Digital Records Curation Programme (DRCP) - English Version

Week 5 – Class: Cloud Computing

Learning Outcomes

At the end of this class, students should be able to:

- explain what cloud computing is
- explain how cloud computing can be deployed in record-keeping
- explain the record-keeping issues (benefits and risks) associated with cloud computing
- effectively plan for a transition to records storage and management in the cloud

Lesson Plan

1. Introduction

Ask students to summarise their learning from the previous class.

2. Lecture – What is Cloud Computing? (10 minutes)

Use the DRCP slides for this class to provide a short lecture on the nature of cloud computing.

3. Activity – Issues with the Cloud (30 minutes)

If your classroom has an internet connection, you could use Poll Everywhere (https://pollev.com/) or a similar service to enable students to create a visual representation of issues about cloud storage. You will need to set up the Poll Everywhere presentation before the class. The poll question should be "What do you think are the record-keeping issues with cloud computing?" If students have access to computers with internet connections or to mobile phones, they will be able to contribute, and watch a word cloud form. Poll Everywhere's free service will only allow a few responses.

If internet connections and/or equipment are not available, ask the students to brainstorm the issues on paper, in small groups, and then feedback to the class.

Once the students have finished responding, discuss the issues they have identified, drawing on your knowledge of the subject and the guidance set out in the readings for this class, particularly section 1.7 of:

> 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.

4. Group Work – Cloud Service Contracts (30 minutes)

Explain the InterPARES Cloud Service Provider Contracts Checklist to your students:

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

If internet connections and equipment are available in the class room, divide the students into small groups and ask them to use the checklist to analyse the terms of service for popular cloud storage providers, such as Dropbox and Google Drive. If computers and internet connections aren't available, print copies of the checklist in advance of the class, and print copies of the cloud storage provider's terms of service.

Be sure to explain that providers' terms of service won't necessarily address all of the issues in the checklist, and that organisations usually enter negotiations with cloud storage providers to make sure their requirements (including record-keeping requirements) are met.

Once the students have analysed the terms of service, reconvene the class and ask students to report their findings. Which issues were covered in the terms of service, and how? Which issues were not addressed? What would students do if they were looking for a cloud storage provider for their organisation? Are there any of the checklist items negotiable? Is there anything they would add to the checklist?

5. Group Work – Working through the Cloud Computing Decision Making Framework (40 minutes)

Ask the students to work in groups. Each group should choose an organisation that one of the group members has worked for, and work through the decision making framework. In particular, the students should consider:
- How they will gather data about deployment models and service providers
- How they will identify records, applications and processes for migration to the cloud environment
- How they will determine which cloud service and deployment models fit the organisation's business drivers and governance and compliance requirements;

- How they will conduct a risk assessment and response plan
- How they will plan a pilot and gauge its success
- How they will plan for and deliver ongoing management functions, such as monitoring, security, etc.
- How they will plan an exit strategy

When the students have finished, go through each of these phases of the framework, asking each group to report on its findings / considerations.

6. Conclusion

Summarise what you have covered in class in relation to learning outcomes for this class.