Thank you for the invitation to speak. Today I will provide some examples of cross-sector collaboration from the UK. I've also included some examples of different models for international collaboration. You'll know more about projects with Taiwanese collections or institutions than I will, and I'm looking forward to learning more in the discussion.
Collaboration through...

- MCG, MCN: informal support through practitioner groups
- Culture24's Let's Get Real: action research
- Finland100, BnF: selective digitisation
- Sharing audience data: MHM, Audience Agency segments
- UK Libraries taskforce
- Sector-wide approach: DCMS #CultureIsDigital
- Europeana – international collaboration on shared infrastructure

An overview of the examples I'll be looking at today
Museums Computer Group (MCG)
Museum Computer Network (MCN)
About me

- Worked in web/database/digital teams in Museum Victoria (Australia), Museum of London (UK), Science Museum Group (UK), British Library; freelance consultancy
- Chair of the Museums Computer Group (2011-2017)
- Member of Executive Council for the Association for Computing in the Humanities (2013-2017)

Informal collaboration through practitioner discussion: MCG, MCN
Combination of in-person events and discussion forums helps create community. As groups open to anyone interested, they connect the people responsible for devising strategies, implementing them by selecting or building software, running social media campaigns and education programmes, etc with each other. Wide-ranging discussions give people a sense of what other roles entail, and frequent job postings give people an opportunity to progress in their career and share experience between organisations.

<table>
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<th>Practitioner groups</th>
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<tr>
<td>• Museums Computer Group (1982, UK)</td>
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<td>• 'Connecting, supporting, inspiring museum technology professionals'</td>
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<td>• Annual conference and email discussion list - 1700 subscribers</td>
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<td><a href="http://museumscomputergroup.org.uk/">http://museumscomputergroup.org.uk/</a></td>
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<tr>
<td>• Museum Computer Network (1967, US)</td>
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<tr>
<td>• 'Advancing digital transformation in museums'</td>
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<td><a href="http://mcn.edu/">http://mcn.edu/</a></td>
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About 400 posts so far this year from a range of contributors. Archive goes back to 1998.

Effective in providing support and inspiration, at its best, but inconsistent – can depend on people being able to ask questions that both make sense to others and can be answered online. MCG committee worked hard to encourage constructive tone, discourage meanness on the list. The rest of the internet may be nasty, but the list should be a safer space. Less traffic as some conversation moved to social media, but still going very strong.

**MCG discussion list**

- Discussion forums: space for informal sharing of best practice, lessons learnt, new tech
- Sample subjects in July, August 2017:
  
  Bringing collections together, Digital Archives and Archaeology, intranets, eCommerce / Shopify, games in libraries, social media influencers, ticketing and membership systems, support for old web browsers, contactless donation, VR on a budget, maintaining gallery interactives, 3D digitisation, crowdsourcing, Minecraft, manuscript digitisation, rebranding

http://museumscomputergroup.org.uk/email-list/
Collaborating on research: Culture24's Let's Get Real action research projects

Began in 2010, also North American versions more recently.
Began in 2010, now includes projects in North America.

Organisations contribute funds but also staff time. It’s hard to find time to be more strategic or think about applying new methods to your work, but the 'action research' format means you are responsible for implementing some changes in your organisation. As an official work project, it’s easier to block out the time required. It also means you have the support of your peers. It provides a chance to stop and assess the effectiveness of practices you might take for granted.
The projects to date.

Phase 4: develop a more coherent approach to online publishing.

Phase 3: Is your content fit for purpose? Get better at using digital tactics and building their own digital capacity. We all need to be better at understanding changing audience behaviours and to re-evaluate our current use of digital tactics.

Phase 2 report's recommendations provide invaluable insights and are a snapshot of the wider struggle the cultural sector faces to significantly improve its digital services. The Social Media Framework - a framework that summarises the relevant social media measurement methodologies, metrics and tools, based on specific strategic objectives. Social media tools comparison – a comparison of the tools identified during the project that can be used to track different social media channels.
Some examples to make it more concrete... Each phase devised activities appropriate to the research question and participants
Two models for collaboration through digitisation. Digitising items of interest to a specific country or theme can be a more lightweight way of cooperating than building shared infrastructure together.
The Finnish Institute in London supported a Finnish researcher working in the library to select items suitable for digitisation. She also had the opportunity to observe work of a range of departments in the BL.

Working directly with the library makes it easier to select items, as checking for copyright, conservation needs and other restrictions can take a lot of time.
800 manuscripts from the years 700-1200 CE from the collections of the British Library and the Bibliothèque nationale de France. Original language is mostly French or Latin, so not easy for most of us to read! The websites created will help the general reader appreciate the manuscripts.

