Otago Heritage Inventory: Proposed Project Outline

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Introduction

Digital repositories are an exciting development in the field of digital content management. A digital repository is a flexible tool that can be used to gather information, disseminate it to a wide audience and preserve it for future generations. Digital repositories store digital artefacts such as text documents, images, video clips, sound files etc., and are currently used for a wide range of purposes such as providing access to academic research material, storing oral histories[1] and displaying marine images[2].

A more recent development has been the application of digital repositories to heritage material. Two examples of this are the *East of England Digital Preservation Regional Pilot Project*[3] and *Wabash Valley Visions & Voices: A Digital Memory Project for West Central Indiana*[4]. The New Zealand Government is interested in this area and is currently formulating a *Digital Content Strategy*[5] as part of their national *Digital Strategy*[6]. The *Digital Content Strategy* has a broad goal to "unlock New Zealand's stock of content and provide all New Zealanders with seamless, easy access to the information that is important to their lives, businesses, and cultural identity."

Our team has previously developed a heritage archive system for the Cardrona Valley community, which can be viewed at http://cardrona.eprints.otago.ac.nz/, in addition to two more typical institutional systems[7,8] for the University of Otago, all using the freely available EPrints repository management software[9]. Local residents provided a range of material for the Cardrona Valley Online Museum which they wished to preserve and share.

The team consists of:

- Nigel Stanger BSc, MSc, PhD, who is a lecturer at the University of Otago specialising in database design and management;

1 http://oralhistories.library.caltech.edu/

2 http://serpent.eprints.org/

3 http://www.data-archive.ac.uk/news/publications/darp2006.pdf

4 http://visions.indstate.edu/

5 http://www.digitalcontent.govt.nz/

6 http://www.digitalstrategy.govt.nz/

7 http://eprints.otago.ac.nz/

8 http://eprintstetumu.otago.ac.nz/

9 http://www.eprints.org/

- Debbie Laney BSc, BCom, who has considerable experience with project management and was involved in rolling out a new education programme for the New Zealand Playcentre Federation at the national level; and
- Monica Ballantine DipTeach(ECE), BSc, who has several years experience in teaching, and working with computer hardware and software.

Task Analysis

Our understanding of the requirements for this project is as follows:

- It must be possible to capture and preserve heritage material of all types in digital form.
- There needs to be a facility for the general public to make submissions, subject to quality controls.
- There should be different levels of access (comprising at least *no access*, *restricted to authorised users* and *public access*), as determined by the governing body of the repository and owners of the digital artefacts.
- The facility to integrate with existing and anticipated heritage databases and websites such as Matapihi, NZAA and NZHPT is important.

Methodology

We propose to build a prototype digital repository for the Central Otago Heritage Inventory. This will be built using the EPrints digital repository software mentioned earlier, which is freely available and can be customised to meet specific requirements. EPrints is well tested having been in wide use since 2000 as a storage mechanism for all types of electronic files.

Our team already has considerable experience developing EPrints-based repositories and can customise the software to reflect individual community requirements (examples of how EPrints' appearance may be modified can be seen at the Registry of Open Access Archives[10]). We can also apply the experience that we have gained in developing the Cardrona Valley Online Museum to the Central Otago Heritage Inventory.

EPrints offers a proven system for anyone to submit material into a repository. New items are placed into a temporary holding area that is accessible only to the repository editors, who evaluate them for suitability and accuracy. With a minimal amount of training repository editors are able to view a submitted item and either accept it for public viewing, amend it themselves before making it public, return it to the user who submitted it if more information is required, or reject and delete the item if it is deemed unsuitable. Material deemed unsuitable is thus never visible to the world at large. The user who submits an item is also able to choose whether they want it made publicly available, restrict access to a group of registered users, or just store it for preservation purposes without making it publicly available.

