



Australian Government
Department of the Environment,
Water, Heritage and the Arts

Indigenous Knowledge Management Systems (databases) Guide for Indigenous Communities

Background

The Indigenous Information Management Workshop was held in Cairns on 26-27 June, 2008. The workshop brought together Indigenous communities, groups and organisations that are involved in, or considering becoming involved in, using computer programs for Cultural and/or Natural Heritage Management. It was also an opportunity for information sharing.

Stepwise Heritage and Tourism were contracted by the Department of the Environment, Water, Heritage and the Arts to facilitate the workshop.

There were 69 participants representing Indigenous organisations including Land Councils, the Department and the Department's Indigenous Advisory Committee (IAC).

Objectives

The stated objectives of the workshop were to:

1. share information about information management systems used by Indigenous groups for natural and cultural heritage management
2. enhance understanding of the development and use of information management systems for user groups and for programs within the Department
3. document the need for information management systems at the user group level
4. identify key characteristics that can act as benchmarks for future projects and systems development and can also act as a guide for groups not present at the workshop
5. produce recommendations on future information management systems development, collaboration and networking between information systems projects and user groups.

Participant's feedback

Importantly, all participants provided invaluable feedback. The Department will review the feedback to determine next steps, where appropriate.

Some of the key messages participants identified as ones they would be taking back to their organisations and communities were the:

- » importance of establishing ethical controls so recorded information is appropriately looked after
- » need for activity at a regional level
- » opportunity databases present to encourage participation from younger generations
- » importance of including both anthropological and archaeological data.

Positive features of Indigenous Knowledge Management Systems

In summary, one of the best features of a database is that communities can record and manage their own information, including traditional knowledge.

Databases can be developed so that the information is looked after appropriately. For example, an area for Sorry Business can be created and secured so that only appropriate people can access the information.

Databases can include a range of information. Stories and information about places can be stored together. The types of information stored on databases can include photos, movies, audio and text as well as geographical data. A geographic information system allows communities to make geo-referenced maps which are useful for showing the positions of recorded sites and places for recording/archiving, management, care and regeneration purposes.

Databases can be important for rangers, Traditional Owners, young people and whole communities and can support the maintenance and transfer of knowledge by bridging western scientific and Indigenous knowledge systems.

Types of operating systems for databases

Geographic Information System (GIS)

A GIS is a computer system used for capturing, storing, checking, integrating, manipulating, analysing and displaying data related to positions on earth. Typically, it is used for handling maps of one kind or another. These might be represented as several different layers where each layer holds data about a particular kind of feature. Each feature is linked to a position on the graphical image on a map and a recorded in an attribute table.

GIS allows sites to be mapped and geo-referenced correctly by providing exact positioning of sites and allows for them to be colour coded on a map for easy identification.

Using GIS, a site can be selected and then zoomed into where the database can then be accessed for that site. The database can include specific information on monitoring sites and site land management inspection forms, sketches or images of art sites, repatriation of old photographs and oral histories, among other things.

Archival System

Archival programs are used solely for storing and managing photos, video and audio materials.

Security is a large feature of this program and it can be governed by passwords restricting access to men's or women's only information. The program offers advanced search and zoom options as well as giving Elders and Traditional Owners a tool for storing and teaching traditional knowledge.

When data is recorded

When data is stored in a database you should:

- » record information on who owns the information, who took the photo or recorded the oral history
- » note when and where it was recorded
- » provide information on the type of art or site, as well as who is in the image, so data can be restricted where necessary and appropriate.

Questions to think about when considering software for land management or cultural heritage archiving purposes

- » What is the purpose of the database and what will it be used for?
- » Who will be using the database?
- » What types of data are you interested in storing?
- » What do you need the software to be able to do?
- » Do you have any I.T. training?
- » What do you want to be able to do with the collected data?
- » Do you need the software to have the ability of mapping and/or geo-referencing sites?
- » Do you have any current methods of collecting/storing material digital or otherwise?
- » Do you already have a computer? If so what are its specifications and will it be suitable for the software you are looking at?
- » Do you want software for use on Mac or Windows?
- » Have you considered what cultural protocols are needed with storing your data? For example, intellectual property, sorry business.
- » Have you considered what security is needed in regards to accessing your data? That is, who can access?
- » do you own the information or will you need to obtain permission from elders, Traditional Owners or copyright holders to include the information in your database?
- » Who will be responsible for managing the data?
- » Who will decide what types of data are stored?
- » What are the hardware requirements for achieving (storing?) the information?
- » How will you back up the information?

Requirements for developing a database

There are a number of ways that information can be gathered for a database, which may have implications on resources:

- » you may already have information in various files or reports which will need to be compiled and entered into the database
- » field work may be necessary to record sites and places of significance
- » information may be gathered from existing Commonwealth and State Government records and archives
- » information may be gathered from the records of other bodies such as CSIRO, NASA and AIATSIS
- » staff may need to be employed to manage the collection of data and the database development
- » staffing or other resources may also need to be engaged to ensure regular updates are made to the database.

Considerations in gathering data

All data that is not created and/or developed by an organisation or group is subject to use license conditions determined by the owner of the data. You may have to obtain permissions for the use of and storage of that data.

Below is a list of the benefits that databases can offer:

- » land management/managing country — monitor assets, manage country, manage resources, map culturally significant sites, record landscapes, mapping, photos, overlays, GPS etc using GIS
- » communication tool — promote country, interpretation and tell our story, create reports, share public stories with wider community, use as evidence and reference for technical people and funding bodies
- » passing on knowledge to next generation — cultural maintenance, education/sharing for future generations, knowledge bank, recording traditional knowledge, bringing the fabric and basics of culture back to our lives
- » bridging knowledge systems — bridge western scientific knowledge and Indigenous knowledge

- » cultural security — protecting sensitive information through security and cultural protocols
- » repatriation tool — repatriate cultural content
- » controls and empowerment for communities/cultural groups — self empowerment of Indigenous people, information to be owned by community
- » archive — store information, capturing and accessing stories, having a place to keep photos and documents, preserve and document heritage.

Where to from here

For effective database management, funding, protocols and training are fundamental.

Communities can independently or collaboratively begin the process of researching, developing, refining databases. Here are some sites to get started:

- » www.irititja.com — gives young and old the opportunity to work together with Elders passing on traditional knowledge and young people recording them using photo, video or audio
- » www.ebmtools.org — promotes awareness, development and effective use of tools for ecosystem-based management in coastal and marine environments and their watersheds. It considers the whole ecosystem rather than managing one issue or resource in isolation
- » www.placematters.org — innovative decision based tools involving community and public
- » www.feralarts.com.au — PlaceStories engages communities and partners to make better use of their cultural assets - stories, histories, networks enhancing their creativity and sustainability and is a user generated digital media content system.
- » www.culturalss.com.au — Cultural Systems Solutions provides support and advice to communities in the development of information systems.