



Africa Programme

Programme pour l'Afrique

Digital Records Curation Programme
(DRCP) - English Version

Course Handbook

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Aim

To introduce students to ways in which digital technologies affect the management and exploitation of records.

Intended audience

The curriculum is intended for students with some knowledge of the fundamentals of archives and records management e.g. those in the second semester of a 1 year Masters or the second year of a 3 year undergraduate degree.

Learning Goals

At the end of this module, students will:

1. understand the impact of digital technologies on the nature and production of records and on records management and preservation
2. have seen and experienced some of the practical applications of digital technologies to record-making and record-keeping
3. be able to plan a digital records curation programme in a low-resource environment

Teaching and learning strategies:

Weekly classes will include an introductory lecture followed by group discussions and / or group work. Some classes will be led by practitioners with specific expertise. Students are expected to attend the classes having completed the preparatory activities, which may include readings, viewing audiovisual resources, studying documentation, participating in online tutorials and using other web-based resources, and undertaking preparatory tasks. In addition to the classes, there will be workshops, seminars and tutorials. Extensive independent study is expected.

Methods of assessment

Audiovisual / Multimedia Presentation	50% of module total Due in Week 11
Essay	50% of module total Due in Week 11

Timetable

Week 1	Class (1): <i>Digital Culture and the Information Society</i> Class (2) : <i>Digital Records – Authenticity and Reliability</i>
Week 2	Class: <i>Fundamentals of Computing</i> Workshop: <i>Introduction to Programming</i>
Week 3	Class: <i>Digital and Hybrid Records Management</i> Workshop: <i>File Profiling</i>
Week 4	Class: <i>Metadata</i> Seminar: <i>Metadata</i>
Week 5	Class (1): <i>Email Management</i> Class (2): <i>Cloud Computing</i>
Week 6	Class (1): <i>Digital Preservation</i> Class (2): <i>Information Security</i>
Week 7	Class: <i>Digital Repositories and Digital Records Appraisal</i> Tutorials: <i>Using Digital Preservation Software</i>
Week 8	Class: <i>Planning for Digitisation</i> Workshop: <i>Digitisation (Practical)</i>
Week 9	Class: <i>Providing Access - Description and Indexing</i> Seminar: <i>Low Cost Digital Preservation Strategies</i>
Week 10	Class: <i>Web and Social Media Archiving</i> Seminar: <i>Social Media Archiving and Personal Data</i>
Week 11	Class: <i>Records and Data</i> Workshop: <i>Data Curation</i>
Week 12	Class: <i>Blockchain</i> Screening: <i>Student video presentations</i>

Introduction

This module will introduce you to ways in which information and communication technologies have affected the management and exploitation of records now that records, and information generally, are created, accessed and stored digitally. As technology changes rapidly, so do the problems and challenges facing record-keepers in this environment. This module will allow you to investigate some of the ways in which archivists and records managers are able to protect, preserve and exploit digital records and information.

Week 1

Class (1): *Digital Culture and the Information Society*

Information permeates our cultural, economic, political and personal lives. This information is now largely digital. Cultures are (sometimes wholly) enacted through information technologies: mobile banking and blockchain technology have altered local and international trade; information activism and civic technologies have resulted in shifts of political power; and personal relationships are memorialised in digital photos and text messages. Evidence and memory are important ideas in this landscape. In Week 1, we will explore the broad concept of the information society and the place of records and archives within it.

Preparation:

Read:

Batchelor, S., 'Changing the financial landscape of Africa: an unusual story of evidence-informed innovation, intentional policy influence and private sector engagement', *IDS Bulletin*, 43:5 (2012), pp.84-90, available at <https://opendocs.ids.ac.uk/opendocs/ds2/stream/?#/documents/32171/page/1>.

Lipchack, A. and MacDonald, J. 'Electronic government and electronic records: e-records readiness and capacity building, an electronic discussion', *IRMT Discussion Paper* (2003), available at http://www.irmt.org/documents/research_reports/e_discussions/IRMT_ediss_readiness.pdf.

UNESCO, *Charter on the Preservation of Digital Heritage* (2003), available at http://portal.unesco.org/en/ev.php-URL_ID=17721&URL_DO=DO_TOPIC&URL_SECTION=201.html

Wamukoya, J., and J. Lowry, 'A regulatory framework for the management of records: assessments in Kenya, Uganda and Tanzania', *ESARBICA Journal*, 32 (2013), available at <https://www.ajol.info/index.php/esarjo/article/view/88543>.

Explore:

AfriLeaks <https://afrileaks.org>

Got To Vote <https://gottovote.cc>

SourceAfrica <https://sourceafrica.net>

Where My Money Dey? <http://wmmd.codeforafrica.org>

Watch:

Library of Congress, 'Software, it's a thing' (2014), available at https://www.youtube.com/watch?v=j6g_kYKo8WU. Matthew Kirschenbaum at the 2014 annual meeting of the National Digital Infrastructure and Preservation Program.

Edward Snowden for TED, 'Here's how we take back the Internet' (2014), available at https://www.ted.com/talks/edward_snowden_here_s_how_we_take_back_the_internet.

Plan:

Read the information in this handbook about the assessment for this module. The assessments are designed to encourage you to engage in independent research into digital records management and preservation, which will be essential throughout your career, given how rapidly the field is developing. Begin to plan your work, and in particular your assessments.

Further reading:

Feather, J., *The Information Society: A Study of Continuity and Change* (London: Facet, 2013).

Marques, F., 'Government and e-participation programs: a study of the challenges faced by institutional projects', *First Monday*, 15:8 (2010), available at <http://firstmonday.org/ojs/index.php/fm/article/view/2858/2583>.

Mayer-Schönberger, V., *Delete: The Virtue of Forgetting in the Digital Age* (Princeton, NJ: Princeton University Press, 2009).

McKemmish, S., 'Evidence of me', *The Australian Library Journal*, 45:3, 174-187 (1996), available at <http://www.tandfonline.com/doi/pdf/10.1080/00049670.1996.10755757>

UNESCO, *The Memory of the World in the Digital age: Digitization and Preservation, Conference Proceedings* (2012), available at: <http://www.unesco.org/new/en/communication-and-information/events/calendar-of-events/events-websites/the-memory-of-the-world-in-the-digital-age-digitization-and-preservation/>

Upward, F., Reed, B., Oliver, G., & Evans, J., 'Recordkeeping informatics: re-figuring a discipline in crisis with a single minded approach', *Records Management Journal*, 23(1), (2013), pp.37-50/

Virilio, P., *The Information Bomb* (New York: Verso, 2005), part available at http://people.ischool.berkeley.edu/~ryanshaw/nmwg/Virilio_Information_Bomb.pdf.

Webster, F., *Theories of the Information Society*, 4th ed. (UK: Routledge, 2014), available at

<https://books.google.co.uk/books?hl=en&lr=&id=jAQkAwAAQBAJ&oi=fnd&pg=PP1&dq=information+society+records&ots=BmbHI2iPJ6&sig=9SPDUbLWqrfVsOjYggQs0QkNQY#v=onepage&q=information%20society%20records&f=false>.

Week 1

Task:

Before the next class, create a gif that illustrates some feature of the information society. You can try using the following tools:

<https://giphy.com/create/gifmaker>

<https://imgflip.com/gifgenerator>

<https://ezgif.com/maker>

Upload and share your gifs on social media using the hashtag #InfoSoc

Week 1

Class (2): Digital Records – Authenticity and Reliability

The management and preservation of digital records aims to preserve not only the record as a digital object, but also the authenticity and reliability of the record. Authenticity and reliability are essential aspects of trustworthy records. This class will introduce you to the core concepts of trustworthiness, authenticity and reliability, and consider how these qualities can be established and preserved in digital records.