Using existing standards like IIIF (International Image Interoperability Framework, http://iiif.io/) means existing data mapping and publishing infrastructure can be used, and that the outputs can be re-used. It provides deep zoom and allows items to be embedded in other pages with all their metadata. There are a range of different viewers available for IIIF images, and the same image can be viewed in different viewers, depending on the user's needs, including annotating images and comparing images side-by-side (e.g. two manuscript versions of the same text). This is an example from the IIIF Mirador viewer.

In this example, an illuminated image was cut from a manuscript sometime in the past. Two different institutions might end up with part of the manuscript, but they can be recombined in the viewer to provide a view of the complete manuscript. (This also means the writing on the back of the image can be seen in the context of the whole page.)
Collaboration through sharing audience data: MHM, Audience Agency segments
Morris Hargreaves McIntyre created 'sector-specific segmentation system for culture and heritage organisations'. Not based on demographics, but on why people engage with cultural heritage. For a fee, you can include diagnostic questions in your visitor surveys to help understand who's visiting your venue (and who's not). Segments - groups of individuals with similar needs, wants, attitudes and motivations - can be targeted with specific marketing messages or products.

Find out more: http://mhminsight.com/culture-segments
Audience Agency 'Audience Finder'

- Organisations funded by Arts Council England must contribute data; Audience Finder site helps people prepare standardised data.
  - Surveys: demographics, motivations
  - Box Office data: how far in advance do people book, how many book together, how much do they spend, how often do they book?
  - Website: visitor profiles and locations

https://audiencefinder.org/about/

Seems particular useful for performing arts, especially touring companies who don't have their own box office etc systems.
They also have their own segments... 'Audience Spectrum profiles the population at household and post-code levels and can be used as a tool for prospecting and data-tagging as well as profiling and mapping.'

https://www.theaudienceagency.org/audience-spectrum
Department of Digital, Culture, Media and Sport (DCMS) also collect audience data. 'The Taking Part survey is a continuous face to face household survey of adults aged 16 and over and children aged 5 to 15 years old in England. It has run since 2005 and is the main evidence source for DCMS and its sectors. The survey’s main objectives are to:

• provide a central, reliable evidence source that can be used to analyse cultural and sporting engagement, providing a clear picture of why people do or do not engage.

• meet the needs and interests of everyone who uses Taking Part data.

• underpin further research on driving engagement and the value and benefits of engagement. The survey is commissioned by the Department for Culture, Media and Sport (DCMS) and three partner organisations (Arts Council England, Historic England and Sport England).

Background: https://www.gov.uk/guidance/taking-part-survey

Intra-sector collaboration: Libraries Taskforce
2014 report recommended the 'provision of a national digital resource for libraries, to be delivered in partnership with local authorities', and a taskforce to provide a strategic framework. Digital network could help with basic things like providing wifi; overcoming disadvantages of distance for rural libraries; provide efficiencies and better customer service through shared services.

'Our ambition is for everyone to:
- choose to use libraries, because they see clear benefits and positive outcomes from doing so
- understand what library services offer, and how they can make the most of what's available to them
- be introduced to new ideas and opportunities, then given confidence and quick and easy access to tools, skills and information they need to improve their quality of life
- receive trusted guidance through the evolving information landscape and build the skills needed to thrive in a changing world'

https://librariestaskforce.blog.gov.uk/2016/12/01/introducing-libraries-deliver/
As part of their work, 'establishing a core data set to support decision making'. 'We want the core dataset to be something which all library services will be encouraged to collect, use and publish. A consistent dataset can be used to help inform and improve local library service delivery, as well as being used for advocacy purposes at a local and national level (when aggregated). There may, of course, also be other data which authorities choose to collect in addition to this for their own local purposes.'
https://librariestaskforce.blog.gov.uk/2017/07/20/a-core-dataset-for-libraries/

'We want to show the impact of libraries around the 7 Outcomes described in Libraries Deliver: Ambition: cultural and creative enrichment, increased reading and literacy, improved digital access and literacy, helping everyone to achieve their full potential, healthier and happier lives, greater prosperity and stronger, more resilient communities.'
A sample of reporting with collected data e.g. libraries per head of local population, how far they have to travel to get to a library branch. https://england.librarydata.uk/
Single Library Digital Presence

Working towards a national 'standards-based digital platform', co-produced with library authorities, staff, readers to:

- Make libraries easier to find and use online, offline, increasing the number of people who can use the library; increasing how much each individual uses the library
- Help overcome the 'digital divide'
- Saving staff time; reducing costs


