Data management in perspective:  
*the career profile of archaeologists*

The Research Information Network (RIN) and JISC were co-funders, in partnership with the Digital Curation Centre (DCC), of the Data Management Skills Support Initiative (DaMSSI), which supported five JISC research data management training projects*. These aimed to help researchers and their institutions to plan effectively the development of data management skills and training.

DaMSSI has drawn together a range of short career profiles to illustrate the relevance of data management skills to four graduate professions represented by the JISC training projects. These professions are: conservator; social science researcher; clinical psychologist and archaeologist. Each profile demonstrates how the value of data management skills learned alongside other research skills during graduate and post-graduate study contributes to and underpins high-quality professional performance. DaMSSI has also developed a career profile for describing the work of data managers, to help raise awareness about this emerging new profession.

This leaflet describes the fourth in this series of these profiles, covering the role of the archaeologist.

* Details of the ‘RDMTrain’ projects are available online at:  
  www.jisc.ac.uk/whatwedo/programmes/mrd/rdmtrain.aspx  

October 2011
Studying to be an archaeologist

Entrants to the profession can study archaeology at undergraduate and postgraduate level. Some study archaeology in conjunction with another related discipline, such as geography, geology or anthropology.

Archaeologists often develop a speciality within the discipline through PhD study. For example, they may develop specialist knowledge of an historical period, a location or a particular archaeological activity such as excavation or working with GIS data.

What archaeologists do

Archaeologists aim to connect people to places across time, communicating the relevance of the historic environment to people today and in the future. They achieve this by gathering findings through fieldwork, interpreting those findings and communicating them to funders and the public.

Archaeologists may work for charities including national heritage agencies, government departments such as the Highways Agency or the Environment Agency, local authorities, universities, commercial planning and development consultancies, museums or commercial archaeology units.

Daily duties and necessary skills

Archaeologists undertake a wide range of duties. Some of these are in the field, and others are desk-based or public-facing. Archaeologists are responsible for data gathering (including survey and excavation of historic sites and buildings), assessment and interpretation; production of maps and other documentation of historic sites; data management; researching archive material; project and logistics management; engaging with the public and generally promoting the discipline.

Necessary skills vary from role to role, but include deep knowledge of landscape or structure formation processes and the ability to identify and accurately document sites, ruins, remains and landscape fragments. The ability to analyse the evidence of the past is another key skill – archaeologists work with varied evidence and can be dealing with anything from pollen grains or pottery shards to large areas of landscape. Analysis of these resources is often synthesised with other comparable datasets in order to generate new knowledge.
Archaeologists who produce documentation of sites need photography and drawing skills, and a working knowledge of imaging software such as Adobe Illustrator or Photoshop and AutoCAD. The use of GIS data is increasing popular, obliging archaeologists to become familiar with software such as ESRI ArcGIS and MapINFO.

Communication skills are also an important part of the job – on many occasions, archaeologists need to be able to communicate their findings in clear, technical or non-technical language, depending on the needs of the audience (which can vary from academic conferences to talks at primary schools!). Report-writing is another aspect of communication – archaeologists must be able to write fluently and clearly for a variety of readers.

**Professional standards**

The UK Institute for Archaeologists (IfA) has published codes and standards for all member UK archaeologists and registered organisations. These are available at www.archaeologists.net/codes/ifa. IfA members are obliged to maintain their skills through ongoing continuing professional development training.

The European Association for Archaeologists has also drawn up codes of practice and principles of conduct for individual and corporate members. These are available in various European languages at www.e-a-a.org/eaacodes.htm. Some archaeological organisations use OAIS-compliant reporting methods, are required to be INSPIRE-compliant or employ other specific recording standards.

**The importance of good data management**

Archaeological sites are often transient in nature - for example, in urban areas where the site may subsequently be built upon when the excavation is over. In addition, archaeology projects can generate large or complex datasets and so, particularly as much excavation work cannot be repeated, careful and consistent management of these datasets is crucial.

In addition to objects recovered by fieldwork, archaeologists work with many types of data, including analogue and digital photography (e.g. aerial photographs, documentation of objects), digital and paper maps, archive manuscripts, research reports, books, videos of excavations, blogs from excavations and research projects, paintings, illustrations including AutoCAD imaging, GIS data, databases, slides, oral recordings and information gathered by word-of-mouth.

1. EU INSPIRE (Infrastructure for Spatial Information in Europe) directive: http://inspire.jrc.ec.europa.eu
These varied data sources both underpin and augment fieldwork findings and help to disseminate the knowledge gained. They may, however, lose their value to the project if the relationship between them is compromised during storage or delivery to the client. Consideration must therefore be given to maintaining the links between the files pertaining to each project and sustaining that relationship up until and including delivery of findings to the client.  

Decisions which affect the public are often made based on the findings of archaeologists; for example, whether a wind farm, power line or building development goes ahead on a particular site. These circumstances dictate that archaeologists must be able to produce rigorous and understandable documentation of the data with which they work, to support the decisions made as a result of their research.

2. For more information on RIN research into linkage between site data and information about objects in museums or museum catalogues, see www.rin.ac.uk/physical-objects.

Further reading...

Institute for Archaeologists: www.archaeologists.net
Council for British Archaeology: www.britarch.ac.uk
European Association for Archaeologists: www.e-a-a.org
Archaeology Data Service list of UK professional standards: www.yorkarchaeology.co.uk/d3e0L4l3/papers/ads/standards.html
Data management training resources for postgraduate archaeology students are available from the JISC DataTrain project at: http://archaeologydataservice.ac.uk/learning/DataTrain

This factsheet is available to download at: www.rin.ac.uk/data-management-skills and www.dcc.ac.uk/training/data-management-courses-and-training/career-profiles
For hard copies, please email contact@rin.ac.uk