Preparation:

Read:

Digital Preservation Coalition, 'Preservation issues', *Digital Preservation Handbook*, available at <http://dpconline.org/handbook/digital-preservation/preservation-issues>.

Duranti, L., 'Archives as a place', *Archives & Social Studies*, 1:0 (2007), pp.445-466, available at http://archivo.cartagena.es/doc/Archivos_Social_Studies/Vol1_n0/07-duranti_archives.pdf. First published in *Archives & Manuscripts*, 24:2 (1996), pp.242-255.

Lynch, C., 'Authenticity and integrity in the digital environment: an explanatory analysis of the central role of trust', in Council on Library and Information Resources, *Report: Authenticity in a Digital Environment* (2000), available at <https://www.clir.org/pubs/reports/pub92/lynch.html>.

Reed, B. 'Records', chapter 5 in McKemmish, S., Piggott, M., Reed, B., & Upward, F., *Archives: Recordkeeping in Society*. Elsevier (2005).

Consider:

- When does data become a record?
- Where is the 'archival threshold' in the digital environment?
- Are traditional concepts of 'originals' and 'copies' useful – or meaningful – in the digital environment?
- What do you think will be the record-keeper's role in the management of digital records in the future and what do you think you need to know in order to fulfil this role?

Further reading:

Council on Library and Information Resources, *Report: Authenticity in a Digital Environment* (2000), available at <https://www.clir.org/pubs/abstract/reports/pub92>.

Duff, W., 'Issues of authenticity, social accountability, and trust with electronic records', *The Information Society*, 17:4 (2001), pp.229-31.

Duranti, L., *Diplomatics: New Uses for an Old Science* (USA: Scarecrow Press, 1998), part available at https://books.google.co.uk/books?id=pRDIiPHw_SwC&printsec=frontcover&dq=new+uses+for+an+old+science&hl=en&sa=X&ved=0ahUKEwivroa7r8rUAhWrAcAKHXbFCjkQ6AEIJDAA#v=onepage&q&f=false.

Duranti, L., 'From digital diplomatics to digital records forensics', *Archivaria*, 68 (2009), pp.39-66.

MacNeil, H., 'The reliability and authenticity of electronic records', in L. Duranti, T. Eastwood and H. MacNeil (eds.), *Preservation of the Integrity of Electronic Records* (Dordrecht, Netherlands: Springer, 2002), part available at <https://books.google.co.uk/books?id=pM8hBQAAQBAJ&pg=PT84&dq=macneil+trusting+records&hl=en&sa=X&ved=0ahUKEwjYr7qCsMrUAhWiF8AKHU2DAeUQ6AEILjAB#v=onepage&q&f=false>.

MacNeil, H., *Trusting Records: Legal, Historical, and Diplomatic Perspectives* (Dordrecht, Netherlands: Springer, 2000), part available at <https://books.google.co.uk/books?id=pe0sBAAAQBAJ&printsec=frontcover&dq=macneil+trusting+records&hl=en&sa=X&ved=0ahUKEwjG47KcscrUAhVjI8AKHQ7NB5AQ6AEIKDAA#v=onepage&q&f=false>.

Ohio State University. *Trustworthy electronic Records*, available at <https://library.osu.edu/osu-records-management/trustworthy-electronic-records>.

USA National Archives and Records Administration, *NARA Guidance on Managing Web Records*, available at <https://www.archives.gov/records-mgmt/policy/managing-web-records.html>.

Week 2

Class: *Fundamentals of Computing*

Find a guest lecturer for this class who is a specialist in computer science. Try the Computer Science department in your university or a university nearby, or else there may be someone in the university's Information Technology department who could give this lecture. If no one is available, look for relevant online tutorials and ask students to complete these during Week 2.

This session will introduce students to the basics of computer systems covering: general computer architecture; the basics of filestores and their operation; number representation for computation; an overview of problem solving through algorithms; an overview of the main programming paradigms, an overview of the basics of the world wide web, cloud computing and networking. The session will finish with an opportunity for students to pose any questions they may have about the basics of computing.

The class will be led by *[insert name and biography for guest lecturer]*.

Work with the guest lecturer to identify any viewing or reading that the students should do in advance of the class, and list them below.

Preparation:

Watch:

Read:

Further reading:

Week 2

Workshop: *Introduction to Programming*

Students should be encouraged to develop some basic knowledge of programming / coding. Determine if there is someone in your university who is offering or could offer introductory classes in programming. If it is not possible to give your students a face to face introduction to programming, encourage them to attempt the free online tutorials in Python, which is widely considered to be a simple programming language.

Begin with this free DataCamp.com Python tutorial

<https://www.datacamp.com/courses/intro-to-python-for-data-science/>

Then direct students to work through the exercises at:

<https://www.learnpython.org>

You may also find the Teach the Nation workshops useful:

<https://www.qa.com/about-qa/teach-the-nation/>

Week 3

Class: *Digital and Hybrid Records Management*

This week, we begin with an introduction to the terminology of digital records management. We will review the history of digital record-keeping systems and the move towards integration with other business systems, before studying international standards for record-keeping functional requirements. Finally, we will consider how to approach digital records management in low resource environments, where access to specialist software may not be possible.

Preparation:

Read:

International Council on Archives, 'Chapter 4: Implementing recordkeeping requirements', *Electronic Records: A Workbook for Archivists* (2005), available at: <https://www.ica.org/en/ica-study-n%C2%B016-electronic-records-workbook-archivists>.

International Records Management Trust, 'Introduction' and Units 1.2-1.3, *Training in Electronic Records Management – Module 1: Understanding the Context of Electronic Records Management* (2009), available at http://www.irmt.org/documents/educ_training/term%20modules/IRMT%20TERM%20Module%201.pdf.

Explore:

European Commission, *Modular Requirements for Records Systems (MoReq)*, available at: <http://www.moreq.info/specification>

Further reading:

Abbott, B., 'The state of electronic records management in South Africa: an overview', *ESARBICA Journal*, 20 (2001), pp.62-70.

Asogwa, B.E., 'The challenge of managing electronic records in developing countries: implications for records managers in sub Saharan Africa', *Records Management Journal*, 22:3 (2012), pp.198-211.

Brown, A., 'Introduction' and sections 1.3-1.7, *Practical Digital Preservation: A How-To Guide for Organisations of Any Size* (London: Facet, 2013).

Houghton, B., 'Preservation challenges in the digital age', *D-Lib Magazine*, 22:7/8 (2016), available at <http://www.dlib.org/dlib/july16/houghton/07houghton.html>.

LoC Sustainability of Digital Formats website:
<https://www.loc.gov/preservation/digital/formats/>

McGovern, N., and K. Skinner (eds.), *Aligning National Approaches to Digital Preservation – Proceedings* (USA: Educopia, 2012), available at <https://educopia.org/aligning-national-approaches-to-digital-preservation-2/>.

Ngulube, P., 'Strategies for managing digital records and documents in the public sector in sub Saharan Africa', paper presented at the 67th IFLA Council and General Conference (2001), available at <https://eric.ed.gov/?id=ED459780>.

Wamukoya, J., and S.M. Mutula, 'Capacity-building requirements for e-records management: the case in East and Southern Africa', *Records Management Journal*, 15:2 (2005), pp.71-79, available at <https://www.emerald.com/insight/content/doi/10.1108/09565690510614210/full/html?fullSc=1&mbSc=1&fullSc=1>.

Week 3

Workshop: *File Profiling*

Module convenors should timetable this workshop in a computer lab if one is available. Each computer should be capable of having DROID and JHOVE installed. DROID can be downloaded here: <http://www.nationalarchives.gov.uk/information-management/manage-information/preserving-digital-records/droid/> JHOVE can be downloaded here: <http://jove.openpreservation.org/> If a computer lab is not available, download DROID and JHOVE to an available PC and offer this as a tutorial in small groups. The important thing is for each student to have a chance to run DROID and JHOVE and see what the results look like.