Report: 'a standards-based digital platform is the only viable technology for realising recent strategic goals articulated by leaders for England's public libraries' 'primary mode of service on this platform must be co-production -- among library authorities, and among library staff, national and local partners, and importantly, end users. We show how new digital divides have made the mission of libraries -- literacy, learning, and community inclusion -- as relevant as it ever was. And that in order to provide an energetic response, libraries must invite their users into their digital spaces: their catalogues, their websites, their ebook readers, their online events calendars. We argue that these two measures, a standards-based digital platform and co-production of services, will reinvigorate libraries and create substantial, tangible outcomes in literacy, digital and social inclusion, health, education, and economic participation'
UK government is keen on the 'digital economy'

Sector-wide approach: DCMS
#CultureIsDigital
#CultureisDigital is a conversation between Government, tech companies and the cultural sector, led by the Department for Digital, Culture, Media and Sport.

Background: https://librariestaskforce.blog.gov.uk/2017/07/13/cultureisdigital/
Responses: https://cultureisdigital.dialogue-app.com/
DCMS #CultureIsDigital

- Access and Participation
  - How can digital content and distribution support new forms of engagement and attract more diverse audiences?
- Cultural Infrastructure
  - How can we position the UK as a world leader in digitised collections and digital cultural content?
- Cultural Content and Technology
  - How can we encourage innovation between content and technology?
- Skills, IP and Business Models
  - How can we build the digital skills and capability needed to drive innovation and ensure financial resilience?

Using a website https://cultureisdigital.dialogue-app.com/ to collect responses to the four questions outlined above. Also have seconded experts to the project to lead discussion.
The consultation is still open, and this is a very quick and dirty analysis... Some findings in common with the Libraries report. There's a danger of siloed thinking about infrastructure, platforms, software as a service, as people post from their organisational perspective. Wider #CID project needs to ask when does it make sense to share infrastructure, and when is it more effective to work alone? Teasing out posts from the perspectives of performing arts organisations, archives, museums, etc, to understand where they appear to have commonality but don't, and where commonality exists but isn't immediately apparent will require some thought. It's still not clear when shared platforms for digitised content offer the most benefits across the sector (narrowly or broadly defined)? Who would benefit from a shared platform and who has the resources to manage bespoke systems? How should shared infrastructure be funded? Who's capable of building it and acting as a service provider to the rest of the sector?

How can you maximise the benefits of mixed ecosystems, where some orgs have their own digital services and others are yet to start? What lessons can we learn about data aggregation and the levels of support needed at the institutional level from Europeana and CultureGrid?

There are worries about failing to keep up with audiences (who arrive, smart phone in hand). Underlying questions like 'do you need tech expertise in-house?' 'What skills does the sector lack?' are intermingled with expressions of already being asked to do too much in the time available.

Looking through submissions, there's a tantalising sense that new audiences, better relationships are just out of reach, if only they (physical venues, cultural organisations) could find the right technology to reach them. Or somehow use the data they have more effectively... Is there an underlying worry about how to meet current goals more effectively without getting distracted by shiny new technologies? It's hard to get new tech right - look at all the money wasted on apps. However, perhaps the benefit of apps isn't always directly related to use, but lies in PR value of letting people know you exist and that you're not what they might expect.

Orphan works are those where the creator/rights holder is unknown or untraceable. Risk-averse organisations often won't put them online in case someone claims them.
International collaboration: Europeana

Explore 53,255,628 artworks, artefacts, books, videos and sounds from across Europe.

http://www.europeana.eu/
Here's a sample of search results for 'Taichung' - sound files recording frog species, fashion / social history items, library documents...

Began in 2005 as the 'European Digital Library', launched 2008 to share Europe's cultural heritage for 'enjoyment, education and research'
Europeana

• No direct digitisation. Aggregates metadata and thumbnails.
• Organisations had to figure out how to extract and share collections records with national or thematic aggregators.
• Tension between quality vs quantity of records
• Portal or platform?

'At Europeana we work with thousands of European archives, libraries and museums to share cultural heritage for enjoyment, education and research.'

Aggregation model can suffer when originating sites change their links, update or remove content - links back to the site may fail.

The Europeana model put all the work on the cultural heritage organisation, who may not have had the resources to map their internal metadata structures to Europeana's data model and figure out Z39.50 or OAI-PMH transfer protocols.

Funders had certain expectations which might have made the architecture less effective. Quantity useful for funders, quality better for users. A destination portal operates very differently than a platform upon which people could build services...
I'm not aware of many examples working with really 'big' data. However, there are some examples within the sector working with other research questions, commercial or outreach goals, so big data methods are all around us.
谢谢

Questions and comments?

Dr Mia Ridge @mia_out
Digital Curator, British Library

Chinese Association of Museums
Taipei, Taiwan, August 2017