With EPrints it is possible to store any type of digital material, i.e., any item that can be created or stored on a computer may be stored within the underlying EPrints database. Examples of the types of material that can be stored include video clips[11], digital photographs[12], text[13], maps, and sound recordings[14]. Items stored in the EPrints database can be searched on different criteria including author, keywords, classification and full text. It is possible to customise the system so

10 http://roar.eprints.org/?prev=Prev&type=&version=eprints2&country=&action=home&order=recordcount&page=all

11 http://eprintstetumu.otago.ac.nz/view/pubtype/VID.html

12 http://cardrona.eprints.otago.ac.nz/27/

13 http://cardrona.eprints.otago.ac.nz/3/

14 http://cardrona.eprints.otago.ac.nz/22/

that material can be classified according to whatever subjects, themes, categories, etc., that your organisation wishes to use. This would enable addition of core heritage or other required metadata during the submission process. During the editorial review process it is possible to add to or modify any of the submitted metadata so that it conforms to the standards that are being applied within libraries and museums.

It is possible to link to other relevant websites from any entry in the repository. Another important feature of EPrints is that it conforms to the information-sharing standard set by the Open Archives Initiative[15], which is a key body in the field. Compliance with this standard ensures that other databases such as Matapihi[16] can readily retrieve information regarding items stored in an EPrints repository (note that this only provides access to information *about* the item, not the content of the item itself, which may not be publicly accessible). It is also easy for web sites such as NZAA[17] and NZHPT[18] to link to items stored in a repository.

We propose a two stage project. Stage one is to develop a Demonstrator CD that would show how an EPrints system could look and operate. This would function in much the same way as a finished system, except that it would not be possible to enter any new material. This would enable you to see and specify what elements you liked and did not like in order to suggest improvements for the next stage. It also offers the opportunity to consider which subject headings and classifications would be needed to ensure compatibility with existing systems. Future development paths should also be kept in mind. This includes such initiatives as the government's *Digital Strategy*, which is providing seed funding for projects to develop digital content[19], and the vision of the National Library for communities to "preserve and promote community memories"[20].

Stage two is to develop a prototype system based on the required modifications identified in stage one, to the extent that these are feasible. This prototype will be fully functional and available online, with the facility to submit files (refer to Figures 1 and 2 on pages 4 and 5 respectively). However, this prototype will only be available for a limited time. At the end of the prescribed time we will provide your organisation with a copy on CD of any material that has been collected.

Knowledge and experience gained during this project could be used as a basis for further development in any following projects (refer to Figures 3 and 4 on page 6).

Deliverables

Stage One

1. A demonstrator CD containing a mock-up of how the Central Otago Heritage Repository might look and operate. The mock-up will be read-only and some features (such as Search) will not be fully functional. This will be evaluated by your organisation in order to produce a list of desired alterations. Interacting with this demonstrator will help your group to identify appropriate classifications and metadata which can then be integrated into the Stage Two prototype. The user interface and appearance of the demonstrator can be relatively quickly modified providing a way of refining requirements before proceeding to the working prototype.

15 http://www.openarchives.org/

16 http://www.matapihi.org.nz/

17 http://www.nzarchaeology.org/

18 http://www.historic.org.nz/

19 http://www.digitalstrategy.govt.nz/templates/Page____18.aspx

20 http://www.natlib.govt.nz/files/initiatives/NATLIB-DRAFT-STRAT.pdf

2. Our team will evaluate the suggested alterations to determine which are feasible, and produce a brief report outlining which alterations will and will not be developed further.

Stage Two

3. A fully functional prototype system that reflects the requirements identified in Stage One, which will be made available on the Internet for a specified length of time. This will function exactly as a live repository would and any changes that have been agreed to in the previous stage will be incorporated. This enables your group to discover if there are any other enhancements they might want to consider for any future projects based on this one.

4. A document will be produced describing any modifications to the standard EPrints configuration or internal database that are necessary to meet your requirements.

5. A document which outlines the security and privacy features that are incorporated in the Eprints system and its underlying database, including a description of the backup processes necessary to ensure a disaster recovery procedure for the system.

6. At the end of this period we will produce a backup copy (on CD or DVD) of any digital material that has been submitted to the prototype system.