In this workshop, we will complete some basic tasks using the Digital Record Object Identification (DROID) and JHOVE tools. DROID is a free software tool developed by the UK National Archives which performs automated file format identification of digital objects using information recorded in the PRONOM technical registry. JHOVE was developed by Stanford University to characterise files and provide technical metadata about individual digital objects.

Week 4

Class: *Metadata*

Metadata is data about data. In record-keeping, a record's metadata is a set of information about that record that allows us to understand the nature of the record and therefore manage, preserve and access it appropriately. Descriptive metadata refers to the content of a digital resource (i.e. title, date, author etc) and facilitates intellectual management, whilst technical metadata refers to technical characteristics (i.e. file format, file extension, checksum etc) and supports preservation management. Recording such information about digital objects provides a record of activities which have been performed upon the object, helps inform preservation decisions, and supports discoverability and use.

In this class, we will explore metadata in more depth, in order to understand how to create, manage, preserve and use it across time.

At the end of the class, students should be set the group task described below (p.17). The Week 4 seminar will need to be scheduled so that students have time to prepare their presentations.

Preparation:

Read:

Digital Records Pathways: Topics in Digital Preservation – Module 4: An Overview of Metadata, available at http://interpres.org/ip3/display_file.cfm?doc=ip3_canada_gs12_module_4_july-2012_DRAFT.pdf.

Digital Preservation in Lower Resource Environments: A Core Curriculum - Managing Metadata to Protect the Integrity of Records, available at <http://www.ica.org/sites/default/files/Metadata%20Module.pdf>.

Add here the relevant local metadata standard(s) for students to familiarise themselves with.

Further reading:

(UK) Archives and Records Association, 'Guide to Archival Standards', available at <http://www.archives.org.uk/about/sections-interest-groups/archives-a-technology/news-and-events.html>.

National Archives of Australia, 'Metadata', available at <http://www.naa.gov.au/information-management/managing-information-and-records/describing/metadata/index.aspx>.

Week 4

Task: Metadata

In this week's seminar, students will deliver presentations based on the material covered in the Week 4 lecture and readings.

Each group of students will be assigned a metadata standard (see slide in Week 4 presentation slides) and will make a presentation during the Week 4 seminar, explaining:

- The historical evolution of the standard
- The type of metadata it standardises
- What kind of objects it is intended for, in the case of standards for specific types of objects such as museum objects, artworks, datasets, etc.
- The structure of the standard
- The core elements in the element set
- Any controlled vocabularies or other tools that are associated with the standard
- The names of institutions that are using the standard, if possible with some examples of particular usages

If metadata standards are inaccessible, develop some general questions about metadata that the student groups should answer in their presentations. See, for example, the review questions given in *Digital Records Pathways: Topics in Digital Preservation – Module 4: An Overview of Metadata* (p.38).

The presentations should demonstrate the students' understanding of the answers to these questions through the inclusion of examples drawn from their own experiences of records and their metadata.

Week 4

Seminar: *Metadata*

In this seminar, student groups will make their presentations to the class. At the end of the presentations, students will be encouraged to critique the work presented.

Week 5

Class: Email Management

The lecture for this class is based on *Digital Records Pathways: Topics in Digital Preservation – Module 6: Email Management and Preservation*. It may be useful to set all or part of that module as required reading.

Although emails are much like any other digital record, for many organisations the practicalities of email management and preservation are difficult. This class will cover the key issues in managing and preserving email and relevant strategies that records professionals can employ within organisations.

Preparation:

Waugh gives an overview of the records management strengths and weaknesses of email systems. The papers from The National Archives (UK) and NARA (US) outline the rival policy adopted for the email of the governments of those two countries. The Mellon Foundation report gives an overview of the state of play with regard to the preservation of historically important email collections.

Waugh, A. Email - a bellwether records system *Archives and Manuscripts* 42 (2) pp 215-218 (2014). Also available at <https://rkroundtable.org/2014/06/30/email-a-bellwether-records-system/>

The UK National Archives, 'Email management', *Managing Digital Records Without an Electronic Record Management System* (2012), pp.44-54, available at <http://www.nationalarchives.gov.uk/documents/information-management/managing-electronic-records-without-an-erms-publication-edition.pdf>.

NARA. (2015). *White Paper on The Capstone Approach and Capstone GRS*. <https://www.archives.gov/files/records-mgmt/email-management/final-capstone-white-paper.pdf>

Andrew W. Mellon Foundation *The Future of Email Archives A Report from the Task Force on Technical Approaches for Email Archives* (2018) <https://www.clir.org/wp-content/uploads/sites/6/2018/08/CLIR-pub175.pdf>

Further reading:

Jason Baron provided the thinking behind NARA's Capstone approach to email (he served as attorney for NARA). The paper on defensible deletion of government email (Lappin et al) gives a critical evaluation of the approach of moving business emails out of email accounts. The paper on rival records management models (also by Lappin et al) looks at the Capstone approach through the lens of archival theory. The papers by Prom and Pennock give an overview of digital preservation practice in relation to email. The paper by Jaillant gives a researcher's perspective on the

frustrations of restrictions on access to email collections held by archives. The paper by Schneider et al gives five case studies of archives which have accessioned the email accounts of literary figures (and used ePadd open source software to process them).

Baron, J., and Attfield, S. "Where Light in Darkness Lies: Preservation, Sensemaking, and Access Strategies for the Modern Digital Archive," In Luciana Duranti & E. Shaffer (Eds.), *Proceedings of The Memory of the World in the Digital Age: Digitisation and Preservation. An international conference on permanent access to digital documentary heritage, 26-28 September 2012* pp 580-595
(2013) http://ciscra.org/docs/UNESCO_MOW2012_Proceedings_FINAL_EN_G_Compressed.pdf

Baron, J., & Thurston, A. (2016). What lessons can be learned from the US archivist's digital mandate for 2019 and is there potential for applying them in lower resource countries? *Records Management Journal*, 26. Issue, 206–217.

International Records Management Trust, 'Managing electronic mail', *Training in Electronic Records Management – Module 3: Managing the Creation, Use and Disposal of Electronic Records* (2009), pp.27-29, available at http://www.irmt.org/documents/educ_training/term%20modules/IRMT%20TERM%20Module%203.pdf.

Jaillant, L. After the digital revolution: working with emails and born-digital records in literary and publishers' archives *Archives and Manuscripts* 47(3)
(2019) <https://www.tandfonline.com/doi/full/10.1080/01576895.2019.1640555>

Lappin, J., Jackson, T., Matthews, G. *et al.* Rival records management models in an era of partial automation. *Archival Science* (2021).
<https://link.springer.com/article/10.1007/s10502-020-09354-9>

Lappin, J. Jackson, T, Matthews, G. Onoieharho, E. The defensible deletion of government email *Records Management Journal Vol. 29 No. 1/2, 2019*
<https://www.emerald.com/insight/content/doi/10.1108/RMJ-09-2018-0036/full/pdf?title=the-defensible-deletion-of-government-email>

Pennock, M., 'Curating emails: a life-cycle approach to the management and preservation of email messages', *DCC Digital Curation Manual* (2006), available at
<http://www.dcc.ac.uk/sites/default/files/documents/resource/curation-manual/chapters/curating-e-mails/curating-e-mails.pdf>.

