We hope to learn as well as share our experiences in managing information relating to archives and collections and have some interesting conversation over the time we’re here.

So, you can see us puzzling at the unfinished Forth Rail Bridge (for those who don’t know it’s a famous feat of engineering and is just outside Edinburgh). This image reflects where we felt we had lots of positive projects and information about our collections but that the bridge and routes hadn’t yet been completed in terms of integrating practice, skills and systems.
Introduction
University of Edinburgh, like many big institutions, has experienced, change in the form of mergers, partnerships, drives for innovation and efficient working with the background of a world renowned research active academic programme. When considering the information and communication about the collections we had to take a step back and consider this landscape when thinking of what we could improve. We have world class collections but the information out there about them is scant and navigation around this information was at times disjointed and based in antiquated practice. As well as this what did we know about the skills, resources and people across all our disciplines that could partner up to make this change in collections and information management fit with the ambition of the University? We wanted to avoid the well-known professional discipline silos and to take the best practice approach from the archives, museums and library sectors in terms of gathering, organising, presenting and communicating to wider audiences information about our collections.
Where did we come from?
Rather than provide you with a narrative and timeline of what we did we’ll illustrate our practical approaches with two case studies. Before we hear from Norman and Claire about these, I’m going to set the scene.

There were a number of national and international projects and collaborations that collections teams were involved with (Archives Hub, Eurpoeana and others mentioned later). Major changes in for example the archival profession in the UK in the 2000s led to greater understanding and skills in applying technology for discoverability. Our team of experienced professionals with these skills was being built up across all three sectors and a change in culture and working practice was also being developed to reflect a more open, collaborative less ridged structured silo approach. Conversations were now pushing boundaries of mapping standards and data and there was a clear frustration that we weren’t able to communicate collections effectively out to a greater and more diverse audience.

Systems that were established were based sometimes on antiquated 19th century practice or over complicated processes through over strict interpretation of standards or professional practice. Our first case study will show how the European project catalyst drove a programme of discoverability forward to consider how we linked and shared our collections data. While our second will look at how we moved from an in house built system which had been scantily resourced to pioneering an internationally developed open source approach to archival cataloguing. To begin
with Norman will take you through some of the changes that allowed us to be creative and flexible in working culture, communication and practice to satisfy both organisational and user needs.
In 2012, we brought all our library and museum services under one division: **Library and University Collections**.

More importantly, out of this restructure came a vision for an ambitious and dynamic service with discovery of the collections at its heart.

Within this division, staff were split into four sections:

- Research and Learning Services,
- Collections Development and Access,
- Special Collections and Centre for Research Collections,
- Museums.

It was also decided to review services across the division and so four cross cutting groups were formed, each of which included team members from all of the sections. These looked at four key areas of our work:

- **Digital Asset Management**
- **Resource Description and Discovery**
- **Academic, Student, and Public Engagement**
- **Projects and Fundraising**

One of the key purposes of these groups was for all staff to look beyond the area that they worked in and to start thinking and working with a joined up approach.
across the whole division. This way we could help one another overcome obstacles, by bringing together technical expertise, specialised curatorial and subject based knowledge and project management skills to achieve a common goal.
To illustrate this we are going to focus on two case studies. I’m going to talk first about the work we did around the European funded MIMO project. MIMO stands for Musical Instrument Museums Online and between 2009-2011; the University of Edinburgh was the lead partner on this project.

But I’m going to start with a small confession: I have a problem with guitar shops.

So, my case study starts here... this is a guitar shop near where we work, called Live Music, and a couple of years ago I made the mistake of going inside, where I immediately saw this.
This is a Yamaha SG2000 and in the shop the card on the guitar said it was probably an early 1980s model. Now, I already had a Yamaha SG and I really didn’t need another one but mine was a newer model, much less well made than the earlier versions. I also made the fatal mistake of playing the one in the shop and knew immediately that this was a really lovely instrument.

So, armed with the serial number of the guitar I immediately went online and after a few minutes was able to establish that this was indeed a 1983 guitar. A short while later I became the proud owner of what is now my favourite guitar, with only one other problem to solve – how to explain my purchase to my wife...
Anyway, the reason I tell that story is to illustrate the difference between searching for information about a relatively modern instrument, with access to serial numbers, online catalogues etc. and trying to find the same level of information about historic instruments.

The University of Edinburgh has two musical instrument museums and a world class collection of instruments contained within them. However, until a few years ago there was no way to comprehensively search those collections online. We had online catalogues which were not fully searchable, and we had images and sound files which weren’t linked in any way to the text. Moreover the search facility we did have relied on specialist knowledge of the Hornbostel Sachs Classification system, a system for classifying musical instruments by number, developed in 1914 and not updated since.

The same problem existed in other musical instrument museums around the world and, within the networks that existed within that community various discussions had taken place about the need to find a solution but nothing had been done. So when we proposed the concept of MIMO we were able quickly bring together some of Europe’s most important musical instrument museums.

Essentially what we set out to achieve was to create a single access point to digital content and information on the collections of musical instruments held in European museums.
So, by bringing together the specialist knowledge of the museum curators and the technical expertise of development teams, the MIMO project enabled the digital content of nine major musical instrument museums from across Europe to be harvested from their collection databases and made available to all, both through Europeana and also via our own MIMO website.