Time and cost

The time required for Stage One is one week at a cost of $1,250 (including GST). The time required for Stage Two will vary depending on the degree of customisation required. If only simple changes to the appearance of the repository are required then one week would suffice. It may take up to a month, however, for significant changes to the fields and more significant changes to the appearance. The cost for Stage Two is $3,750 (including GST). The total cost is thus $5,000 (including GST), which covers the deliverables listed above and also the hosting of a web site for a limited period of time so that your team can experience what a real system would be like.

Figures

Figure 1: A Possible Repository

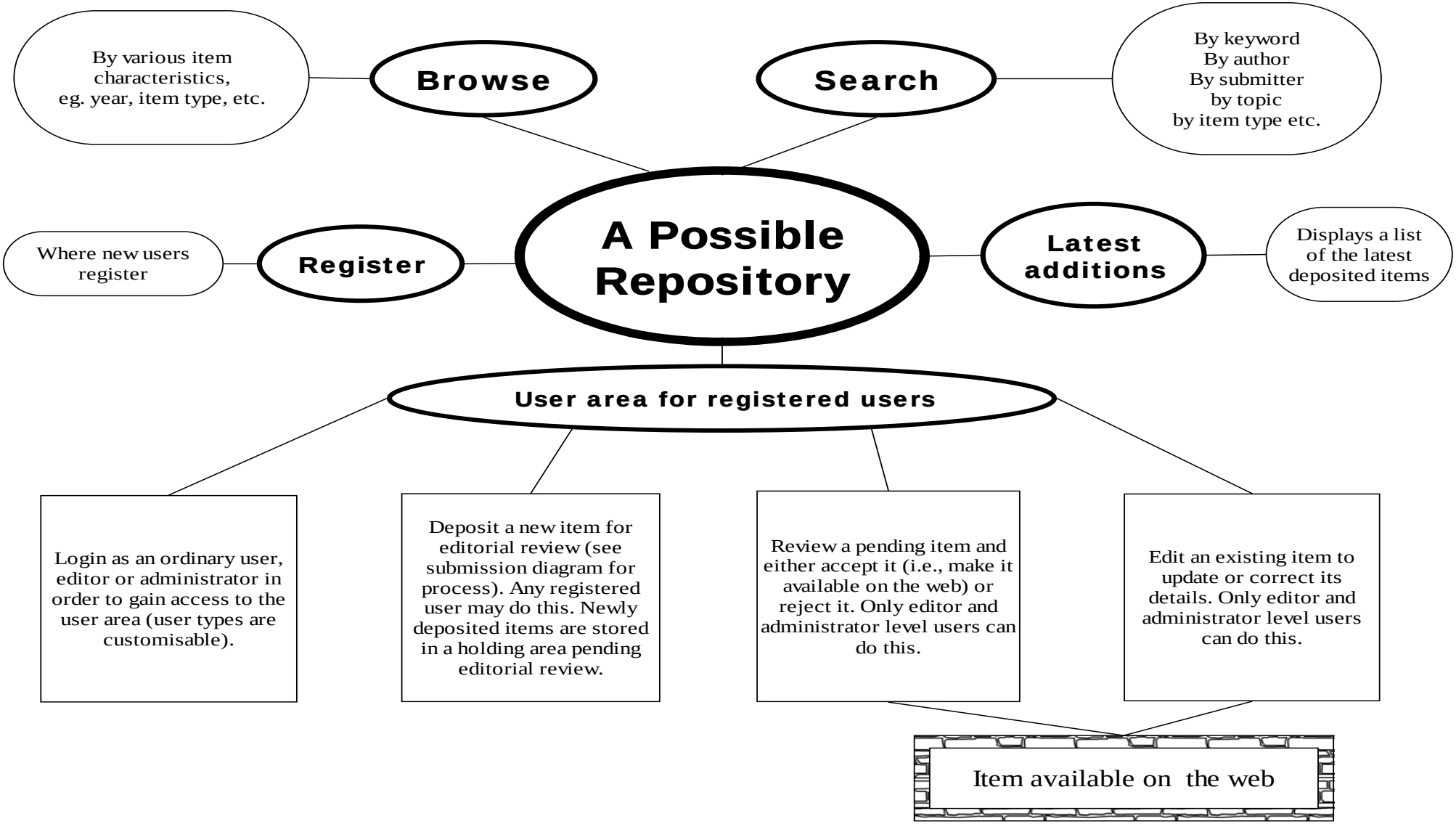
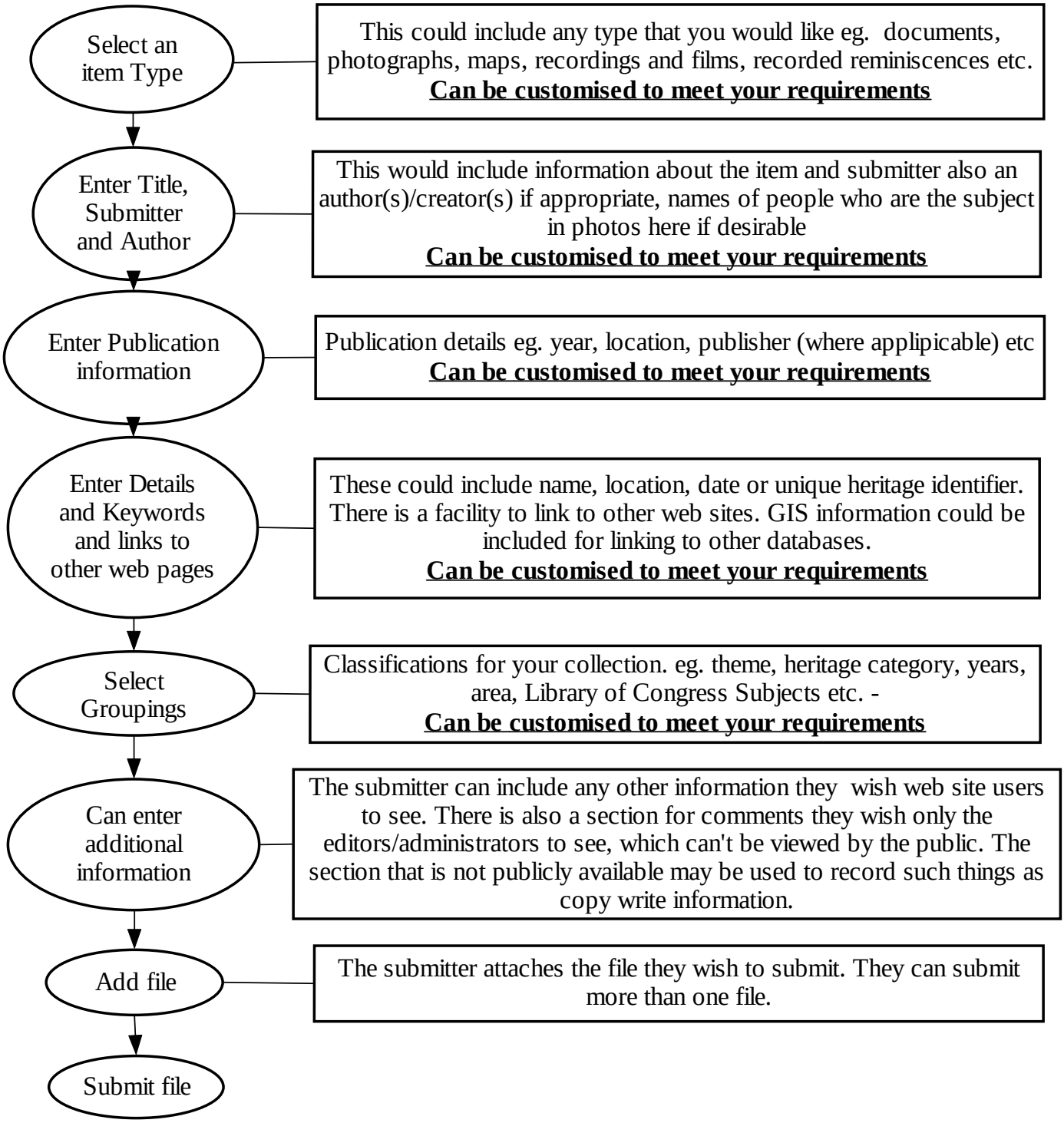