Prom. C., *Preserving Email* (2nd Ed) Digital Preservation Coalition
Technology watch report. <https://www.dpconline.org/docs/technology-watch-reports/2159-twr19-01/file> 2019

J. Schneider, C. Adams, S. DeBauche, R. Echols, C. McKean, J. Moran & D. Waugh (2019) Appraising, processing, and providing access to email in

contemporary literary archives, *Archives and Manuscripts*, 47:3, 305-326, DOI: [10.1080/01576895.2019.1622138](https://doi.org/10.1080/01576895.2019.1622138)

Sigauke, D., C. Nengomasha and S. Chabikwa, 'Management of email as electronic records in state universities in Zimbabwe', *ESARBICA Journal*, 35 (2016).

Week 5

Class: Cloud Computing

The lecture for this class is based on *Digital Records Pathways: Topics in Digital Preservation – Module 8: Cloud Computing Primer*. It may be useful to set all or part of that module as required reading.

Cloud computing is being adopted by public and private organisations around the world, and it is already used by individuals to store and share personal data and records. But what is cloud computing? This class will explain the concept and underpinning technologies of cloud computing, before turning to the benefits and risks that come with cloud computing when used for records management, storage and preservation.

Preparation:

Read:

Beagrie, N., A. Charlesworth and P. Miller, *Guidance on Cloud Storage and Digital Preservation* (London: The National Archives, 2014), available at <http://www.nationalarchives.gov.uk/documents/archives/cloud-storage-guidance.pdf>.

Bushey, J., M. Demoulin, E. How and R. McLellan, *NA14 Cloud Service Provider Contracts – Checklist*, v.2 (2016), available at http://interparestrust.org/assets/public/dissemination/NA14_20160226_CloudServiceProviderContracts_Checklist_Final.pdf.

Convery, N., *Cloud Computing Toolkit: Guidance for Outsourcing Information Storage to the Cloud* (2010), available at www.archives.org.uk/images/documents/Cloud_Computing_Toolkit-2.pdf.

Hidalgo, J. R. (2013). *How Cloud Computing (SaaS) Supports an Electronic Document and Records Management Systems (EDRMS)*. Capstone Report, available at <https://scholarsbank.uoregon.edu/xmlui/bitstream/handle/1794/19749/Hidalgo2013.pdf>

Pan, W., J. Rowe and G. Barlaoura, *Records in the Cloud (RIC): User Survey Report*, v.10.1 (2013), available at http://recordsinthecloud.org/assets/documents/RiC_Oct232013_User_Survey_Report.pdf.

Further reading:

Askhoj, J., S. Sugimoto and M. Nagamori, 'Preserving records in the cloud', *Records Management Journal*, 21:3 (2011), pp.175-187.

Bailey, S., *Managing the Crowd: Rethinking Records Management for the Web 2.0 World* (London: Facet, 2008).

Borglund, E., 'What about trust in the cloud? Archivists' views on trust', *Canadian Journal of Information and Library Science*, 39:2 (2015), pp.114-127.

'Computing in the cloud: mitigating privacy, security, legal risks', *ARMA International Hot Topic* (2014), available at [http://bluetoad.com/publication/?i=242401#{"issue_id":242401,"page":0}](http://bluetoad.com/publication/?i=242401#{).

Duranti, L., and C. Rogers, 'Trust in digital records: an increasingly cloudy legal area', *Computer Law & Security Review*, 28:5 (2012), pp.522-531.

Guo, W., Y. Fang, W. Pan and D. Li, 'Archives as a trusted third party in maintaining digital records in the cloud environment', *Records Management Journal*, 26:2 (2016), pp.170-184.

Oliver, G., & Knight, S., 'Storage is a strategic issue: digital preservation in the cloud', *D-Lib Magazine*, 21(3/4) (2015)

Rao, C., M. Leelarani and Y.M. Kumar, 'Cloud: computing services and deployment models', *International Journal of Engineering And Computer Science*, 2:12 (2013), pp.3389-3392, available at <https://pdfs.semanticscholar.org/3cec/1ce42a554dd20dcf029789c5378d7bf57cbb.pdf>.

Rouse, M. (2017). *Cloud computing*, available at <http://searchcloudcomputing.techtarget.com/definition/cloud-computing>

Sobczak, A., 'Public cloud archives: dream or reality?', *Canadian Journal of Information and Library Science*, 39:2 (2015), pp.228-234.

Stancic, H., A. Rajh and H. Brzica, 'Archival cloud services: portability, continuity and sustainability aspects of long-term preservation of electronically signed records', *Canadian Journal of Information and Library Science*, 39:2 (2015), pp.210-227.

Stancic, H., A. Rajh and I. Milosevic, 'Archiving-as-a-Service: influence of cloud computing on the archival theory and practice', paper presented at The Memory of the World in the Digital Age: Digitisation and Preservation (2012), available at https://www.researchgate.net/publication/310452684_Archiving-as-a-Service_Influence_of_Cloud_Computing_on_the_Archival_Theory_and_Practice.

Week 6

Class: Digital Preservation

The first step towards a digital curation programme is understanding what kinds of 'stuff', and how much stuff, your organisation has and is likely to have in the future. In this class, we will look at approaches to understanding organisational needs, including digital preservation needs assessments, digital asset registers, and we will look at maturity models and consider how to plan for and develop digital preservation programmes on the basis of organisational needs. This will provide the context for the Week 9 task and seminar on low cost digital preservation strategies.

Preparation:

Read:

Dollar, C., and L. Ashley, *Digital Preservation Capability Maturity Model (DPCMM)* (2015), available at https://static1.squarespace.com/static/52ebbb45e4b06f07f8bb62bd/t/55a7ed87e4b016f840ba1adb/1437068679137/DPCMM+Background+and+Performance+Metrics+v2.7_July+2015.pdf.

International Records Management Trust, Unit 2.2-2.3, *Training in Electronic Records Management – Module 2: Planning and Managing an Electronic Records Management Programme*, pp.11-36, available at http://www.irmt.org/documents/educ_training/term%20modules/IRMT%20TERM%20Module%202.pdf.

NSW Government State Archives & Records, 'Step A – Preliminary investigation', *Designing and Implementing Recordkeeping Systems (DIRKS) Manual* (2018), available at https://media.opengov.nsw.gov.au/pairtree_root/0a/85/e7/7b/fd/3a/43/c3/87/fa/b7/c5/57/a8/24/b0/obj/Strategies_for_Documenting_Government_Business_the_DIRKS_Manual.pdf.

Further reading:

Cunningham, A., 'Good digital records don't just happen: embedding digital recordkeeping as an organic component of business processes and systems', *Archivaria*, 71 (2011), pp.21-34.

Digital Preservation Coalition, 'Business cases, benefits, costs, and impact', *Digital Preservation Handbook*, available at <http://dpconline.org/handbook/institutional-strategies/business-cases-benefits-costs-and-impact>.

Harries, S., 'Managing records, making knowledge and good governance', *Records Management Journal*, 19:1 (2009), pp.16-25.

International Records Management Trust, Unit 1.2-1.4, *Training in Electronic Records Management – Module 1: Understanding the Context of Electronic Records Management*, pp.15-45, available at http://www.irmt.org/documents/educ_training/term%20modules/IRMT%20TERM%20Module%201.pdf.

Week 6

Class: Information Security

Find a guest lecturer for this class who is a specialist in information security. Try the Computer Science department in your university or a university nearby, or else there may be someone in the university's Information Technology department who could give this lecture. There may also be information security specialists working in large companies, who may be able to provide a guest lecture.

Information security is a highly specialised field in its own right, but records managers and archivists should be aware of some of the basics. In this class, we will explore some fundamental concepts in information security, both physical and digital.

The class will be led by [insert name and biography for guest lecturer].

If it is not possible to find an appropriate guest lecturer, make use of the lesson plan and lecture slides in this toolkit.