The project also successfully established the technical infrastructure that facilitates the harvesting of each museum’s content into the MIMO database, held at the Cité de la musique in Paris, and on to Europeana and, alongside that, the classification and thesauri that underpins multi-lingual searching.

The project was a huge success and since it ended we have continued to expand the partnership so we currently have the content of twenty-two museums online. The aim now is to attract other museums to add their collections to MIMO and ultimately to reach a point where MIMO can become the single access point for information on musical instrument collections for the entire world.

Locally however, the end of the MIMO project brought into focus the inadequacies of our own system. As we still did not have a fully searchable website for collections discovery at the University of Edinburgh anyone coming to our site was faced with seriously outdated provision which failed to make use of the technology and resources that had been developed for MIMO and Europeana.
So at this point I will pass you on to Claire, our Library Digital Development Manager.
Now, moving on to the new sites have been developing within Library and University Collections at the University of Edinburgh.
Following on from the re-organisation we had an away day, where we mapped all the different objects, metadata and systems in use across L&UC. Today we are going to discuss a subset of these.
At the centre of this work was collections.ed.ac.uk a new service to showcase our world class collections.

However, this is not a standalone system as it needs to integrate with all the cataloguing tools for the specific types of material and also be available for harvesting by aggregators such as Europeana, MIMO, Archives Hub as well as internal systems such as our Library Management System’s discovery layer. It also needs to be easy to link to social media and be Googleable.

Collections.ed.ac.uk pulls together metadata from our Museums Collections System (Vernon) our archives system ArchivesSpace as well as digital objects, both digitised versions of physical objects and born digital.
The homepage of collections provides links to individual collection sites as well as a search and browse of the Collection Level Descriptions of the collections within Library and University Collections.
Archival data is currently being loaded into Archives Space, which we joined as the first European Members last year (2013). This open source archival cataloguing system is enabling Edinburgh to for the first time have one cataloguing location for all archival material and link it to other L&UC services.
We are linking the archival records to high resolution images in our image management system, LUNA and also associated video and audio files. These images and videos are all of the student revels held by the Edinburgh College of Art, one of our merged institutions.
Here is a copy of a high resolution image from the student revels.
Here is a film shot from the Edinburgh College of Art student revels.
The Library and University Collections division also includes the University Museums, which contain a large range of physical objects ranging from the Anatomy Collection to Zither’s in the Museum of Musical Instruments. Our museum objects are cataloged in Vernon which is very much an admin tool and not for public discovery, data is migrated from Vernon into ..
Collections Manager, which is a DSpace Repository (which has restricted access). This repository is the datastore for all our collections online and where we combine all the catalogue data and digital objects from our various systems. It is also the home for objects with no obvious system, e.g. our Exam Papers and Alumni records. It is used for administration and metadata mapping purposes and is not publicly available.

This instance of DSpace was originally created for the harvesting of our musical instrument collections by MIMO.
We then create different website for all our collections, which are easy to discover online and provide browsing and searching. This site is for our Musical Instruments and shows how we have learnt from the MIMO project about the value of easy to use websites. We use the Skylight PHP application developed by the Library Applications Development and Support Team at the University of Auckland, this open source software is available for download at https://github.com/skylightui/skylight
The individual record pages have been created for each collection in conjunction with the collection curators who know their audiences and data the best. This is very much a collaborative process. However, we also have placed a lot of emphasis on the digital objects which help the items come alive to audiences along with the high resolution images, audio recordings and video footage.
The Collection Level Descriptions are a gateway to the collection, linking to sub-collections, collection sites where possible, and our aim is to eventually, where possible, have websites displaying content for every CLD.
One of the advantages in this approach is that it allows us to have cross collection sites as well as those for individual collections. This is demonstrated in Exhibitions online, which contains records of oriental manuscripts, museum objects, rare books and art in one site.
Where possible the individual item page links to our other systems, such as LUNA.
Zoom in functionality within LUNA allows closer inspection of the images.
Conclusion
So, in conclusion, we’ve experienced a cultural shift in the way we manage, share and link our data driven by a real desire to communicate our collections in a more diverse way and to a wider and diverse audience while continuing the ensure we provide authoritative information. Combining existing skills and open minded working culture to learning new ones, including investigating approaches through collaboration and partnership, has strengthened and reinvigorated our thoughts and practice. Open minded positive professional compromise has led to some exciting conversations, experimentation and creativity in this. On the horizon we have a new library management system which we’ll be mapping to ArchivesSpace, digital image and media collections will be cross linked and our ability to be more interoperable with external partners has undoubtedly been extended. Enthusiastically sharing our collections has been the aim and we’ve now got the plan, the practice and mapped the skills for the future. We’re very excited about where this will take us and look forward to embracing new opportunities to make the most of the collections we have the privilege to care for.

So our ‘Forth bridge’ of collections information has been linked up, connected, has more routes and the flow of information is now happily moving along. As you can see we’re now happier with our bridges.
Please contact us with any questions:
Rachel Hosker, Merged Institutions Archivist, rachel.hosker@ed.ac.uk
Claire Knowles, Library Digital Development Manager, claire.knowles@ed.ac.uk
Norman Rodger, Projects and Innovations Manager, norman.rodger@ed.ac.uk