Figure 2: Submission Process



This record then goes to the editorial review process where trained Administrators/Editors check the details and the file and:

- ***Any of the above details can be altered**
- ***Additional information can be included**
- ***This item can be specified to be either publicly available, repository only, or only for the Administrator/Editorial team to view.**

Figure 3: Possible Directions for the Next Project

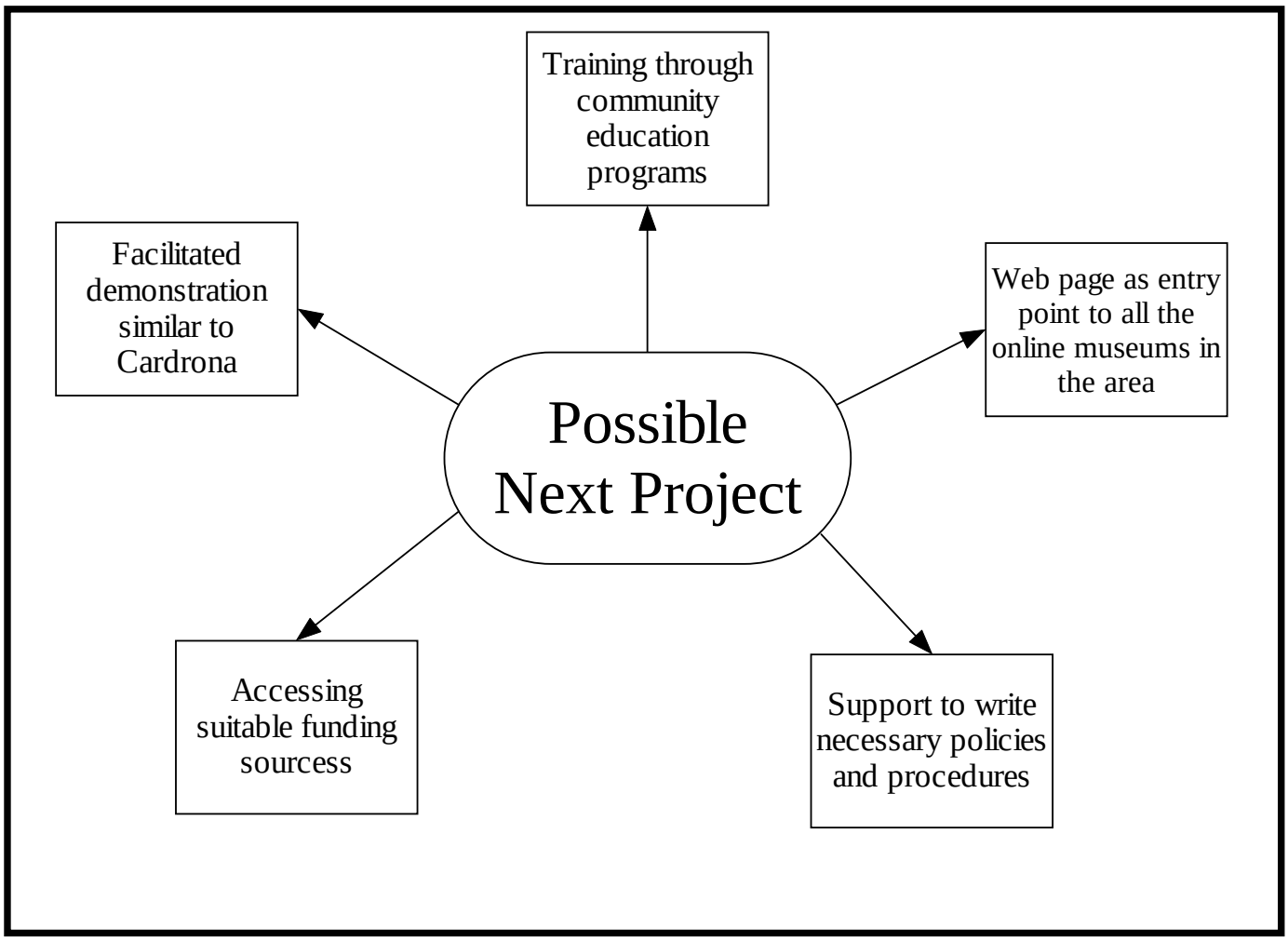
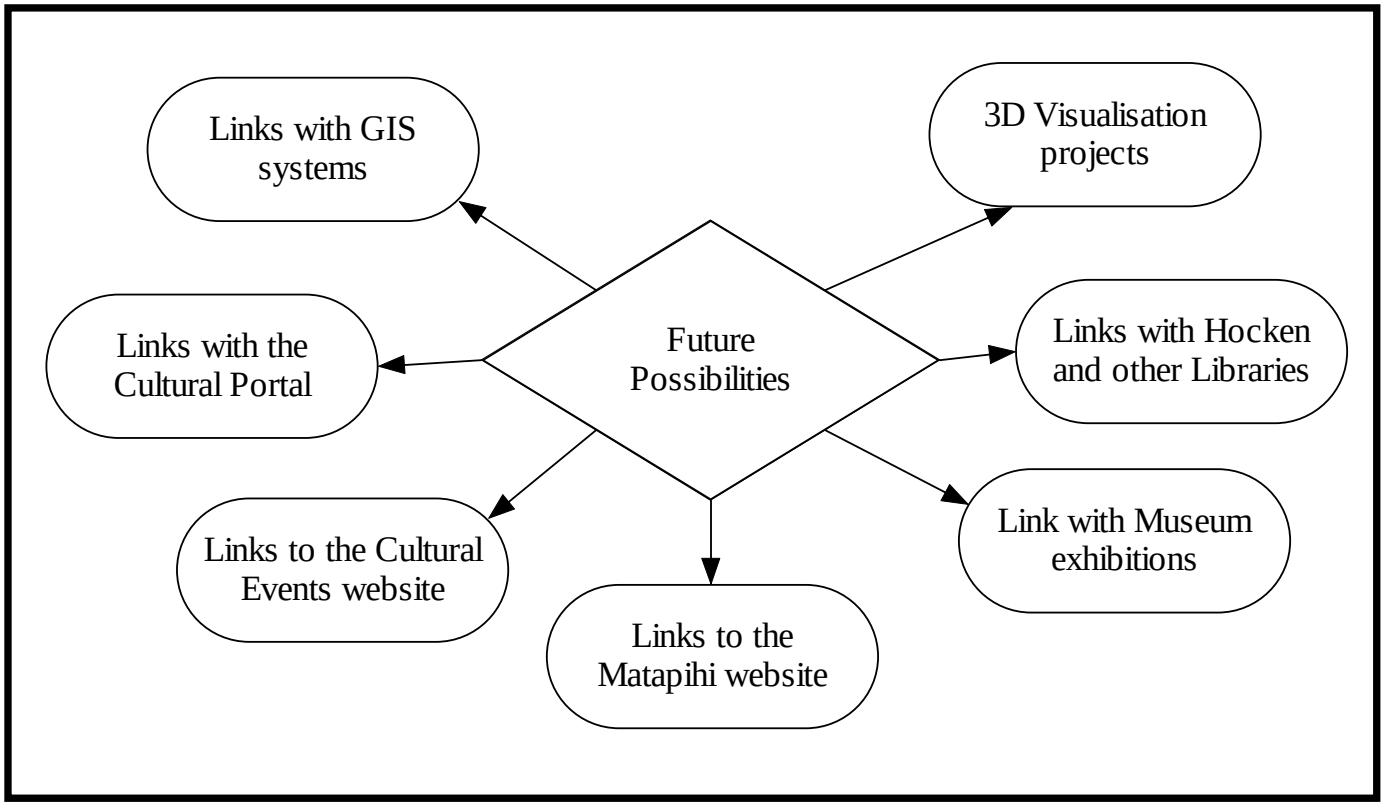



Figure 4: Future Possibilities