Preparation:

Consider:

Following these blogs:

- Graham Cluley: <https://www.grahamcluley.com>
- Brian Krebs: <https://krebsonsecurity.com>
- Bruce Schneier: <https://www.schneier.com>
- Troy Hunt: <https://www.troyhunt.com>

Read:

The following National Cyber Security Centre (NCSC) Infographics - <https://www.ncsc.gov.uk/information/infographics-ncsc>

- Cyber Security: Small Business Guide
- NCSC Glossary
- Password Guidance
- 10 Steps to Cyber Security
- Common Cyber Attacks
- Bring Your Own Device

The following items from the SANS Reading Room (<https://uk.sans.org/reading-room>):

- "The Sliding Scale of Cyber Security" - <https://uk.sans.org/reading-room/whitepapers/analyst/sliding-scale-cyber-security-36240>The Sliding Scale of Cyber Security
- "Physical Security and Why It Is Important" - <https://uk.sans.org/reading-room/whitepapers/physical/physical-security-important-37120>

- "An Overview of Threat and Risk Assessment" - <https://uk.sans.org/reading-room/whitepapers/auditing/overview-threat-risk-assessment-76>

Further reading:

The following NCSC guidance:

- Risk Management collection - <https://www.ncsc.gov.uk/guidance/risk-management-collection>
- Information Risk Management: HMG IA Standard Numbers 1 & 2 - https://www.ncsc.gov.uk/content/files/guidance_files/IS1%20%26%202%20-%20Information%20Risk%20Management%20-%20issue%204.0%20April%202012%20-%20NCSC%20Web.pdf
- Phishing attacks: defending your organisation - <https://www.ncsc.gov.uk/phishing>
- Get the basics right: risk management principles for cyber security - <https://www.ncsc.gov.uk/guidance/get-basics-right-risk-management-principles-cyber-security>
- "Keeping your smartphones (and tablets) safe" - <https://www.ncsc.gov.uk/guidance/keeping-your-smartphones-and-tablets-safe>
- "The principles of supply chain security" - <https://www.ncsc.gov.uk/guidance/principles-supply-chain-security>
- "An introduction to malware" - https://www.ncsc.gov.uk/content/files/protected_files/guidance_files/An-introduction-to-malware.pdf

Week 7

Digital Repositories and Digital Records Appraisal

Ideally, this class would be delivered by an expert who has practical experience of implementing and running a digital repository. Consult the National Archives in your country to see if they have someone planning or operating a digital repository that conforms to the OAIS model. If the National Archives has not started work in this area, consider approaching large private companies or academic libraries, which often have more resources and may be operating a digital preservation software such as Preservica or Archivematica.

If it is not possible to find an appropriate guest lecturer, make use of the lesson plan and lecture slides in this toolkit.

Good practice digital records management is aimed at managing records during active use. Inevitably, some of those digital records will need to be preserved as digital archives. There is a great deal of work underway in archives of all kinds, universities, and various professional communities to find ways to preserve digital archives. In this lecture, [insert name and job title of guest lecturer], will provide an introduction to digital repositories and ingest processes, and explain the current situation at the national level in [insert name of country].

Preparation:

Read:

International Council on Archives and International Records Management Trust, 'Lesson 2 – Digital records preservation initiatives', *Digital Preservation in Lower Resource Environments – Understanding Digital Records Initiatives* (2016), available at http://www.ica.org/sites/default/files/Digital%20Preservation%20Initiatives%20Module_0.pdf.

Lavoie, B., *The Open Archival Information System Reference Model: Introductory Guide*, 2nd ed. (Digital Preservation Coalition, 2014), available at <http://www.dpconline.org/docman/technology-watch-reports/1359-dpctw14-02/file>.

Ngoepe, M. and Nkwe, M., 'Separating the wheat from the chaff with the winnowing fork. The eeny meeny miny mo appraisal approach of digital records in South Africa', *Records Management Journal* (2018) Vol. 28, No. 2, pp. 130-142, available at: www.dx.doi.org/10.1108/RMJ-09-2017-0027

Try:

Decision Tree for Selection of Digital Materials for Long-term Retention: <https://www.dpconline.org/handbook/organisational-activities/decision-tree>

Further reading:

Bantin, P.C. (ed.), *Building Trustworthy Digital Repositories: Theory and Implementation* (USA: Rowman & Littlefield, 2016), part available at https://books.google.co.uk/books?id=I0V5DAAAQBAJ&printsec=frontcover&source=gbs_ge_summary_r&cad=0#v=onepage&q&f=false.

Caroll, L., E. Farr, P. Hornsby & B. Ranker, 'A comprehensive approach to born-digital archives', *Archivaria* 72 (2011), pp.61-92.

International Records Management Trust, Unit 4.3, *Training in Electronic Records Management – Module 4: Preserving Electronic Records* (2009), pp.33-46, available at http://www.irmt.org/documents/educ_training/term%20modules/IRMT%20TERM%20Module%204.pdf.

Week 7

Tutorials: *Using Digital Preservation Software*

If your institution uses digital preservation software, work with the archivist / curator / system administrator to develop an exercise covering:

- ingest
- access
- dissemination

If your institution does not have digital preservation software, consider approaching software vendors about demo versions. If there are technical, legal or commercial issues with this, consider approaching public or private sector organisations that are using digital preservation software with a proposal to offer training to your students.

If none of these alternatives are possible, have the students complete the University of London's free online course 'A Beginner's Guide to the OAIS Reference Model' available at <https://dptp.london.ac.uk/course/index.php?categoryid=13>. Students will work through this at different speeds, so you might prefer to set this as an independent task, rather than a timetabled activity.

Week 8

Lecture: Planning for Digitisation

In collaboration with [insert name of institution that will host digitisation workshop], we will spend this week looking at digitisation. In the lecture, we will explore the issues that need to be considered in planning and managing a digitisation project, including resourcing, legal and technical issues. [Insert name of curator] will then provide an introduction to the collections you will be digitising in the workshop, described below.

Preparation:

Read:

Digital Preservation Coalition, 'Creating digital surrogates', *Digital Preservation Handbook*, available at <http://dpconline.org/handbook/organisational-activities/creating-digital-materials>.

Okwaro, D., 'Digitization of libraries/archives and development', paper presented at the First International Conference on African Digital Libraries and Archives (ICADLA-1) (2009), available at <http://wiredspace.wits.ac.za/bitstream/handle/10539/8930/15%20Okwaro.pdf?sequence=1&isAllowed=y>.

Watch:

SABC Digital News, 'Fort Hare University on digitisation drive of their archives' (2016), available at <https://www.youtube.com/watch?v=ELSXfyQ9W1A>.

UK Parliament, 'Parliamentary archives: the digitisation process' (2016), available at <https://www.youtube.com/watch?v=0p3-v0rp1rc>.

Further reading:

Bulow, A.E., and J. Ahmon, *Preparing Collections for Digitisation* (London: Facet, 2010).

Deacon, H., 'Involving archive users in digitizing archival collections', *The Archival Platform Blog* (2010), available at http://www.archivalplatform.org/blog/entry/involve_users/.

Federal Agencies Digital Guidelines Initiative (FADGI), *Guidelines*, available at <http://www.digitizationguidelines.gov/guidelines/>. This website provides thorough guidelines for a number of digitisation activities.

Garaba, F., 'Preparing collections for digitisation: The case of religious archives in Pietermaritzburg, KwaZulu-Natal, South Africa,' *Verbum et Ecclesia* (2014) 35(1). DOI: <https://doi.org/10.4102/ve.v35i1.1319>

Ghobrial, R.A., and S.M. Sharif, 'Planning for building Digital Memory of the Sudan (DMS)', paper presented at the First International Conference on African Digital Libraries and Archives (ICADLA-1) (2009), available at <http://wiredspace.wits.ac.za/bitstream/handle/10539/8945/30%20Ghobrial%20%26%20Sharif.pdf?sequence=1&isAllowed=y>.

