directly addresses this risk

Appendix 6 – Acknowledgements

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