Marchionni, P., 'Why are users so useful?: User engagement and the experience of the JISC Digitisation Programme', *Ariadne*, 61 (2009), available at <http://www.ariadne.ac.uk/issue61/marchionni/>.

Pickover, M., 'Contestations, ownership, access and ideology: policy development challenges for the digitization of African heritage and liberation archives', paper presented at the First Conference on African Digital Libraries and Archives (ICADLA-1) (2009), available at <http://wiredspace.wits.ac.za/bitstream/handle/10539/8929/14%20Pickover.pdf?sequence=1&isAllowed=y>.

Week 8

Workshop: Digitisation (Practical)

Using some of the specialist equipment in the [insert name of host institution] digitisation suite, you will carry out some digitisation work on each of the following collections. The staff of the [host institution] will guide you through the established digitisation workflow, covering material handling, imaging and metadata capture. Be sure to keep copies of some of the digital surrogates that you produce, as you will use them to create an online exhibition.

[Insert descriptions of materials to be digitised].

Week 8

Task: Online Exhibitions

Start with some background reading:

Leong Chee Khoo, Chennupati K. Ramaiah, Schubert Foo, 'The design and development of an online exhibition for heritage information awareness in Singapore', *Program*, 37:2 (2003), pp.85-93, available at https://www.ntu.edu.sg/home/sfoo/publications/2003/2003Program1_fmt.pdf

Martin R. Kalfatovic, *Creating a Winning Online Exhibition: A Guide for Libraries, Archives, and Museums* (Chicago: American Library Association, 2002), chapters 1-3, available at <http://www.nyu.edu/projects/sanger/CDH/kalfatovic.pdf>

Chern Li Liew, 'Online cultural heritage exhibitions: a survey of strategic issues', *Program*, 40:4 (2006), pp.372-388, available at https://www.researchgate.net/profile/Chern_Li_Liew/publication/235308803_Online_cultural_heritage_exhibitions_A_survey_of_strategic_issues/links/55cd388c08ae1141f6b9edb3.pdf.

Most of the literature concerning online exhibitions dates to the 2000s, around the time online exhibitions were gaining recognition as a wide-reaching and easy to develop means of exhibiting collections. Whilst the specific technology referred to in these readings is now largely outdated, their discussions of understanding and meeting user requirements, how to apply curatorial practices to online exhibitions, and factors for successful exhibitions remain relevant and useful.

Create an account with www.omeka.net

Using your digitised records from this week's workshop, you will design and create an online exhibition. Drawing on the readings listed above, develop a concept for your exhibition, keeping in mind your target audience. On the Omeka website, create a site and a collection for your exhibition.

When adding items to be displayed in your exhibition, fill out the metadata elements according to the Dublin Core standard; the 'Description' field may be used as the main exhibition item label. An explanation of the elements of Dublin Core may be found here: <http://dublincore.org/documents/dces/>. You can use the UNESCO Thesaurus as a controlled vocabulary for your metadata input: <http://vocabularies.unesco.org/browser/thesaurus/en/>

Edit the appearance, layout and navigation of your site as you choose. Some key considerations for developing an online exhibition include:

- What is the concept for your exhibition? Is it based around a theme or event, or is it a showcase of collection 'treasures'?
- What is your target audience and what are their likely requirements and preferences?

- What message are you aiming to convey?
- How much text is required to contextualise the visual elements of the exhibition?
- Will you include questions in the text to encourage audience engagement?

When you've finished, email the link to your exhibition to the course convenor, with a brief explanation of how you have developed your exhibition, which target audience you had in mind, and how you have designed the exhibition to meet their needs.

Week 9

Class: Providing Access: Description and Indexing

This week will explore ISAD(G), Encoded Archival Description, Encoded Archival Context, the Text Encoding Initiative and Linked Data, including a practical session using EAD. Areas for discussion:

- What has been the impact of technology on archival description?
- What is the value of EAD versus cataloguing software such as CALM?

Preparation:

Read:

Pitti, D., 'Creator description: Encoded Archival Context', available at <http://harep.org/Documentr/g.pdf>

EAC-CPF Homepage: <http://eac.staatsbibliothek-berlin.de/>. Information about EAC and the EAC schema.

Watch:

There are a number of EAD demonstrations and tutorials available on Youtube, including Jules Filipki, 'EAD Metadata Schema', available at https://www.youtube.com/watch?v=4iws_OQDwOk and Online Archive of California Screencast: 'Encoded Archival Description Repository Demonstration', available at: <https://www.youtube.com/watch?v=ogMtRfSIP6w>

Further reading:

Cox, R. et al, 'Machines in the archives: technology and the coming transformation of archival reference', *First Monday*, 12:11 (2007), available at <http://www.uic.edu/htbin/cgiwrap/bin/ojs/index.php/fm/article/view/2029/1894>.

Peters, V., 'Developing archival context standards for functions in the higher education sector', *Journal of the Society of Archivists*, 26:1 (2005), pp.75-85.

Ruth, J.E., 'Encoded Archival Description: A structural overview', *American Archivist*, 60:3 (1997), pp.310-29.

International Council on Archives, Records in Contexts Conceptual Model, available at: <http://www.ica.org/en/egad-ric-conceptual-model>

Week 9

Task: Low Cost Digital Preservation Strategies

Between Week 9's class and Week 9's seminar, work in groups to develop low cost digital preservation strategies. Identify the components of the strategy on the basis of the recommendations of the National Digital Stewardship Alliance's 'Levels of Digital Preservation', available at <http://ndsa.org/activities/levels-of-digital-preservation/> The strategies should be developed for an organisation without a big budget – think about what you can do with limited resources.

This is an opportunity to demonstrate the knowledge you have gained in the classes to date. Consider material covered in class, as well as the assigned readings. You will present your strategies in the seminar.

Week 9

Seminar: Low Cost Digital Preservation Strategies

In this seminar, student groups will present their strategies to the class. At the end of the presentations, students will be encouraged to critique the strategies presented.

Week 10

Class: *Web and Social Media Archiving*

The lecture for this class is based on *Digital Records Pathways: Topics in Digital Preservation – Module 7: Management and Preservation of Records in Web Environments*. It may be useful to set all or part of that module as required reading.

The good man from Lanet Umoja, Nakuru North District, sent out a tweet to his near 65,000 followers saying; “Kwa kihanda nyumbani kuna moto kubwa sana majirani saidieni tafadhali. Pale karibu Umoja 2” (There’s a big fire at Kihanda’s home, neighbours please help. It’s at Umoja 2.)

The residents, many who subscribe to his tweets through a free text messaging service, jumped into action just in time and saved the family. The tweet received just six retweets but the SMS service proved to be the lifesaver.

<https://citizentv.co.ke/news/a-chief-kariuki-tweet-saved-a-family-in-nakuru-187676/>

This use of Twitter by Chief Kariuki, the ‘Tweeting Chief’, in mobilising his community demonstrates the social significance of social media. When so much social interaction, debate and information dissemination takes place over social media, capturing and preserving web-published information becomes vital for accountability and memory. The content of social media platforms makes them a rich source for study across various fields.

In his *Archiving Websites: A practical guide for information management professionals*, Adrian Brown observed that the ‘ease with which content can be made available via the web, combined with the fragility of that content in a world of constant technological change, engenders an information environment which can be positively hostile to long-term sustainability’ (p.3). Technological change is one threat; the active removal of content is another. Text can be altered, pages taken down, links removed. Poor management and lack of resources also pose risks to the persistence of web content. This lecture will consider solutions for preserving web content.

Preparation:

Read:

Tom Storrar, ‘Archiving social media’, *The National Archives blog* (8th May 2014), available at <http://blog.nationalarchives.gov.uk/blog/archiving-social-media/>

Rakesh Madhava, ‘10 things to know about preserving social media’, *Information Management* (Sep-Oct 2011), available at <https://www.questia.com/magazine/1G1-271050072/10-things-to-know-about-preserving-social-media>

The National Archives, *Web Archiving Guidance* (London: The National Archives, 2011), available at <https://nationalarchives.gov.uk/documents/information-management/web-archiving-guidance.pdf>

NCSU Libraries, 'Facebook and Twitter personal archives', available at <https://www.lib.ncsu.edu/social-media-archives-toolkit/collecting/facebook-and-twitter-personal-archives>

Watch:

IIPC, 'Web archiving and the IIPC' (2015), available at <https://www.youtube.com/watch?v=wG7dRjtGWDk>

Try:

Internet Archive Wayback Machine <http://www.archive.org/web/web.php>

Further reading:

Australia, State Archives and Records Authority of New South Wales. *Keeping web records*, 2015, available at <https://www.records.nsw.gov.au/recordkeeping/advice/keeping-web-records>

Barone, F., D. Zeitlyn and V. Mayer-Schonberger, 'Learning from failure: the case of the disappearing Web site', *First Monday*, 20:5 (2015), available at <http://firstmonday.org/ojs/index.php/fm/article/view/5852/4456>.

Bragg, M and Hanna, K. *Web archiving life cycle model*, 2013. The Archive-It Team, Internet Archive, available at http://ait.blog.archive.org/files/2014/04/archiveit_life_cycle_model.pdf

Brown, A., *Archiving Websites: A practical guide for information management professionals* (London: Facet, 2006).

Jeffery, S., 'A new digital dark age? Collaborative web tools, social media and long-term preservation', *World Archaeology*, 44:4 (2012), pp.553-570.

Pennock, M. *Web archiving*. DPC Technology Watch Report 1 March 2013. DOI: <http://dx.doi.org/10.7207/twr13-01>

PBS News, 'Internet history is fragile: This archive is making sure it doesn't disappear', *PBS Newshour Online* (2017), available at <http://www.pbs.org/newshour/bb/internet-history-fragile-archive-making-sure-doesnt-disappear/>.

Raynes-Goldie, K., 'Aliases, creeping, and wall cleaning: understanding privacy in the age of Facebook', *First Monday*, 15:1 (2010), available at <http://journals.uic.edu/ojs/index.php/fm/article/view/2775/2432>.

USA National Archives and Records Administration (NARA), *Best Practices for the Capture of Social Media Records* (2013), available at <https://www.archives.gov/files/records-mgmt/resources/socialmediacapture.pdf>.

Watzman, N., 'Internet Archive's Trump Archive launches today', *Internet Archive Blog* (2017), available at <http://blog.archive.org/2017/01/05/internet-archives-trump-archive-launches-today/>.

Week 10

Task: Your Social Media 'Archive'

Given the vast quantity of personal data held on social media platforms, many providers, notably Facebook and Twitter, allow users to download their personal account archive. In this week's seminar we will analyse our own social media archives and discuss the purpose of social media archiving and the issues related to personal data being held by social media platforms.

The following instructions for downloading your social media 'archive' were correct at the time of writing, but they may have changed. If so, work out how to access the data, and make a note of what you do, so that you have up to date guidance.

Using your own Facebook account, log in and then navigate to 'Settings' and select 'Download a copy of your Facebook data' within the 'General' settings tab. Select 'Download archive' and you will receive an email containing a zip file of your account data. When you open the zip file, open the 'html' folder, and open each html file to view your account data archive.

To access your Twitter archive, log into your account and navigate to 'Settings and privacy'. Under 'Content' request 'Your Twitter archive'. You will receive an email directing you to download a zip file online. Once you have opened the zip file, select 'index.html' to view your Twitter archive. You can also open 'tweets.csv' to view a table of all your Tweets.

If you do not have Facebook or Twitter accounts, see if you can access 'archives' of your other social media profiles. If you do not use social media, come to class having reflected on what informed this choice. Are you concerned about privacy, access to mobile data / bandwidth, access to technology?

Week 10

Seminar: Social Media Archiving and Personal Data

In this seminar, we will discuss social media use, archiving and issues of privacy and legacy. Questions for discussion:

- Were you surprised by the contents of your own social media archives? Was there more or less sensitive data in them than you expected? Did the results raise any concerns for you?
- Why might individuals want to preserve their personal social media archives? How does this differ from the requirements of organisations or public bodies to archive their social media accounts?
- How does the preservation of social media accounts compare to keeping analogue personal or family records (photographs, memorabilia etc)?
- The Facebook and Twitter account archives are presented as basic html files, so appear differently from how account profiles appear online. How does that affect the authenticity of these archives and their use as records?
- What privacy and data protection concerns emerge from the amount of personal data social media platforms hold about individuals?

Week 11

Class: Records and Data

The open data movement aims to give people access to, and the ability to compare, freely accessible data to enable them to monitor what their governments are doing and how money is being spent, and to hold public officials accountable. There is great hope that data will provide the key to transparency, accountability, anti-corruption and citizens' rights. In 2012, the UK minister then responsible for Open Government, Rt Hon Francis Maude, Minister of State for the Cabinet Office (UK), noted:

Open data drives growth and prosperity. Data is the raw material of the 21st century and a resource for a new generation of entrepreneurs. But transparency is not just about economics. Transparency shines a light on underperformance and inefficiencies in public services. It allows citizens and the media to hold governments to account, strengthening civil society and building more open societies.¹

Chris Anderson of WIRED Magazine has made similar claims about the implications of 'big data' for knowledge creation. This new focus on data as a resource for social and economic development has wide-reaching effects, not least on the distribution of resources for information management. Is there a role for records and record-keepers in these initiatives? What can we contribute, and how should we engage with them?

Preparation:

Watch:

Berners-Lee, T., *The next web*, 2009:

https://www.ted.com/talks/tim_berniers_lee_on_the_next_web

Berners-Lee, T., *The year open data went worldwide*, 2010:

https://www.ted.com/talks/tim_berniers_lee_the_year_open_data_went_worldwid_e?language=en

Read:

Davies, T., and Z. Bawa, 'The promises and perils of open government data', *Journal of Community Informatics*, 8:2 (2012), available at <http://ci-journal.net/index.php/ciej/article/view/929/955>.

Anderson, C., 'The end of theory: the data deluge makes the scientific method obsolete', *Wired* (2008), available at <http://www.wired.com/2008/06/pb-theory/>.

¹ Shadbolt, N., *Happy Birthday OGP*, accessed 31 August 2019. Available at: <http://oldsite.theodi.org/blog/happy-birthday-ogp>

Further reading:

Kitchin, R., *The Data Revolution: Big Data, Open Data, Data Infrastructures & their Consequences* (California: SAGE Publications, 2014), available at <https://books.google.co.uk/books?hl=en&lr=&id=GfOICwAAQBAJ&oi=fnd&pg=PP1&dq=open+data&ots=pczjRXUiXW&sig=tYsF2ogiLIFakVSWWhjYhErqdx5c#v=onepage&q&f=false>.

McDonald, J., and V. Leveille, 'Whither the retention schedule in the era of big data and open data', *Records Management Journal*, 24:2 (2014), pp.99-121.

Big Data

Bryant, A., and U. Raja, 'In the realm of big data...', *First Monday*, 19:2 (2014), available at <http://firstmonday.org/ojs/index.php/fm/article/view/4991/3822>.

Marciano, R., V. Lemieux, M. Hedges, M. Esteva, W. Underwood, M. Kurtz and M. Conrad, *Archival Records and Training in the Age of Big Data* (2016), available at http://dcicblog.umd.edu/cas/wp-content/uploads/sites/13/2016/05/submission_final_draft.pdf.

McCaninch, G., 'Big data and big challenges for archives', *BLOGGERS - Society of American Archivists Electronic Records Section Blog* (2015), available at <https://saaers.wordpress.com/2015/03/05/big-data-and-big-challenges-for-archives/>.

Open Data

Jerven, M., *Poor Numbers: How We Are Misled by African Development Statistics and What to Do about It* (New York: Cornell University Press, 2013).

Lowry, J., *Open Government Data Literature Review Project Final Report* (InterPARES Trust: 2015), available at https://interparestrust.org/assets/public/dissemination/EU02_20151210_OpenGovernmentDataLiteratureReview_FinalReport.pdf.

Thurston, A., 'Trustworthy records and open data', *The Journal of Community Informatics*, 8:2 (2012), available at <http://ci-journal.net/index.php/ciej/article/view/951/952>.

Week 11

Workshop: Data Curation

School of Data is an international network of data literacy experts active in Europe, Asia, Latin America and Africa, which was established in 2012. It provides data literacy training resources and courses online, with the aim of boosting data skills within civil society organisations, civil services, journalism and the wider public. Work through the School of Data's online courses: <https://schoolofdata.org/courses/>

As students will work through these online courses at different speeds, module convenors may prefer to set this as a task rather than as a timetabled workshop.

Week 12

Class: *Blockchain*

Given the technical nature of this subject, it may be best to find a guest lecturer for this class. Try the Computer Science department in your university or a university nearby. You may also find suitable computer science specialists in the private sector, since blockchain is used in cryptocurrency systems such as BitPesa.

This class will provide an introduction to the blockchain and its applications. The blockchain is a revolutionary new technology that allows people who don't know or trust each other, to maintain and preserve records together. The first application of the blockchain - Bitcoin, a digital cryptocurrency without any central control - allows people around the world to maintain records of financial transactions, bypassing banks and institutions. We will explore other applications of the blockchain and what this means for digital record-keeping.

The lecture will be presented by [insert name and biography of guest lecturer here].

Preparation:

Read:

Britt, M., 'A ledger and a network: Bitcoin, money and Datalove, part two' (2014), available at <https://medium.com/quinn-norton/a-ledger-and-a-network-89d7809e7416#.cql5b84o8>.

Lemieux, V., 'Preserving the archival bond in distributed ledgers: A data model and syntax' (2017), available at <http://papers.www2017.com.au.s3-website-ap-southeast-2.amazonaws.com/companion/p1437.pdf>.

Watch:

'What is bitcoin?' (2014), available at <https://www.youtube.com/watch?v=Gc2en3nHxA4>.

Further reading:

Cheng, S., M. Daub, A. Domeyer and M. Lundqvist, 'Using blockchain to improve data management in the public sector', available at <http://www.mckinsey.com/business-functions/digital-mckinsey/our-insights/using-blockchain-to-improve-data-management-in-the-public-sector>.

Coindesk, *A Beginner's Guide to Blockchain Technology*, available at <http://www.coindesk.com/information/>.

Findlay, C., 'Decentralised and inviolate: the blockchain and its uses for digital archives', *Recordkeeping Roundtable* (2015), available at <https://rkroundtable.org/2015/01/23/decentralised-and-inviolate-the-blockchain-and-its-uses-for-digital-archives/>.

Findlay, C., 'We need to talk about smart contracts and recordkeeping', *Recordkeeping Roundtable* (2016), available at <https://rkroundtable.org/2016/07/27/we-need-to-talk-about-smart-contracts-and-recordkeeping/#more-80494>.

Iron Mountain, 'What is blockchain technology and why should records management professionals care?', *Iron Mountain Knowledge Centre*, available at <http://www.ironmountain.com/Knowledge-Center/Reference-Library/View-by-Document-Type/General-Articles/W/What-is-blockchain-and-why-should-records-management-professionals-care.aspx>.

Lemieux, V., 'Trusting records: is blockchain technology the answer?', *Records Management Journal*, 26:2 (2016), pp.110-139.

Polrot, S., and F. De Senneville, 'Blockchain: the 'trust machine' that Africa needs?' (2017), available at <http://www.fieldfisher.com/publications/2017/02/blockchain-the-trust-machine-that-africa-needs#sthash.JLqGWV3S.dpbs>.

Week 12

Screening: Student video presentations

In this class, we will screen the videos you produced for Assessment 2.

Assessments

Assessment of students' knowledge and understanding of digital records curation will need to comply with the policy and practices of the University where the course is being delivered. The assessments below offer a suggested approach but may be substituted or augmented with other assessments as appropriate to the institution where the course is delivered

Assessment 1: Essay

Write an essay on the relevance and significance to digital records curation to one of the following topics:

- The Sustainable Development Goals (SDGs)
- Trade and economic development
- Your country's national development strategy (if one exists)

Remember that, because digital curation is always evolving, much of the writing about digital issues may be found outside of books and refereed journal articles. Consider looking at blog posts, research reports and other products of research projects, and online resources in various formats. You will need to assess whether these sources are worth citing on the basis of their contribution to the literature, theory or practice of the topic.

Notes

Marking will take into consideration:

- Structure, degree of reflection, analysis and critical insight
- Use of evidence to develop argument/support case
- Degree of professional awareness
- Knowledge of relevant sources/literature
- Presentation including references and bibliography

Format/indicative word length: Structured essay c.2,500-3000 words

Deadline:

This assessment is worth 50% of the total mark for this module.

Assessment 2: Audiovisual / Multimedia Presentation

Prepare an audiovisual or multimedia presentation. The presentation should be designed as a training resource, which means that it should:

- have a stated learning outcome. After watching the presentation, the viewer should be able to understand the subject or perform the skill.

- introduce the subject with sufficient background for the viewer to understand in what context the subject or skill is useful or applicable
- provide an introduction to the subject and provide an example of its use / applicability
- identify any problems or disadvantages associated with the subject and, where possible, how these can be addressed
- conclude by summarising the subject in relation to the stated learning outcome.

For guidance on developing training material, see the ICA's *Training the Trainer Resource Pack* at <http://www.ica.org/en/training-trainer-resource-pack>

This assessment is designed to give you experience of developing audiovisual / multimedia presentations, designing training resources, and conducting independent research, which will be vital in keeping up to date with developments in digital curation throughout your career.

You should start this assignment by considering your intended audience, defining your learning outcome, researching the subject and deciding how you will present it before starting to develop the presentation itself.

Preparing the presentation

Students may use any software they like to prepare their videos.

You will also need to submit a single page summary of your presentation, with references.

In selecting sounds and images for the presentation, students should be mindful of copyright restrictions. **Insert link to copyright guidance provided by your library or department, if available.**

Submitting the presentation

Upload your video to Vimeo, Youtube or a similar platform, and include the address of the video in your one page summary, which should be submitted **describe the usual way in which hardcopy or digital paper assignments are submitted.**

Topics

Assign a topic to each student before the beginning of the course.

Topic	Student
Normalisation	
Bit rot	
Characterisation	
EAD	
Checksums	

Degaussing	
Lossless compression	
PDF/A	
Persistent identifiers	
Significant properties	
Emulation	
Technical registries	
Timestamping	
Video transcoding	

You may chose an alternative topic if you wish, but it will need to be agreed with the module convenor before the end of Week 1.

Marking will take into consideration the student's

- demonstrated understanding of the topic
- understanding of the significance of the topic for record-keepers
- appropriate use of examples, depth of analysis, ability to explain concepts succinctly and in relation to related concepts or practices
- format and presentation skills

Format/indicative length: 5 minutes.

Deadline: