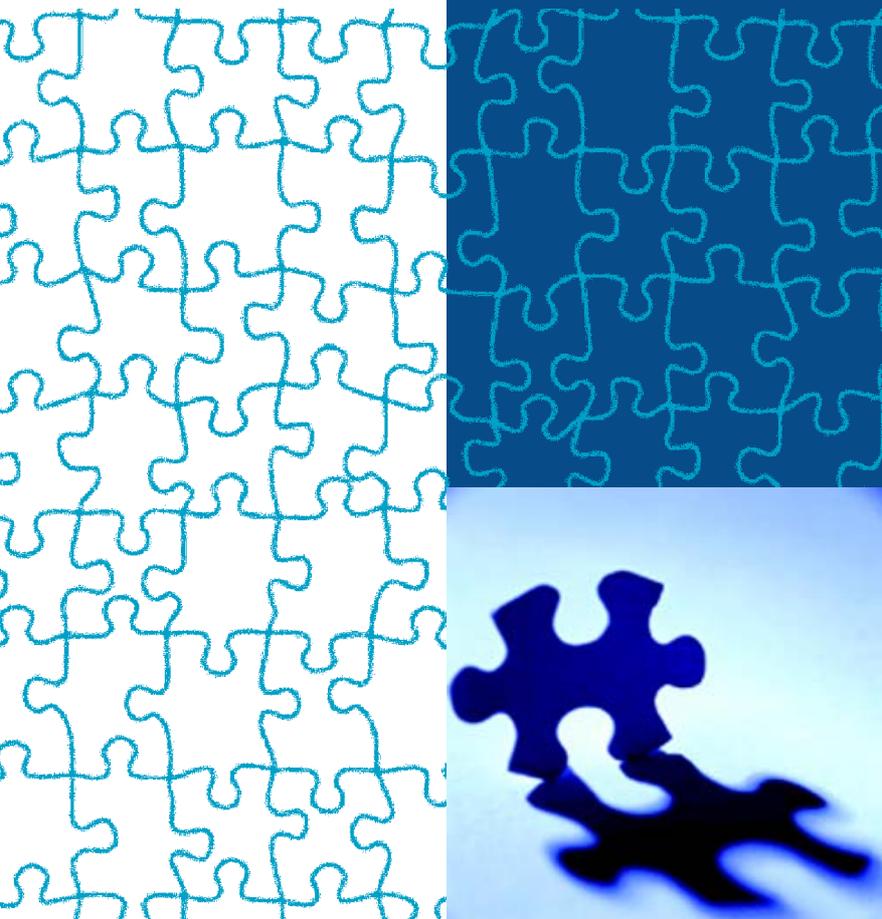


# 4

Collaborating  
for Efficiency

Report of the  
Library  
Services  
Sub-group

Sharing  
Library  
Services



# Collaborating for Efficiency

Report of the Library Services  
Sub-group

## **Sharing Library Services**

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## Executive Summary

**Purpose:** This report includes findings and recommendations on options for sharing library services across the public tertiary education sector. It also provides recommendations on extending these options to Crown Research Institutes (CRIs) and considers the role of the National Library.

**The Sector:** The Tertiary Education Institution (TEI) libraries meet the information needs of over 204,000 Equivalent Full Time Students, 12,450 full time equivalent teaching and research staff and 11,430 other staff. In 2001 they employed 1,120 full time equivalent staff, 49 percent of whom held library qualifications. Only 5 percent of TEI library staff identify themselves as Māori.

In the year ending 31 December 2001 the combined TEI libraries had assets valued at \$285.7 million, or 7 percent of total fixed assets within the TEI sector. The combined libraries' operating expenditure in the year to 31 December 2001 was over \$93.6 million. Within the TEI sector the eight universities account for 60 percent of total potential library users, 92 percent of total library assets and 81 percent of total library operating expenditure.

The 9 CRI libraries meet the information needs of 2,312 researchers and 944 other full time equivalent staff. In the year ending 30 June 2002 the combined CRI libraries' operating expenditure was 5 percent of the combined operating expenditure for the CRIs and TEIs.

The National Library is well placed to make a positive contribution to closer collaboration among the TEI and CRI libraries, particularly given its proposed new legislative mandate.

**Libraries - Added Value through Collaboration:** Libraries aim to organise knowledge in a manner that provides ready access to the information required by their users. Collaboration across TEI and CRI libraries provides an important means of improving access to information that is vital to New Zealand's research and learning processes: processes that underpin the development of New Zealand's knowledge economy and New Zealand's unique society.

**Strategic Directions:** Library services continue to have a central role to play in the research, teaching and learning process. Economic trends reinforce the need for ready access to information, while the changing nature of New Zealand society underscores the need to meet the information needs of Māori, Pacific and Asian students and the increasing numbers of full fee paying international students. Information and communications technology is a key enabler of collaboration and globalisation and the competitive pressures it entails. It is helping to drive the emergence of what has been termed the 'hybrid library' – one that provides access to both electronic and paper based information.

Government policy is more supportive of a collaborative approach to the provision of library services than in the 1990s. While the tools available to government to steer the sector are still being developed and their application tested, collaborative initiatives that demonstrably can deliver benefits to the individual participating institutions are more likely to succeed.

**Supply Side Issues:** The costs facing libraries have been increasing ahead of the rate of inflation, driven by the growth in the amount of knowledge been created each year, and the influence of international publishers who control access to both physical and electronic resources.

**Demand Side Issues:** There has been steady growth in the number of students, which is projected to continue. This is likely to place further pressure on the Government's tertiary education budget. If the government's additional investment in tertiary education continues to be spent on meeting uncapped demand, there is likely to be less money available for targeting particular capability development initiatives. The projected growth in international, Māori and Pacific students poses challenges for library services that need to meet the particular needs of these user groups.

**Substitutes:** Library services offer significant advantages over 'free' internet access to data. They provide access to commercial databases of peer-reviewed literature, not freely available over the web. Librarians have the tools and expertise to enable users to select quality information sources that are more closely targeted to their needs in a timely manner. They offer facilities and an environment conducive to research and learning.

**Existing Collaborative Initiatives:** New Zealand tertiary libraries have had a tradition of collaboration and resource sharing, including an effective inter-loans systems underpinned by a national union catalogue hosted by the National Library.

A number of regional or sub-sector bodies have facilitated the introduction of closer collaboration among member libraries including:

- The Council of New Zealand University Librarians (CONZUL)
- The Tertiary Alliance Libraries Group in the Waikato
- The Canterbury Tertiary Alliance
- The Bill Robertson Library – which meets the needs of both Otago Polytechnic and Dunedin College of Education
- The New Zealand universities, and some polytechnics, belong to the Council for Australian University Librarians Electronic Information Resources Committee (CEIRC), and

- A number of polytechnics have formed a consortium for negotiating the purchase of electronic resources.

**Drivers:** The drivers of closer collaboration include:

- Responding to user needs to improve access to quality information
- Cost pressures on limited library budgets
- Mutual benefits for participating libraries and their users
- Technology enabling libraries to more readily access and share information
- International best practise
- The Government's tertiary education strategy and associated funding framework
- The role of libraries as 'active learning environments'.

**Barriers:** The barriers to closer collaboration include:

- Unequal benefits from collaboration – smaller institutions tend to benefit more than larger institutions. The benefits of collaboration, when weighed against the financial and non-financial costs of collaboration, may not appear as attractive to larger institutions
- Institutional rather than system perspectives – institutions naturally focus on the needs and interests of their users and the institution in the first instance. There is an understandable concern at the prospect of the loss in autonomy and self-sufficiency inherent in many collaborative arrangements
- Perceptions that institutions are still operating in a competitive commercial environment, which means collaborative initiatives need to meet institutional interests
- Lack of resources to meet the start up costs required to realise longer term benefits
- Accounting policies that do not always make the cost of current management practises transparent
- Lack of an effective forum for cross-sector dialogue
- Limited time and resources available to institutions to invest in the assessment and development of new initiatives
- Lack of a co-ordinating infrastructure, and
- Lack of inter-operable computer systems.

**International Context:** There is a rich and varied array of successful collaborative arrangements among library services internationally. Each approach tends to represent the particular interests, needs and circumstances of the partner organisations.

In broad terms the development of library consortia overseas underscores a shift from peripheral and limited resource sharing to integrated system-wide and formalised resource sharing. Moreover, there appears to be a trend toward public supported academic libraries including vocational and technical institutes and public libraries and private academic libraries in their consortia arrangements.

The benefits of closer collaboration are readily apparent. Resources are being provided to users that did not have access to them before the consortia was formed. Access and levels of service have been improved. Moreover, by banding together, libraries have achieved cost savings through reduced cost per unit.

## 1.4 Conclusions

Some of the initiatives the Sub-group has explored have the potential to make more efficient use of resources. Most will require either the parent institutions or the government to provide some additional funding so the potential benefits can be realised.

**The foundation for collaboration:** In the sub-group's view four key initiatives are required to provide the basis for stronger cross-sector collaboration:

- A regular national forum for tertiary and research library managers in association with the National Library to foster a shared commitment to improving library service access and performance through closer collaboration
- An Office of Library Co-operation to facilitate the scoping, development and implementation of practical collaborative initiatives designed to improve the performance of the tertiary and research library sector
- A set of service standards against which tertiary and research libraries can benchmark their performance, and
- A shared or interoperable technology infrastructure to provide the basic capability required for other collaborative initiatives.

**Building on the foundation:** Once this foundation is established the sector will be well placed to:

- Implement an approach to Māori responsiveness that gives meaning to the Treaty partnership, substantively increases the number of qualified Māori librarians, meets the needs of Māori researchers and learners, ensures improved access and appropriate care of Māori knowledge and taonga, and contributes to an improved literacy rate, particular among Māori youth
- Further develop consortia arrangements for the purchase of electronic resources
- Establish a database enabling easy access to New Zealand's research outputs
- Develop a national strategy for co-ordinated collection development
- Assess the feasibility of sharing technical services across the tertiary library sector
- Explore the feasibility of shared storage options for low use materials, and
- Further develop reciprocal borrowing schemes and cross database access.

## 1.5 Recommendations

### The foundations for closer collaboration

**Recommendation 1:** That a National Forum for TEI, CRI and National Library managers be convened to review the proposals in this report and confirm actions under an Agenda for Collaboration.

**Recommendation 2:** That the Ministry of Education and the Tertiary Education Commission support a national forum for TEI and CRI and National Library managers under the auspices of the Collaborating for Efficiency Project.

**Recommendation 3:** That an Office of Library Co-operation be established to facilitate and drive collaboration across the TEI and CRI sector.

**Recommendation 4:** That the National Library and CONZUL and representatives from ACENZ, ACRI, APNZ, and Te Taihū o Ngā Wānanga:

- Agree governance arrangements for an Office of Library Co-operation;
- Agree terms of reference and an initial work programme for the Office; and,
- Develop a proposal for the Tertiary Education Commission to contribute to the funding of the Office through the Innovation and Development Fund.

**Recommendation 5:** That the National Library and CONZUL, on behalf of the sector, prepare an application for funding for a project manager to undertake the work required to define terms of reference and a work programme for the Office of Library Co-operation, along with proposed governance and funding

arrangements.

**Recommendation 6:** That the National Library, working through the Office of Library Co-operation, facilitate the development of an agreed set of best practice library service standards for the tertiary and research library sector, in partnership with the sector.

## Co-ordinated collection development and shared technical services

**Recommendation 7:** That the development of a national strategy for co-ordinated collection development form part of the work programme for the Office of Library Co-operation.

**Recommendation 8:** That assessing the feasibility of shared technical services initiatives form part of the work programme for the Office of Library Co-operation.

## Māori responsiveness

**Recommendation 9:** That each TEI library develop a Māori responsiveness plan that can form part of its institution's profile, including specific action plans and targets to:

- Give effect to their partnership responsibilities to iwi
- Increase the number of qualified Māori library staff
- Provide a research and learning environment that meets the needs of Māori researchers and students
- Improve the access to, and protection of, Māori knowledge and taonga, and
- Contribute to improvements in Māori literacy, particular among youth.

**Recommendation 10:** That the Tertiary Education Commission:

- Develop benchmark standards for Māori responsiveness, in consultation with TEIs
- Monitor progress with the implementation of TEIs' Māori responsiveness plans through the Charters and Profiles review process
- Ensure consolidated time-series reporting on Māori library staff numbers takes place, and
- Review, in consultation with the Ministry of Education and Te Puni Kōkiri, scholarship funding available for developing Māori librarians.

**Recommendation 11:** That the Tertiary Education Commission (TEC) facilitate meetings between Victoria University of Wellington, Wānanga o Raukawa and

The Open Polytechnic of New Zealand to develop options for:

- The cross-crediting, stair-casing and development of qualifications required to produce bi-cultural knowledge workers; and,
- Increasing the number of Māori learners taking and completing library qualifications.

**Recommendation 12:** That a specific position within the Office of Library Co-operation be dedicated to facilitating enhancements in Māori responsiveness in tertiary libraries including:

- Communication of Māori responsiveness best practice within the libraries and their communities;
- Attraction of Māori to librarianship;
- Negotiation with Victoria University of Wellington, Wānanga o Raukawa and The Open Polytechnic of New Zealand to enable students to take some courses from each institution and cross credit them to create a tailored qualification;
- Participation in developing standards for New Zealand's tertiary libraries (client services, collection management, physical environment, ownership and access);
- Develop draft documents for iwi and libraries entering into arrangements over ownership and access to taonga; and,
- Prepare draft policy relating to management of collections e.g. intellectual property.

## Technology infrastructure

**Recommendation 13:** That all tertiary and research libraries in New Zealand should operate an inter-operable Integrated Library and Resources Access Management System (IRAMS).

**Recommendation 14:** That the Office of Library Co-operation, working closely with CONZULSys and the National Library:

- Identifies the best option for ensuring inter-operable systems for the tertiary and research libraries is developed;
- Identifies a funding and governance model for the development and ongoing support of an inter-operable IRAMS for the sector
- Develops a business case for submission to the TEC for national funding, or contributory national funding that maximises the removal of barriers to participation by smaller institutions.

**Recommendation 15:** That the National Library, working through the Office of Library Co-operation, lead the establishment of appropriate standards for

IRAMS across the sector to maximise interoperability

**Recommendation 16:** That all TEI and CRI libraries endorse the concept of the Next Generation Internet Consortium initiative to ensure adequate bandwidth is available to the tertiary library and research New Zealand community as quickly as possible and support the consortium proposal to seek seed funding from the TEC.

## Access to New Zealand research outputs

**Recommendation 17:** That New Zealand establishes a database that provides access to all New Zealand published research outputs (papers, conference proceedings and books) for the research and tertiary community.

**Recommendation 18:** That the National Library works collaboratively with the tertiary and research sector, through the Office of Library Collaboration, to determine the infrastructure and standards required to establish the database.

**Recommendation 19:** That the TEC, FRST, Health Research Council and Royal Society of New Zealand require research funding recipients to enter their research outputs to an agreed standard on the database as a requirement of government funding.

**Recommendation 20:** That the Office of Library Co-operation develop a business case for the seed funding required to establish and maintain the database and provide unrestricted TEI and CRI access to it for a three-year period for consideration by TEC and MORST.

**Recommendation 21:** That the Office of Library Co-operation investigate an expansion of the [Australian Digital Theses Program](#) to become an Australasian programme capturing metadata and potentially full-text for theses from the tertiary sector.

## Access to e-resources

**Recommendation 22:** That all universities, CRIs and the larger polytechnics are encouraged to join CEIRC.

**Recommendation 23:** That CONZUL expand its consortium to a model similar to CEIRC, so that all tertiary libraries and CRIs can join to acquire electronic resources that are not available through CEIRC.

**Recommendation 24:** To enhance access to international electronic resources for New Zealand tertiary teachers, researchers and students, the Office of

Library Co-operation should develop a business case for new funding from TEC and MORST to support consortial purchase of:

- Back issues of key resources; and,
- Access to core research databases for a three-year period.

**Recommendation 25:** That an extended CONZUL committee, or the Office of Library Co-operation, represent the CRIs and TEIs in negotiations for e-resources, establish guidelines for the funds and, ensure the funds are equitably spent on core resources.

### **Shared storage**

**Recommendation 26:** That the Office of Library Co-operation, as a secondary priority, undertake a study to establish what governance and economic arrangements would be required to enable a national store facility to operate so as to attract the participation of a majority of the large libraries in the tertiary sector.

# 1 Introduction

## 1.1 Purpose

This report outlines the Collaborating for Efficiency Library Services Sub-Group's findings and recommendations on options for sharing library services across the public tertiary education sector.

It also provides recommendations on extending these options for sharing services to Crown Research Institutes (CRIs) and considers what assistance the National Library could provide.

## 1.2 Context

Library services play a pivotal role in the teaching, learning and research programmes of public tertiary education institutions (TEIs).<sup>1</sup> Libraries provide access to electronic and print information resources. They also foster information literacy skills in their users – a crucial competency for life-long learning.

The requirement to manage available resources efficiently combined with rapid technological advancement and increased demand by students, researchers and academic staff for quality library services and, in particular, electronic access to information has led to mounting pressure on the library services provided by TEIs and CRIs.

Closer collaboration among libraries has the potential to improve the services available to users, improve access to a wider range of publications, and provide financial benefits to the participating institutions.

## 1.3 Collaborating for efficiency

### 1.3.1 Overview

The Collaborating for Efficiency Project was launched by the Associate Minister of Education (Tertiary Education) Hon Steve Maharey on 28 August 2002. The project's ultimate objective is to strengthen the contribution of TEIs to the Tertiary Education Strategy.

The project has two enabling roles – diagnostic and facilitative:

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<sup>1</sup> Tertiary Education Institutions is a term that covers universities, polytechnics, colleges of education and wānanga as provided for in the Education Act 1989.

- The diagnostic role relates to the identification and sharing of best practice development within and across the public tertiary education sector. The aim is to encourage individual TEIs to adopt good practice, which has been demonstrated to enhance academic, research or financial performance.
- The facilitative role will be to assist TEIs to develop collaborative strategies, including shared services, innovation, course delivery/design and export education initiatives which maximise efficiency and effectiveness of performance. These collaborative initiatives may also include working with iwi, local government, industry (e.g. fishing, forestry, boat building) and CRIs.

A Steering Group Chaired by the Chairman of the Tertiary Education Commission, Dr Andy West, is overseeing the work of a number of sub-groups examining capital costs/cost management, entrepreneurial activities, Māori responsiveness, staffing costs and the sharing of library services. The Steering Committee is required to report to the Associate Minister of Education (Tertiary Education) on the work undertaken and propose next steps to maintain momentum.<sup>2</sup>

### **1.3.2 Library services**

The Library Services Sub-Group was charged with preparing a report that will provide the basis for the effective and efficient sharing of library services across the public tertiary education sector.

The group's terms of reference<sup>3</sup> state that this report should include a high level stocktake of existing initiatives and issues surrounding the sharing of library services. It should also assess options for sharing services against the following criteria:

#### *Efficiency*

- The extent to which the preferred options will facilitate and encourage efficient management processes of library services;
- The effects of the preferred options on the overall performance of the public tertiary education sector;

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<sup>2</sup> Collaborating for Efficiency Steering Group Terms of Reference.

<sup>3</sup> A full copy of the sub-group's Terms of Reference is included at Appendix A.

### *Collaboration*

- The extent to which the preferred options will encourage collaboration and responsiveness in the use of library services;
- Considering whether the options for sharing services should be extended to CRIs; and,
- Considering what assistance the National Library may be able to provide.

In developing the report the sub-group was asked to take into account:

- The need to develop stronger institutions that are better positioned for strategic change;
- The need to enhance collaborative opportunities both within institutions and between TEIs, including considering the cost vs benefits of collaboration;
- The strategic directions elaborated in the Tertiary Education Strategy and Statement of Tertiary Education Priorities and the need to enhance sector capability to meet those priorities;
- The needs of stakeholders (particularly students) for responsive services;
- Opportunities arising from relationships with iwi, local government, industry and research organisations (including CRIs) as appropriate;
- The ability to monitor and assess improvements in effectiveness and efficiency;
- Identifying innovative practice in the sector;
- “Best practice” in both a New Zealand and international context; and
- The government’s e-learning strategy.

### **1.3.3 Private Training Establishments**

The sub-group’s Terms of Reference focused our attention on the TEI and CRI library sectors, precluding consideration of Private Training Establishments (PTEs).

The sub-group notes that in 2001 approximately 51,000 students were enrolled in PTEs, which comprised 18 percent of all tertiary sector student enrolments.<sup>4</sup> Only a limited number of these students appear to have access to dedicated professional library services through the institutions with whom they are enrolled. There is anecdotal evidence from the public library sector of increased demand on their services from PTEs. There is a need to consider what PTE students and staff may need in terms of information support and how these needs may best be met in the future. The provision of standards for TEI libraries could also be applied to PTEs.

## 1.4 Our approach

The sub-group met formally on six occasions over the period from 19 September 2002 to 4 April 2003 to work on the development of this report.

In developing its report the sub-group:

1. Considered existing information on the TEI and CRI libraries, including existing and proposed collaborative initiatives and the implications of e-learning developments
2. Completed literature reviews on collaborative initiatives internationally
3. Completed a survey of TEI and CRI libraries to gather additional information on, inter alia: numbers of users and library staff, library budgets, library management systems, electronic information, storage arrangements, technical services and collection development, current and proposed collaborative arrangements, drivers and barriers to collaboration, the potential role of the National Library in facilitating collaboration and examples of innovation and best practice
4. Gathered additional quantitative data from TEIs and CRIs to develop a consolidated statistical profile for the sector. The information gathered is included in full at Appendix B, and
5. Commissioned or undertook more detailed analysis of particular areas of potential co-operation, which formed the basis for chapters 5-9 of this report.

While developing its report the Sub-Group was aware of the need for more substantive dialogue and engagement on any proposals for collaboration across the library sector as a whole.

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<sup>4</sup> Ministry of Education, New Zealand's Tertiary Education Sector 2001 Profile and Trends (Wellington: Ministry of Education, October, 2002) p94.

Given the timeframes for developing this report, there was limited opportunity for such a dialogue during the report's preparation. The sub-group did provide a written update on progress to 12 March 2003 in which it signalled its intent to convene a national forum for librarians from across the TELs and the CRIs to consider the findings and recommendations in this report and to discuss possible next steps.

## 2 The New Zealand library sector

### 2.1 Overview

*TEIs:* The TEI libraries meet the information needs of over 204,000 Equivalent Full Time Students (EFTS), 12,450 full time equivalent teaching and research staff and 11,430 other staff.<sup>5</sup> A core part of their role is to ensure students and teaching staff have access to curriculum specific information required for students to successfully complete their course of study or achieve their research objectives.

In 2001 TEI libraries employed 1,120 full time equivalent staff, 49 percent of whom held library qualifications. Of these staff, 5 percent identify themselves as Māori. Of this total group, 38 percent hold a library qualification.

In the year ending 31 December 2001 the TEI libraries had assets valued at \$285.7M, or 7 percent of total fixed assets within the TEI sector. The combined libraries' operating expenditure was over \$93.6 million. Staff salaries accounted for 43 percent of this expenditure, while 53 percent was spent on acquisitions.

The proportion of the acquisitions budget spent on electronic resources appears to vary significantly between different types of institution. While the sub-group did not receive complete or uniform returns from all institutions, it appears the universities spend between 15-33 percent of their acquisitions budget on electronic resources. Polytechnic expenditure appears to vary widely but is lower on average than the universities. Some polytechnics reported no expenditure on electronic resources, while others reported expenditure of between 5 percent and 30 percent of their acquisitions budget. Expenditure by colleges of education ranged from 7 percent to 21 percent of their total acquisitions budgets. CRI expenditure ranged from less than 5 percent to 20 percent, with a number of the CRIs averaging 10 percent of the total acquisitions budget.<sup>6</sup>

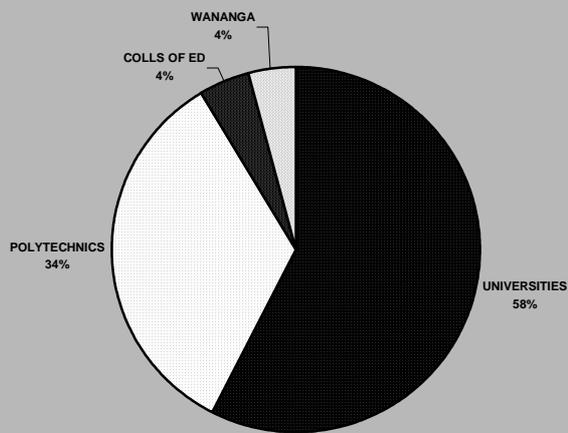
*Universities:* Within the TEI sector the eight universities account for 60 percent of total potential library users and 92 percent of total library assets. The universities also account for 81 percent of total library operating expenditure. There are 832 library staff, 43 percent of whom hold a library qualification. eight percent of these staff identify themselves as Māori; 32 percent of this group hold a library qualification. The University of Auckland Library is the largest tertiary library in New Zealand, accounting for 13 percent of total TEI library users and 34 percent of total library assets. The University of Auckland also accounted for 22 percent of total TEI operating expenditure in the year ending 31 December 2001.

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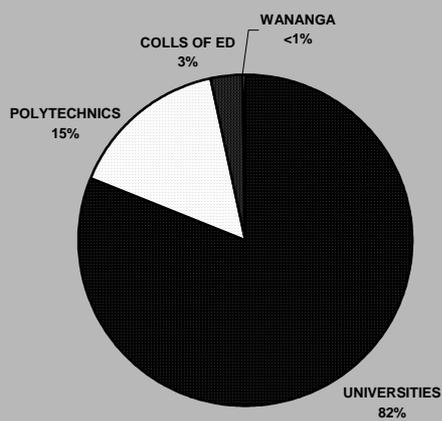
<sup>5</sup> see Appendix B for the full data set from which these highlights are drawn.

<sup>6</sup> Returns on this matter were not received from the three wānanga.

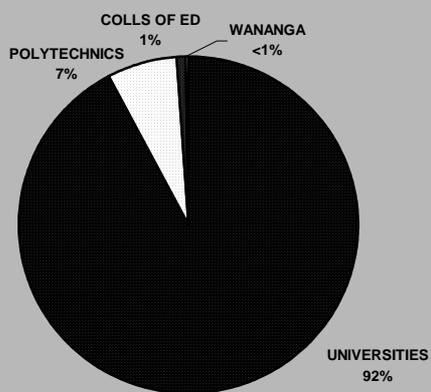
**Total Potential TEI Library Users by Sector (2001)**



**Total TEI Library Operating Expenditure by Sector (2001)**



**Total TEI Library Asset Value by Sector (2001)**

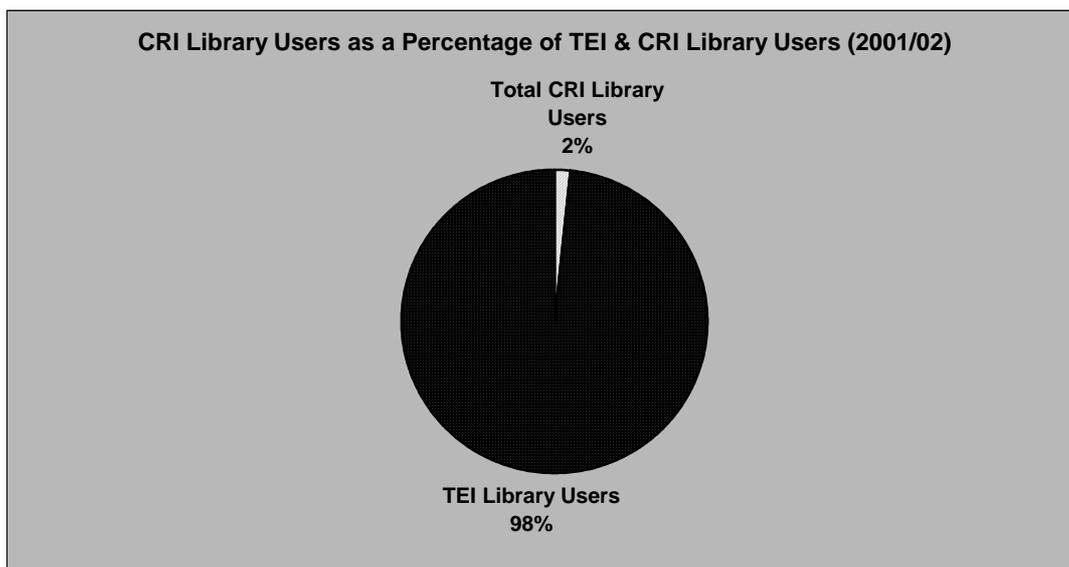


*Polytechnics:* Within the TEI sector the polytechnics account for 32 percent of total potential TEI library users. They account for 7 percent of total library assets and just over 15 percent of total sector library operating expenditure. The polytechnic libraries employ 220 FTE staff of whom 64 percent hold a library qualification. Six percent of polytechnic library staff identify themselves as Māori, with 48 percent of these staff holding a library qualification.

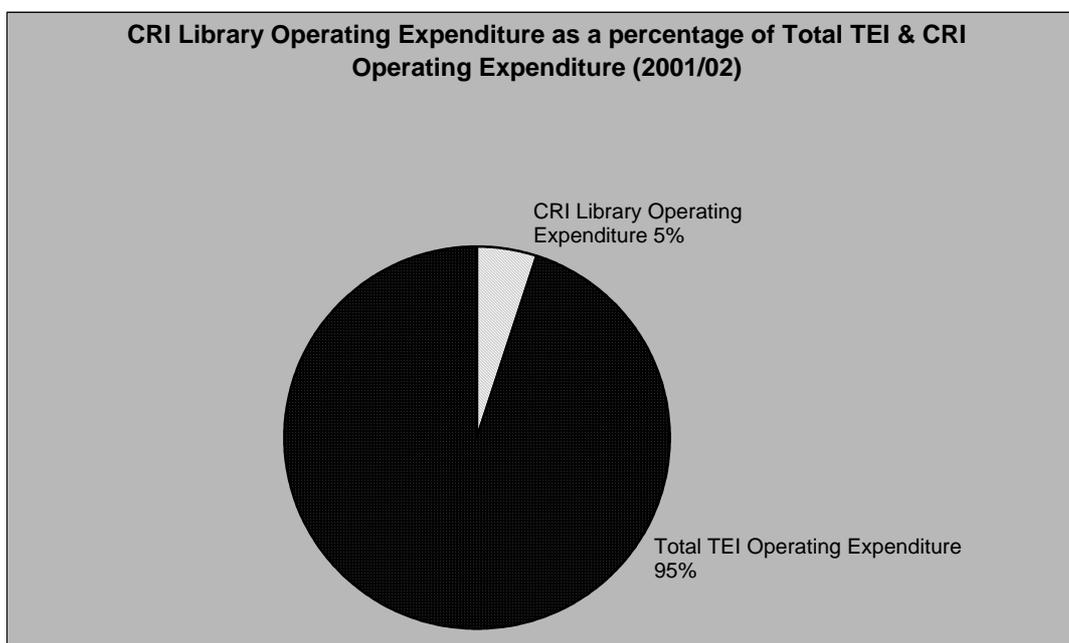
*Colleges of Education:* The colleges of education account for just over 4 percent of total potential library users. They hold 1 percent of total library assets and account for just over 3 percent of total sector library operating expenditure. The colleges of education libraries employ 61 staff of whom 72 percent hold a library qualification. There is one library staff member (1.6 percent) in the colleges' sector that identifies as Māori. This librarian holds a library qualification.

*Wānanga:* In the year ending 31 December 2001, the three wānanga accounted for 4 percent of total potential library users, although this figure is growing rapidly. The wānanga employed 7 library staff, 57 percent of whom held a library qualification. At this time Te Wānanga O Aotearoa contracted their library service from The Open Polytechnic of New Zealand and so did not have any dedicated library staff of its own. All the library staff at the wānanga identify themselves as Māori.

*CRIs:* The 9 CRI libraries meet the information needs of 2,312 researchers and 944 other full time equivalent staff. Their primary focus is on ensuring CRI researchers are able to readily access the information required to support their public good and commercial research programmes. In the year to 30 June 2002 CRI library operating expenditure was 5 percent of the combined operating expenditure for CRIs and TEIs. In the year to June 2002, the CRIs employed 65 FTE staff, 77 percent of whom hold library qualifications. No CRI library staff identify themselves as Māori.



In the year ending 30 June 2002 the combined CRI libraries operating expenditure was over \$5.3 million. Staff salary costs accounted for 34 percent of operating expenditure while 59 percent of expenditure was devoted to acquisitions. CRI annual library operating expenditure is 5 percent of the combined operating expenditure for the CRIs and TEIs.



*National Library:* The National Library is well placed to make a positive contribution to closer collaboration among the TEI and CRI libraries, particularly given its new legislative mandate. The new legislation for the National Library of New Zealand states that the purpose of the Library is to enrich the cultural and economic life of New Zealand, and its interchanges with other nations by:

- Collecting, preserving and protecting documents, particularly those relating to New Zealand;
- Making those documents accessible to all people of New Zealand, in a manner consistent with their status as documentary heritage and taonga;
- Supplementing and furthering the work of other libraries in New Zealand; and,
- Working collaboratively with other institutions having similar purposes, including those forming part of the international library community.<sup>7</sup>

The National Library has approximately 364 full time equivalent staff (including the staff of the Alexander Turnbull library) with a total operating expenditure of \$42.2 million in the year ending 30 June 2002, equivalent to 42 percent of the expenditure made by the TEI libraries. Its fixed assets were valued at \$80.2 million, equivalent to 28 percent of the assets held by the TEI libraries. In the year ending 30 June 2002, the National Library employed 27 full time equivalent staff who identify themselves as Māori, 7 percent of its total staff. A library qualification was held by 15 percent of the National Library's Māori staff members.

## **2.2 How libraries add value**

Libraries aim to organise knowledge in a manner that provides ready access to the information required by their users. They are key enablers of information-literate, life-long learners.

For public tertiary education libraries this involves identifying user needs to support their curriculum delivery, learning and research. Ideally, this involves library staff being engaged in the curriculum design and development process to ensure they can identify the resources required to support both teaching staff and students. Once user needs have been identified the library can factor these requirements into its collection development process for both physical and electronic resources.

Libraries use a range of tools to enable access to these resources from the cataloguing (metadata) system through to various search facilities. Libraries also invest in developing the information literacy skills of users, so they can

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<sup>7</sup> National Library of New Zealand (Te Puna Matauranga o Aotearoa) Bill.

independently identify their particular needs and access the information they require.

Finally, the library provides the facilities that enable virtual or physical access to all of the information resources it has available. This often involves providing physical space for users to undertake reading or research.

A range of support functions underpin the delivery of these value-adding services. Consistent with the libraries core purpose, the leadership and management team:

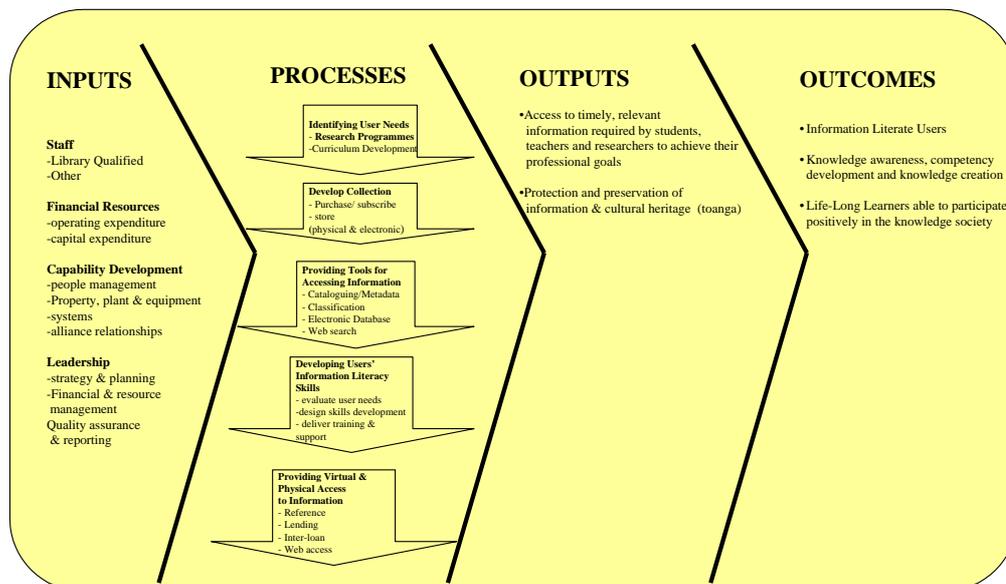
- Charts the library’s strategic direction and response to changes in its business environment;
- Co-ordinates the delivery of services along the value chain and ensures appropriate quality assurance systems and processes are in place;
- Ensures prudent financial and resource management and meets accountability reporting requirements; and,
- Oversees the library’s capability development.

The core capability development functions include:

- The provision of the physical infrastructure and information management systems, required to support the delivery of the library’s core services;
- The recruitment, leadership and development of the library’s staff; and,
- The development and management of the alliances and collaborative arrangements (which are usually designed to enhance, access to information resources or manage costs).

In considering the scope for collaboration, the Library Services Sub-Group has taken into account the range of services TEI and CRI libraries offer to their users and also the supporting infrastructure that is required to deliver those services. The following generic model depicts library service, inputs, processes, outputs and outcomes.

## Library System



There are potential opportunities for benefits to accrue from closer collaboration in most of the services provided by libraries to users or in the infrastructure and support functions.

In subsequent chapters the sub-group has explored the scope for collaboration in a number of the areas identified in this model.

## 2.3 Strategic directions

### 2.3.1 Government

Government policy and funding mechanisms have a significant impact on the development of library services and the institutions of which they are a part.

*TES:* The Government's Tertiary Education Strategy aims to support the Growth and Innovation Framework and more closely align tertiary education provision with the achievement of New Zealand's national development goals in the areas of economic transformation, social development, Māori development, environmental sustainability, infrastructural development and innovation.<sup>8</sup>

Towards this end the strategy recognises tertiary education system capability as a national asset. It signals a move away from a primarily market demand driven model toward greater collaboration and rationalisation within the tertiary education system. It aims to reduce unnecessary duplication and to make better use of the Government's finite resources.

The library's ability to facilitate access to information is at the heart of an institution's capability to create knowledge, to teach, and develop the competencies in learners that enable them to participate effectively in New Zealand society and the wider global community.

As TEIs respond to the six strategies within the overall Tertiary Education Strategy, so will libraries need to adapt and refine both the services they offer and the manner in which they deliver them.

*STEP:* The priorities signalled in the Statement of Tertiary Education Priorities of particular relevance in the library sector include:

- *Collaboration:* Identifying and developing the most appropriate partnership and collaborative ventures to complement or enhance each institution's areas of strength, including – for some institutions - contributing to the development

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<sup>8</sup> See Ministry of Education, Tertiary Education Strategy 2002/07, (Wellington: Ministry of Education, May 2002).

of e-learning capabilities as flagged in the report of the E-learning Advisory Group<sup>9</sup>;

- *Research Specialisation*: Aligning the collection development strategy to complement the increased differentiation and specialisation in research focus and resource concentration that begins to emerge within institutions or across networks of institutions;
- *Māori Development*: Developing the staff profiles and services that enable libraries to support initiatives designed to facilitate the achievement of Māori development aspirations;
- *Pacific Peoples, Foundation Skills, Generic & Specialist Skills Development*: Developing capabilities and services in a manner that support initiatives taken by institutions for improving Pacific Peoples' learning outcomes, raising foundation skills and the development of the generic and specialist skills required for our knowledge society.<sup>10</sup>

*Charters & Profiles*: As part of the Government's approach to more actively steering the Tertiary Education System, it is introducing a system of Charters and Profiles. Charters and Profiles will enable Tertiary Education Organisations (TEOs) to demonstrate alignment with the Tertiary Education Strategy and the Statement of Tertiary Education Priorities. They will provide the basis for:

- Funding negotiations between TEOs and the Tertiary Education Commission;
- Monitoring organisational performance; and,
- Ensuring accountability for the use of public funds.<sup>11</sup>

Charters and Profiles provide a mechanism for fostering collaborative initiatives between TEOs.

*Funding*: The Government has signalled its intention to develop an integrated funding framework that will over time support the alignment of the tertiary education system with the tertiary education strategy and in so doing contribute to the achievement of New Zealand's national development goals.<sup>12</sup>

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<sup>9</sup> See E-Learning Advisory Group, Highways and Pathways: Exploring New Zealand's E-Learning Opportunities (Wellington: Ministry of Education, March 2002).

<sup>10</sup> See Ministry of Education, Interim Statement of Tertiary Education Priorities, (Wellington: Ministry of Education, July 2002).

<sup>11</sup> See Ministry of Education, Excellence, Relevance and Access: An Introduction to the New Tertiary Education System, (Wellington: Ministry of Education, Wellington, May 2002). p 5.

<sup>12</sup> See Ministry of Education, Excellence, Relevance and Access: An Introduction to the New Tertiary Education System.

Institutions will still receive the bulk of their funding through the Student Component, which will incorporate a performance element to ensure accountability and encourage improved performance.

The introduction of a Performance Based Research Fund and the Centres of Research Excellence Fund underscores the emphasis on research quality and alignment with national goals rather than leaving research programmes vulnerable to fluctuations in student demand.

The strategic development component of the framework groups a number of funds that provide a potential source to fund collaborative initiatives, including the E-Learning Collaborative Development Fund and the Innovation and Development Fund. It is these funds that the library services will be able to bid for to help seed or fund any proposed collaborative initiatives.

Overall, Government has signalled a commitment to fostering a ‘systems’ approach to tertiary education provision. It also recognises the need to strike a balance between respecting institutional autonomy and taking a more directive approach to change. While there are positive examples of collaboration among institutions, this collaboration still tends to be driven by institutional self-interest. The Government’s policy and funding instruments are not yet sufficiently developed to drive more significant change.

### **2.3.2 Information and communications technology (ICT)**

One of the most significant drivers of change within the tertiary education sector – as in other sectors of society - is information and communications technology. E-learning – learning that is delivered through electronic media such as the internet – is changing the learning environment.

Technology is enhancing traditional contact and distance learning delivery. We are likely to see a convergence in learning modes for particular learners, with some institutions offering ‘blended’ or ‘mixed’ mode delivery.

As the Tertiary Education Advisory Commission noted, ICT is also enabling the unbundling of teaching and learning services.<sup>13</sup> It provides the potential for institutions to offer the full range of learning services or to specialise in particular niches such as curriculum design and content, tutorial and learning support, and assessment or credentialing.

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<sup>13</sup> Tertiary Education Advisory Commission, *Shaping the System* (Wellington: Tertiary Education, Advisory Commission, February 2001) p 15.

ICT is also a catalyst for globalisation, providing researchers and students with access to information globally and also increasing competitive pressure as international learning providers offer distance and mixed mode programmes within New Zealand.

The challenge for libraries is to continue to add value, so researchers and students can access relevant information from anywhere in the world via the internet. Thus libraries need to not only keep abreast of changes in curriculum and learning delivery that are being driven by technology; they also need to provide ready access to digital information. We are seeing the emergence of the ‘hybrid library,’ one that provides access to both electronic and paper based items.

Technology underpins:

- Improved access to electronic resources held at many other sites within New Zealand and internationally;
- A move from paper-based systems to electronic databases with full text e-publications;
- Digitisation of heritage and other material to enhance access and protect the original source documents; and,
- Cost-effective sharing and purchase of resources (such as one hard copy of limited use publications).

The introduction of international standards, access to improved bandwidth and the development of interoperable ‘open’ information management systems that are able to deal with hard copy and electronic resources will be critical to these developments. Greater collaboration between library services is likely to underpin such developments and provide a means of managing the costs.

### **2.3.3 Economic**

The capacity of the New Zealand economy to continue delivering real increases in per capita GDP will depend on diversification of the economy beyond its traditional resource-based products and services, and also on adding value to those traditional resource-based products and services. Increasingly that value is being provided through adding more information.

As the tertiary service sector expands, the economy will require more “knowledge workers”. Already many traditional manual jobs require the use of technology. As a consequence there is an increasing requirement for the education system to foster a high level of literacy in the broadest sense. It will be important to not only read and write but to also be able to interpret and use information. Increasingly education will be about providing people with skills in how to learn and use information. Perhaps not surprisingly, libraries as “portals” to information are a critical resource in our research and learning institutions.

### **2.3.4 Social**

The needs and expectations of learners are changing, as New Zealanders become more technologically sophisticated and increasingly expect access to information on a 24 hour, 7-day basis. An ageing population and growing labour market scarcity will lead to a greater demand for flexible work and learning practises as people balance their work and personal lives. Economic and technological trends will reinforce the trend toward life-long learning.

Māori, Pacific and Asian populations in New Zealand are growing at faster rates than the Pākehā population.<sup>14</sup> The Māori population, for example, is expected to increase from 16 percent the total population in 1996 to 21 percent in 2051. Pacific Peoples are projected to increase from 6 percent of the population in 1996 to 13 percent in 2051. Projections for the Asian population have only been made to 2016 when it is estimated they will comprise 9 percent of the population. By 2016 these groups are expected to constitute nearly half of all students and an increasing percentage of the workforce.

The tertiary education strategy recognises the importance of meeting the needs of these growing groups of learners, and in particular underscores the importance of improving the learning outcomes for Māori and Pacific learners.

For libraries the challenge will be to ensure they have relevant learning materials and can provide access in a way that meets the needs of Māori and Pacific learners. A key issue, highlighted in the Māori development chapter of this report, is the need to develop and retain a core group of qualified Māori library staff.

### **2.3.5 New Zealand library operating environment**

*Supply-side issues:* The costs facing libraries have been increasing ahead of the rate of inflation. They have been driven by:

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<sup>14</sup> See Department of Statistics, National Population Projections at <http://www.stats.govt.nz> (Accessed 18 April 2003).

- The “knowledge explosion” on one hand (the exponential growth in the amount of knowledge being created each year);
- The influence of international publishers with whom libraries need to negotiate access to both physical and electronic resources; and,
- Funding constraints that have adversely affected library budgets.

*Demand-side issues:* There has been a steady growth in participation in the tertiary sector over the last 10 years, which is projected to continue. The Ministry of Education estimates that – all else being equal – enrolments will be around 20 percent higher in 2007 than they were in 2001.<sup>15</sup>

Factors driving this growth in participation include: increasing numbers of international students and increasing numbers of learners at wānanga. The wānanga – particularly Te Wānanga o Aotearoa – are attracting students through offering free of tuition fee courses, an increased number of sites and flexible learning styles. The approach adopted by the wānanga is also reflected in mainstream institutions, many of whom have been offering, for example, free of tuition fee computing courses.

Growth in student numbers is likely to continue to place pressure on the Government’s tertiary education budget. It increases the likelihood of initiatives to contain expenditure either through reducing the government per EFTS investment in real terms or through managing demand in some way. In any event while the government’s additional investment in tertiary education goes into meeting uncapped demand, it means there is less money available for targeting particular capability development initiatives.

International students have grown from just over 8,000 in 1997 to 17,658 in July 2001 (6.1 percent of the total student body). Of these students learning through public providers, 77 percent were from Asia. Most of the growth in international student numbers has occurred at universities, which are teaching 56 percent of international students enrolled in New Zealand.<sup>16</sup> The likely continued growth in international students poses a particular challenge for library services that need to provide services that meet the particular needs of this growing group of users.

International students add a further dimension for library services that will need to develop their services in a manner that also:

- Meet the needs of the growth in Māori and Pacific Peoples seeking information; and,

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<sup>15</sup> Ministry of Education, New Zealand’s Tertiary Education Sector 2001 Profile and Trends p 43.

<sup>16</sup> Ibid., p 41.

- Respond to the demand for remote 24 hour, 7 day a week access by increasingly technologically able users.

*Substitutes:* Some commentators point to the internet as a threat or substitute for professional library services. The claim is made that researchers and students can simply ‘surf’ the net for the information they require. There are, however, some significant advantages that library services offer over ‘free’ internet access to data. Libraries provide access to commercial databases of peer-reviewed literature not freely available over the web. Just as importantly librarians have the tools and expertise to enable users to select quality information sources that are more closely targeted to their needs in a timely manner, compared with the near random nature of most Internet search engines. Finally, they offer facilities and an environment conducive to learning.

### **2.3.6 Conclusions**

Library services continue to have a central role to play in the research, teaching and learning process. Economic trends reinforce the need for ready access to information, while the changing nature of New Zealand society underscores the need to meet the information needs of Māori, Pacific and Asian students and increasing numbers of international students. Information and communications technology is a key enabler of both collaboration and globalisation and the competitive pressures they entail.

Government policy is more supportive of a collaborative approach to the provision of library services than in the 1990s. While the tools available to government to steer the sector are still being developed and their application tested, collaborative initiatives that demonstrably can deliver benefits to individual participating institutions are more likely to succeed.

## **2.4 Collaborative initiatives**

New Zealand TEI libraries have had a tradition of collaboration and resource sharing, including an effective inter-loans system underpinned by a national union catalogue hosted by the National Library. There have also been some reciprocal borrowing schemes and co-operative collection development.<sup>17</sup>

A number of regional or sub-sector bodies within the TEI sector have emerged that have facilitated the introduction of closer collaboration among member libraries. These arrangements illustrate some of the potential offered for closer collaboration.

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<sup>17</sup> Helen Renwick, [The Big Picture: Opportunities for potential areas for closer collaboration among the New Zealand university libraries](#), A report to CONZUL and the New Zealand Vice Chancellors’ Committee, June 2002. p 7.

### 2.4.1 CONZUL

The Council of New Zealand University Librarians (CONZUL) acts collectively for the mutual benefit of New Zealand university libraries. It aims to:

- Provide leadership on library and information issues;
- Improve access to information resources fundamental to the advancement of teaching, learning and research;
- Work together on common issues which no one organisation is able to accomplish by itself; and,
- Strengthen and extend alliances with other national and international organisations.<sup>18</sup>

In 2003 it is progressing a range of collaborative initiatives including: consortia purchase of electronic resources, shared systems, reciprocal-borrowing arrangements, and shared administrative services. In line with the recommendations in the Renwick report, the New Zealand Vice Chancellors Committee has recently agreed to fund a position to facilitate the scoping and implementation of CONZUL's work programme.

CONZUL's operating principals recognise that it should pursue co-operative initiatives that are of overall benefit to its members. They also recognise that co-operation may involve compromise for the common good, requiring self-interest to be offset by the collective benefit. Each institution does, however, determine whether or not it will participate in a particular project on a case-by-case basis.

Four of the eight university libraries have, for example, instituted the CONZULSys project, the first consortia Integrated Library and Resources Access Management System (IRAMS) purchase in the sector. We examine this development more fully in Chapter Six together with the potential it has for the development of sector wide interoperable IRAMS.

CONZUL has also led the establishment of a consortium of seven of the eight universities (the University of Auckland has chosen not to participate) known as CONZULAC. CONZULAC aims to increase purchasing power, reduce book and processing costs and negotiate terms for supply for books and ancillary services. In 2002 a Request for Proposal was prepared by the University of Otago Library on behalf of the CONZULAC consortium for the supply of North American publications.

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<sup>18</sup> CONZUL, Strategic Plan 2003-05.

Each library has committed to placing at least 50 percent of its North American book purchases through the selected vendor. YBP was the successful vendor. Because of the size of the business CONZULAC was able to negotiate very favourable terms. The consortium also monitors factors such as speed of supply and follow up of claims. Each library places its individual orders direct with the vendor and books are supplied direct to each ordering institution. The scheme has proved to be so successful that the participating libraries have agreed to extend the scheme to United Kingdom publications.

## **2.4.2 TALG**

The Tertiary Alliance Libraries Group (TALG), is part of the Tertiary Alliance, which comprises tertiary institutions in the mid-north island region. Its members include Tairāwhiti Polytechnic, Bay of Plenty Polytechnic, Waiariki Polytechnic, Waikato Polytechnic, and the University of Waikato. It aims to develop working relationships between member libraries and foster collaboration on library resourcing, services and developments.

TALG has developed a common cataloguing policy, reciprocal-borrowing arrangements, consortium subscription to electronic resources, staff training and collaborative support for e-learning. Its projects for 2003 include:

- Co-operative book purchasing (along the same lines as the successful CONSULAC approach);<sup>19</sup>
- A survey of print serials and electronic database subscriptions as a precursor to considering the possibility of placing the subscriptions through one supplier, in order to get better terms and services;
- Investigation of consortium database subscription to EBSCO Academic Search Elite;
- Staff development initiatives; and,
- Investigation of library services for international English for Speakers of Other Languages (ESOL) students.

## **2.4.3 Canterbury Tertiary Alliance**

The Canterbury Tertiary Alliance involves Christchurch Polytechnic Institute of Technology; Christchurch College of Education, University of Canterbury and Lincoln University. Its Library Services Group has:

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<sup>19</sup> The University of Waikato will not be participating in the TALG cooperative acquisitions scheme because it is already committed to the CONZULAc scheme.

- Established a reciprocal borrowing agreement allowing students and staff of all member institutions to borrow resources from one and others' libraries;
- Jointly purchased e-books through Blackwells, providing access to 100 titles;
- Jointly purchased CCH online law resources; and,
- Facilitated an arrangement whereby Canterbury University provides cataloguing services for both Christchurch Polytechnic Institute of Technology and Christchurch College of Education.

The Canterbury Tertiary Alliance library services group has also begun discussions on a possible distributed collection in the performing arts.

#### **2.4.4 Bill Robertson Library**

In Otago the Bill Robertson Library provides the full range of library services to both Otago Polytechnic and the Dunedin College of Education. It has an agreement with the University of Otago Library for reciprocal access for students and staff of the respective institutions. Otago University, Dunedin College of Education and Otago Polytechnic have also made some progress on shared purchasing. They have agreed not to buy a particular periodical title if one of the other institutions has a hard copy and a long run and it is not regarded as core material in either of the other institutions.

#### **2.4.5 Other initiatives**

There are also two significant consortia for purchasing electronic information. The New Zealand universities, and some Polytechnics, belong to the Council for Australian University Librarians Electronic Information Resources Committee (CEIRC).<sup>20</sup> CEIRC negotiates the purchase of electronic resources on behalf of its members. Within New Zealand a number of polytechnics have formed a consortium for negotiating the purchase of electronic resources – members include CPIT, Manukau Institute of Technology, Northland Polytechnic, Nelson Marlborough Institute of Technology, Otago Polytechnic, The Open Polytechnic of New Zealand, Waikato Polytechnic, UCOL and UNITEC.

There are other limited co-operative collection development arrangements including for example:

- Co-operation between Aoraki Polytechnic and Christchurch Polytechnic Institute of Technology;

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<sup>20</sup> See <http://www.anu.edu.au/caul/datasets/ceirc.htm> for more details.

- Arrangements between individual TEI libraries, public libraries and other libraries such as for example District Health Board libraries; and,
- The provision of library services to Te Wānanga o Aotearoa students and staff by the Open Polytechnic Library.

Other institutions have begun to explore the potential for collaborative arrangements for the provision of library services. The Open Polytechnic of New Zealand, Whitireia Community Polytechnic, and the Wellington Institute of Technology, for example, are introducing a reciprocal borrowing arrangement for staff, and shared collection development for serials. They also intend to examine the feasibility of sharing technical services.

## 2.5 Drivers and barriers

### 2.5.1 Drivers

There are a number of factors that will continue to underpin and drive closer collaboration in the library sector, including:

- *Meeting User Needs:* Libraries have a real interest in improving access to quality information to meet the needs of their user communities.
- *Cost Pressures & Limited Resources:* Faced with inflation in the cost of library materials and limited budgets, institutions are interested in initiatives that enable them to manage costs while maintaining or, ideally, further developing the services required by their users.<sup>21</sup>
- *Mutual Benefits:* The prospect of significant mutual benefits to institutions and their users remains the most significant driver for collaboration. These mutual benefits can include service improvement, cost management, and/or risk management. This report elaborates on these benefits in Chapter 3.
- *Technology:* As we have already noted, technology is a tool that is enabling organisations to access and share information and collaborate more readily. It is also changing the expectations of users in terms of their ability to source and access information, particularly electronic information, via the Internet.
- *International Best Practice:* In an increasingly interconnected world, libraries, like other organisations, are influenced by international trends. Where appropriate, they seek to adopt or adapt successful models to better meet their needs and those of their users. As we highlight in Chapter 3, collaboration

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<sup>21</sup> This is an international trend see for example, Jo Pye and David Ball, “Purchasing consortia: trends and activity in the UK”, in *The Bottom Line: Managing Library Finances* Volume 12, Number 1 1999 p 12.

between institutions is an increasingly common response to the issues facing libraries.

- *Government Policy and Funding:* The Government's Tertiary Education Strategy and the requirements inherent in Charter and Profiles provide a framework that aims to encourage collaboration. Some respondents to our survey referred to a change in the political climate that has given institutions "permission" to talk and work through issues that in the past were considered "too hard." There is also some limited funding available to encourage collaboration through the E-Learning Collaborative Development Fund and the Innovation and Development Fund. The Government's tools for encouraging co-operation do, however, need to be further developed and applied before they are likely to become a significant driver of change.
- *Changing Use of Libraries:* Increasingly, libraries are being viewed as "active learning environments" providing space conducive to collaborative learning and able to accommodate the different learning styles and approaches of users.

## 2.5.2 Barriers

There is also a range of factors that are barriers to effective closer collaboration. These barriers include:

- *Unequal Benefits:* Often the benefits derived from collaboration accrue unequally. In general terms smaller institutions tend to derive greater benefits through greater relative economies of scale than larger institutions. As a consequence, the benefits of collaboration, when weighed against the financial and non-financial costs of collaboration, may not appear as attractive to larger institutions. Larger institutions may, therefore, be less committed to particular collaborative initiatives than smaller institutions.
- *Institutional rather than System Perspective:* While Government is seeking to foster a systems-wide approach, institutions by their nature look to the interests of their users (staff and students) and their institution in the first instance. In doing so there is a natural concern at the prospect of the loss in autonomy and self-sufficiency inherent in many collaborative arrangements (even where many institutions recognise they do not have the resources to 'go it alone'). As libraries serve the needs of their users, staff anxiety about the potential for diminished access to resources impacts on the ability of libraries to develop certain shared initiatives such as co-ordinated collection policies.
- *Competitive Environment/Culture:* The institutional focus has been reinforced by the competitive nature of education provision through the 1990s. While the Government is seeking to moderate the worst excesses of competition, institutions still perceive their business environment as essentially competitive – this perception is perhaps even more strongly held within the CRIs.

Collaboration is still seen as attractive provided it responds directly to institutional interests.

- *Start-up Costs:* Collaborative initiatives often involve some form of up-front investment in time and resources to obtain the desired benefits. The survey undertaken by the sub-group highlighted that some institutions have difficulty finding the time and money to invest.

“Typically you have to be prepared to invest a little more money in collaborative ventures in order to obtain a significant benefit. Our budget is so tight we do not have the ‘little more’ to invest.”<sup>22</sup>

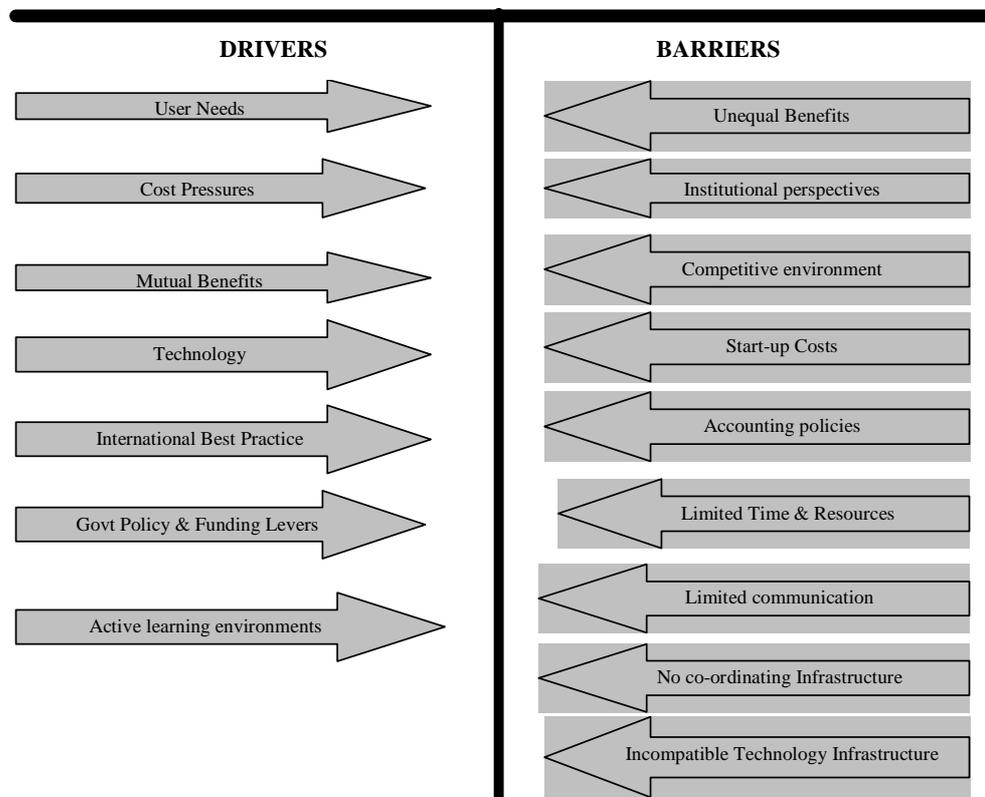
- *Accounting Policies:* Sometimes the accounting policies of institutions do not make the costs associated with current library management practices transparent. Thus the financial benefits of collaborative initiatives may not always be apparent, resulting in sub-optimal management decision-making.
- *Communication:* There is no existing forum for librarians from across the TEI and CRI sectors to share their thinking and develop a shared vision and agenda for New Zealand’s tertiary library services. The absence of regular cross sector dialogue tends to reinforce ‘silo’ thinking and sub-sectorial or regional approaches to collaboration.
- *Time and Limited Resources:* Another significant constraint is presented by the limited time and resource available to institutions to invest in the assessment and development of new collaborative initiatives, even when they offer the prospect of significant benefits. The constraint is exacerbated by the significant compliance costs inherent in meeting government funding, reporting and accountability requirements.
- *Co-ordinating Infrastructure:* There is no organisational infrastructure with dedicated staffing to co-ordinate the scoping, assessment and implementation of collaborative initiatives across the TEI and CRI libraries.
- *Technology Infrastructure:* Our survey confirmed that TEI and CRI libraries are using a range of different library management systems, which are not interoperable. Interoperable computer systems are a critical requirement for collaboration.

The following diagram summarises the drivers and barriers.

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<sup>22</sup> Survey respondent.

## IMPROVING PERFORMANCE THROUGH COLLABORATION



### 2.6 The way forward – first steps

In the sub-group's view four key initiatives are required to set the scene for stronger cross-sector collaboration:

- A regular national forum for fostering shared commitment to improving library service access and performance through closer collaboration
- An Office of Library Co-operation to facilitate the scoping, development and implementation of practical collaborative initiatives to improve the performance of the tertiary and research library sector
- A set of service standards against which tertiary and research libraries can benchmark their performance, and
- A shared or interoperable technology infrastructure to provide the basic capability required for other collaborative initiatives.

### 2.6.1 Improving communication – a national forum

A regular national forum for tertiary and research library managers in association with the National Library is required to enable more substantive dialogue, engagement and commitment to collaborative initiatives. Such a forum is needed to foster a shared understanding of the issues facing libraries and commitment to the priorities for closer collaboration.

**Recommendation 1:** That a National Forum for TEI, CRI and National Library managers be convened to review the proposals in this report and confirm actions under an Agenda for Collaboration.

**Recommendation 2:** That the Ministry of Education and the Tertiary Education Commission support a national forum for TEI, CRI and National Library managers under the auspices of the Collaborating for Efficiency Project.

### 2.6.2 Improving co-ordination – an office for library co-operation

A centrally funded executive office would provide a mechanism for facilitating the scoping, development and implementation of practical collaborative initiatives designed to improve the performance of the tertiary and research library sector.

The Renwick Report noted that CONZUL may need to become a legal entity if it is to enter into undertakings that involve joint commitment of resources. It pointed to the governance arrangements put in place by OHIOLink as a possible model for New Zealand's universities. Renwick also recommended the establishment of a centrally funded office by the 8 universities to sustain CONZUL's current activities and to develop new co-operative ventures and proposed funding arrangements for the office.<sup>23</sup> The New Zealand Vice Chancellors Committee (NZVCC) has recently agreed to fund a position to facilitate the scoping and implementation of CONZUL's work programme.

It would appear to make sense to build on the existing commitment the NZVCC has made to support a central office and the National Library's commitment to supplementing and furthering the work of other libraries in New Zealand and working collaboratively with other institutions with similar purposes.

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<sup>23</sup> Renwick, pp 68-69.

CONZUL in collaboration with the National Library and representatives of the TEI peak bodies<sup>24</sup> would need to work through the issues associated with governance, funding and hosting arrangements for the office. Bernie Sloan's Library Consortia Documents Online provides ready access to a wide range of governance models and associated documentation.<sup>25</sup>

Further work needs to be done to develop a well-considered proposal. The Sub-Group considers, however, that the Office of Library Co-operation:

- Should be a small 'provider-centred' group focused on the feasibility assessment and implementation of practical collaborative initiatives that will enhance the performance of libraries in the sector;
- Should base its initial work programme around the initiatives identified in this report and the proposed "Agenda for Collaboration" we anticipate will be one of the key outcomes from the first Tertiary and Research Library Managers National Forum;
- Have a governance framework that:
  1. Recognises the interest of all the providers within the sector, including universities, polytechnics, colleges of education, wānanga and CRIs and the National Library;
  2. Provides appropriate direction to the Office and ensures it remains accountable to providers; and,
  3. Minimises governance transaction costs.

Our initial thinking suggests a governance structure that includes a nominee from each of the following groups: NZVCC, APNZ, ACENZ, Te Taihū o Nga Wānanga, ACRI and the National Library is worthy of consideration.

As a sign of their commitment to meaningful collaboration and in recognition that individual institutions or their users stand to benefit from closer collaboration, participating TEIs, CRIs and the National Library should contribute to funding the Office. Recognising the public good benefits inherent in collaboration and the value in removing financial barriers to collaboration, there is a sound case for TEC to provide seed funding for scoping and then contributing to the operation of the office for, say, an initial 3-year period.

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<sup>24</sup> Including the New Zealand Vice-Chancellors Committee, Association of Polytechnics in New Zealand, Association of Crown Research Institutes and Association of Colleges of Education in New Zealand.

<sup>25</sup> Go to [www.lis.uiuc.edu/~b-sloan/consort.htm](http://www.lis.uiuc.edu/~b-sloan/consort.htm) (accessed on 2 April 2003).

**Recommendation 3:** That an Office of Library Co-operation be established to facilitate and drive collaboration across the TEI and CRI sector.

**Recommendation 4:** *That the National Library and CONZUL and representatives from ACENZ, ACRI, APNZ, and Te Taihū o Ngā Wānanga:*

- Agree governance arrangements for an Office of Library Cooperation;
- Agree terms of reference and an initial work programme for the Office; and,
- Develop a proposal for TEC to contribute to the funding of the Office through the Innovation and Development Fund.

**Recommendation 5:** That the National Library and CONZUL, on behalf of the sector, prepare an application for funding for a project manager to undertake the work required to define terms of reference and work programme for the Office of Library Co-operation, along with proposed governance and funding arrangements.

### 2.6.3 Library services – a national standard

Our survey of the New Zealand tertiary and research library sector revealed a wide variation in the services available to library users, reflecting an equally wide level of investment by their parent institutions. The library services sub-group is of the view that there would be value in establishing some benchmark service standards that could be applied to the sector as a whole.

A search of the international literature highlighted a range of sources for guidance on international library standards, which would provide the starting point for the development of a set of standards for New Zealand.<sup>26</sup>

A set of best practice library standards would:

- Provide a basis for objective assessment by the academic audit bodies;
- Help establish a baseline standard that would promote equity of access for users;
- Help define and raise library services standards over time, against international benchmarks.

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<sup>26</sup> The American Library Association produces standards and guidelines, for example, - [http://www.ala.org/Content/NavigationMenu/Our\\_Association/Divisions/ACRL/Standards\\_and\\_Guidelines/Standards\\_and\\_Guidelines.htm](http://www.ala.org/Content/NavigationMenu/Our_Association/Divisions/ACRL/Standards_and_Guidelines/Standards_and_Guidelines.htm). The Australian Best Practice Handbook for University Libraries has useful information. See Anne Wilson, and Leeane Pitmann, *Best Practice Handbook for Australian Universities*. Canberra, Department of Education, Training and Youth Affairs, August 2000. Electronic document at [http://www.dest.gov.au/archive/highered/eippubs/eip00\\_10/00\\_10.pdf](http://www.dest.gov.au/archive/highered/eippubs/eip00_10/00_10.pdf) Standards for Canadian College and Resource Centres is another source of best practice standards. This publication can be found at: <http://www.cla.ca/divisions/cacul/ocpaper.htm>

The development of the standards is something the National Library could take forward, in consultation with the sector.

**Recommendation 6:** That the National Library, working through the Office of Library Co-operation, facilitate the development of an agreed set of best practice library service standards for the tertiary and research library sector, in partnership with the sector.

#### **2.6.4 Developing the technology infrastructure**

The development of a shared or interoperable technology infrastructure is the other key plank that will provide the capability for closer collaboration between TEI and CRI libraries.

Chapter Six explores this proposal more fully and also includes the working group's recommendations.

## 3 The international context

### 3.1 Overview

Closer collaboration between libraries is an international trend. There has been a significant growth in the number and type of collaborative arrangements.

Historically co-operation between libraries focused on:

- Sharing union catalogue information;
- Interloan lending;
- Shared storage facilities;
- Shared collection development; and,
- Human resource development at local, regional and national levels.

With the growing importance of the Internet and the World Wide Web, consortia are tending to focus on:

- Sharing expertise in library automation;
- Sharing integrated library systems and computer databases; and,
- Shared collection development, particularly the purchase of electronic resources.<sup>27</sup>

These consortia have moved beyond being simple ‘buying clubs’ to become significant value-adding strategic partnerships.

### 3.2 Drivers

The growth in consortia overseas is largely driven by the same factors as those influencing developments in New Zealand:

- the increase in the output of publications;
- the rise in the cost of publications coupled with stringent budget allocations, growth in student enrolment;
- increased expectations of users;
- the demand for improved inter-lending services; and,
- the impact of the web, internet and the increase in electronic resources.<sup>28</sup>

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<sup>27</sup> See Reason Baathuli Nfila and Kwasi Darko-Ampen, Developments in academic library consortia from the 1960s through to 2000: a review of the literature, Library Management Volume 23 Number 4/5 2002 p 203-212.

<sup>28</sup> Ibid., p 203.

### 3.3 Benefits

Collaboration results in three broad types of benefit:

- *Improved effectiveness*: Libraries can improve access to, and delivery of, their services more quickly than they could alone;
- *Improved efficiency*: Libraries can reduce their capital or operating costs relative to output (improved operating margins); and,
- *Improved risk management*: Libraries can improve their risk profile by reducing risks outright, sharing risks, or enabling risks to be managed more effectively than they could alone.

In the library context the benefits of collaboration have been described as aiming:

- To improve service to users;
- To gain financial benefit though, for example, aggregated buying power;
- To share resources, such as catalogues, collections, collection development, electronic resources, storage and staff expertise;
- To encourage discussion and collective thinking;
- To achieve reduced costs, and thus demonstrate to funders and other stakeholders that the institutions are maximising the use of their resources and spending taxpayers money wisely; and,
- To help member institutions manage change.<sup>29</sup>

### 3.4 Principles underpinning collaboration

The international literature also highlights some key principles that underpin effective collaborative arrangements. Citing Hakli, Renwick summarises these principles as follows:

- *Clear benefits*: Co-operation must be profitable, result in clear benefits for participants and be business-like;
- *Standardisation*: Participants must accept standardised solutions, instead of cultivating local peculiarities; there may be restrictions on local freedom and old habits of competition will be called into question;
- *User focus*: Participants must be able to focus on the needs of their users and less on their own ambitions;
- *Focus on longer-term benefits*: Participants must look for long-term benefits because the progress of mutual effort is usually slower than individual ones, though the final benefits are greater and costs lower;

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<sup>29</sup> Dr Daniel G Dorner and Judith Annear, [The Renaissance of Library Consortia: Implications for New Zealand Libraries](#): a report commissioned by the National Library of New Zealand. Wellington, June, 2000. pp 3 7 22-24.

- *Infrastructural change:* Participants must be prepared to change the present infrastructure and accept new arrangements to achieve long-term benefits;
- *Ownership:* Participants must be owners of joint programmes and have a voice; and,
- *Fostering trust:* A participant must be prepared to work to foster co-operation and mutual trust.<sup>30</sup>

Renwick goes on to emphasise the importance of:

- Clearly defined goals within the organisation;
- Implementation procedures that cater for the needs of all participants;
- Effective decision-making processes (which can take time);
- An executive body for joint work; and,
- And a unit (or units) for preparing programmes and managing their implementation.<sup>31</sup>

The recent report of the Research Support Libraries Group – a group established by the four United Kingdom higher education funding councils, the British Library, and the national libraries of Scotland and Wales – underscores these findings. They have recommended the establishment of a new body, which they term the Research Libraries Network, with a remit to develop, prioritise and lead a UK-wide strategy for research information provision. Its three roles would include:

- Strategic leadership for the provision of research information in the UK, engaging both providers and users in the formulation and delivery of information in the UK;
- An executive function in ensuring that the program is funded and implemented; and,
- Acting as a high-level advocate for research information ensuring that researchers' developing needs inform policy making.<sup>32</sup>

### 3.5 Collaborative models

There is a rich and varied array of successful collaborative models among library services internationally.

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<sup>30</sup> See Esko Hakli, "Creating new information infrastructures through Cooperation," Helsinki University Library Bulletin, 2001, pp5-9.cited by Renwick pp 60-61.

<sup>31</sup> *Ibid.*, p 61.

<sup>32</sup> Research Support Libraries Group, Research Support Libraries Group Final Report, (Higher Education Funding Council for England, 2003).

Consortia can be characterised and grouped by a range of different factors. We consider three here:

- Differentiation by source of funding;
- Differentiation by governance structure and degree of centralisation; and,
- Differentiation by sector.

### 3.5.1 Differentiation by funding

O'Connor identifies four types of consortia based on how they are funded:

- *Off the top*: Members are drawn together for a common purpose by the availability of centrally provided funds. Examples are OhioLINK and Galileo.
- *Get on with It*: Funds are initially provided through a central grant and then funding is taken over by the consortium's institutions. The CAUL/CEIRC in Australia is an example of this approach, where the Australian Federal Government provided funding to establish trials of electronic products across all university libraries for up to two years. The consortia then needed to pick up the ongoing costs themselves.
- *Let's help ourselves*: Member institutions form a company to provide library services, one of which is undertaking negotiations for the consortium. SOLINET is an example.
- *Do it our way*: This model is similar to the first, but is nationally funded and focused. The activities emerging from the Joint Information Systems Committee in the United Kingdom is a highly successful example.<sup>33</sup>

### 3.5.2 Differentiating by governance and organisational structure

Allen and Hirshon place consortia along a continuum running from the highly decentralised network with an informal governance structure through to the highly centralised organisation with a formal governance structure. They identify four points on the continuum:

- *The loosely knit federation*: The loosely knit federation is governed by member libraries and usually has no central staff or central funding. It is

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<sup>33</sup> Steve O'Connor, Beyond Cooperation into Consortial Approaches. Conference paper delivered to Information Online and On Disc 99 Conference, 19-21 January 1999, Sydney Australia. Electronic document available at <http://home.vicnet.net.au/-caval/so0199.htm> cited by Dr Daniel G Dörner and Judith Annear, The Renaissance of Library Consortia: Implications for New Zealand Libraries, A Report Commissioned by the National Library of New Zealand, June 2000. P 28-29.

flexible, with low overheads, but a low level of return. There is little risk or investment of time but it is difficult to achieve more than the simplest outcomes. The group has few common interests, no central authority, and only limited group purchasing power.

- *The multi-type/multi-state network:* The network usually has central staff but a voluntary (and therefore low) level of co-operation among members who have little common interest. Vendors generally provide poor discount rates because there is no guaranteed level of participation. The agenda is likely to be fragmented.
- *The tightly knit consortium:* This type of consortium may have a sponsoring agency and may have a focused membership profile (e.g. research libraries) or a wide membership (e.g. state-wide). Some dedicated staff co-ordinate programme development but do not really control it. The consortium may rely solely upon institutional funding, or may supplement resources with external funding. It could share a virtual or online union catalogue. Publisher discounts to this group are likely to be higher and the group may develop a defined and beneficial development agenda over time.
- *The centrally funded state-wide consortium:* This type of consortium has a sponsoring agency and usually a separate source of funds to boost campus purchases. There will be a central agency that secures the contract and pays many or all of the costs involved, such as the database subscriptions. Members jointly agree on services to be purchased, based on their shared interest. Staff are available to further the group's objectives, and the central administration may be involved in determining agenda and policies. There will almost certainly be a union catalogue. With a central source of dedicated funds, member libraries have more of an incentive to collaborate than with any of the other models. OhioLINK is an example.<sup>34</sup>

More centralised organisational forms with a central staff function and budget and collaborative decision-making engaging in higher risk higher return initiatives. Allen and Hirshon recognise that groups may evolve and shift along the continuum as their mode of operating and the environment change.

### 3.5.3 Differentiating by sector

In surveying a range of models for distinguishing between different types of consortia, Dorner and Annear suggest that they can be categorised by the type of organisations that participate in the consortia. They identify four main groups:

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<sup>34</sup> B Allen and A Hirshon, "Hanging together to avoid hanging separately: opportunities for academic library consortia", *Information Technology and Libraries*, Vol 17, No 1 (1998) pp 36-44.

- *Single sector*: This type of consortium consists of libraries that are all of the same type, such as academic libraries, or public libraries. There is no overlap with other library sectors. Examples include the M25 Consortium of Higher Education in the United Kingdom, the Melbourne Asian Research Libraries Consortium (MARLC) in Australia, Novanet in Canada, the Foursite Consortium in the United Kingdom, and the Ohio Public Library Information Network (OPLIN) in the United States.
- *Single sector with state or national library involvement*: A consortium of this type also consists of libraries of a particular type such as research libraries, but has the State or National Library as a partner. Examples include Co-operative Action by Victorian Academic Libraries (CAVAL), in Australia, Gauteng and Environs Library Consortium (GAELIC) in South Africa, and the Ohio Library and Information Network (OhioLINK) in the United States.
- *Multi-sector*: Members may be from all types of libraries and may include non-library partners. Examples include: library only – The Alberta Library in Canada and the Berri Library and Information Centre in Australia; and library with non-library partners: Fathom.com in the United States and the United Kingdom, and the Colorado Digitization Project in the United States.
- *Mega-consortium*: This type of consortium is formed when consortia have joined together with other consortia. Examples include Consortia Canada and New York Consortium of Consortia.<sup>35</sup>

### 3.6 Illustrative examples

There is a wealth of information available on the library consortia that are operating successfully today. Much of this information is covered in the published literature or is accessible on the web.<sup>36</sup>

In this section we have chosen to illustrate international trends by referring to some examples of collaboration. More specific coverage of collaborative arrangements internationally for shared storage, shared or interoperable technology infrastructure and consortia purchase of e-resources is provided in the following chapters.

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<sup>35</sup> Dorner and Annear, pp 30-31.

<sup>36</sup> See for example the International Coalition of Library Consortia (ICOLC) web page, which includes descriptions of consortia and links to their home pages. [www.library.yale.edu/consortia](http://www.library.yale.edu/consortia) (accessed 2 April 2003).

### 3.6.1 Washington Research Library Consortium

The Washington Research Library Consortium (WRLC) is one of the most tightly integrated consortia in the United States. It is a regional resource-sharing organisation established by several universities in the Washington, D.C. metropolitan area to expand and enhance the information resources available to their students and faculty. The consortium's goals are to:

- Provide co-ordinated access to all information resources owned or chosen by WRLC member libraries, and contain library systems costs by building on shared technology resources
- Increase the scope and accessibility of information resources available to WRLC students and faculty, and
- Provide optimum space for collections, services, and users in campus libraries and reduce capital expenditures for library book space.<sup>37</sup>

The consortium has a shared central budget that covers the following core services:

- Co-operative collection development
- A library automation system with an online union catalogue and multiple electronic resources
- An off-site book storage facility and book delivery service, and
- A separately staffed service organisation.

There is a range of optional additional services which at an additional cost - consortium members can access such as additional mounted databases.<sup>38</sup>

### 3.6.2 OhioLINK

The Ohio Library and Information Network (OhioLINK) as another example of an integrated consortium of higher institutions whose main focus is sharing of electronic access. It is a consortium of Ohio's college and university libraries and the State Library of Ohio, linked to a common central information system. Serving more than 500,000 students, faculty, and staff at 80 institutions, OhioLINK's membership includes 17 public universities, 23 community/technical colleges, 39 private colleges and the State Library of Ohio.

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<sup>37</sup> See <http://www.wrlc.org/wrlcprogs.htm>

<sup>38</sup> See <http://www.wrlc.org/wrlcprogs.htm>, see also L Payne, "The Washington Research Library Consortium: a real organisation for a virtual library:" *Information Technology and Libraries* Vol 16:1 1998 pp 13-17.

OhioLINK serves users at member institutions via 120 campus-based library systems and networks, and the Internet. It has a central catalogue contains more than 8 million unique master records from its 80 institutions. The catalogue systems throughout the state provide capacity for more than 4,500 simultaneous users. The OhioLINK central catalogue also is available to outside users via the Internet.

OhioLINK offers user-initiated, non-mediated online borrowing through its statewide central catalogue. Students and faculty can electronically request items while searching the OhioLINK central catalogue. The service can be accessed from home, office, libraries and student dormitories. Materials are usually delivered to users within 48 hours through a contracted delivery service.

In addition to the central catalogue, OhioLINK users can access electronic research databases including a variety of full-text resources. Over ninety research databases, covering a variety of disciplines, are at the users' fingertips. Many of the databases are citation indexes. In many cases, the user can find out which OhioLINK members possess copies of the cited journal or link to the relevant full-text article. OhioLINK's electronic full-text resources include online dictionaries, literature, and journal articles. Over 1 million research articles are currently downloaded per year.

OhioLINK's newest service is the Digital Media Centre (DMC). It is designed to archive and provide access to a variety of multi-media material.<sup>39</sup>

OhioLINK has a central funding system that provides a subsidy for automation of local campuses. The Ohio Board of Regents has authorised the OhioLINK Governing Board to oversee the OhioLINK programme. The governing board approves the strategic directions and financial expenditures of the programme. Meeting 6 times a year the board reviews the progress of the programme and approves future initiatives and expenditures. The board consists of 13 voting members, 9 from universities, 3 from community colleges, and 1 from independent colleges. Ex-officio members representing technical, library, and board of regents' perspectives also participate on the board.<sup>40</sup>

### **3.6.3 Other state-wide consortia**

Potter's review of five state-wide efforts in the US in library consortia:

- GALILEO
- Louisiana Library Network
- OhioLINK
- TexShare in Texas, and

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<sup>39</sup> <http://www.ohiolink.edu/about/what-is-ol.html>

<sup>40</sup> <http://www.ohiolink.edu/about/what-is-ol.html>

- VIVA in Virginia

highlighted a range of reasons for their formation.

These reasons included:

- Initiatives that would benefit all student and faculty of the participating libraries;
- Initiatives that provided enhanced library services with a particular emphasis on access to new electronic resources, including databases, and web-based services;
- Controlling building costs by providing regional storage facilities;
- Facilitating interlibrary borrowing which has evolved into providing as many electronic resources as possible at the lowest cost to participating libraries;
- Initially, ensuring that students and faculty at all participating institutions had equal access to the same type of materials, which has shifted to include electronic materials; and,
- Better sharing of existing resources and jointly acquiring new resources with greater discounts.<sup>41</sup>

Each of these consortia is extending its services beyond the public supported academic libraries to include private academic libraries, vocational-technical institutes and public libraries. The services they offer are increasingly placeless and virtual. There is an emerging vision of an electronic library for all citizens of the particular state concerned.<sup>42</sup>

### **3.7 Conclusions**

There is a rich and varied array of successful collaborative arrangements among library services internationally. Each approach tends to represent the particular interests, needs and circumstances of the partner organisations.

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<sup>41</sup> W Potter, "Recent Trends in State-wide Academic Library Consortia", *Library Trends* Vol 45:3 (1997) pp 416-434, cited by Nifila & Darko-Ampem.

<sup>42</sup> Nifila and Darko-Ampem, p 206.

In broad terms, however, the literature on the international development of library consortia underscores a shift from peripheral and limited resource sharing to integrated system-wide and formalised resource sharing. Academic libraries are shifting from sharing bibliographic information to sharing technology for bibliographic control.<sup>43</sup>

Moreover, there appears to be a trend toward publicly supported academic libraries including vocational and technical institutes and public libraries and private academic libraries in their consortia arrangements.

This approach is reflected in the UK where there has been an emerging cross-sectoral approach – encouraged by significant central government funding – in which “the traditional distinctions between different types of library can be withdrawn and purchasing consortia viewed as a common response to generally similar circumstances.”<sup>44</sup> This is likely to be reinforced by the recommendations of the Research Support Libraries Group as they are taken forward.

The benefits of closer collaboration are readily apparent. Resources are being provided to users who did not have access to them before the consortia was formed. Access and levels of service have been improved. Moreover, by banding together libraries have achieved cost savings through reduced cost per unit.

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<sup>43</sup> Nifila & Darko-Ampem, p 211.

<sup>44</sup> Pye and Ball, pp 12-118.

## 4 Priorities for collaboration

### 4.1 Overview of options

Our survey of current initiatives in New Zealand and internationally has highlighted a wide array of collaborative initiatives that could be extended or taken up by New Zealand's tertiary and research sector libraries.

Those initiatives extend along the value chain of services provided by libraries to their users as well as covering the underpinning support services.

#### 4.1.1 Support services

Two key support services with collaborative potential are:

- *Shared IT Services*: Building on the work of CONZULSys to develop a shared or inter-operable technology infrastructure for the TEI and CRI libraries would provide a platform enabling a wide range of other collaborative initiatives to take place.
- *Shared Storage*: Growing collections create pressure on valuable floor space. Some library materials are little used, and as space pressure from current requirements mounts, off-site storage becomes attractive, even necessary. Rationalisation of low use duplicate stock could be undertaken on a national basis, with a low-use archive accessible through the interlibrary loan system. Renwick concluded that co-operative storage can be more cost-effective than individual operations. Her report to CONZUL and the NZUVCC recommended that shared storage be the subject of a business case.<sup>45</sup>

#### 4.1.2 Core service options

The key functions relating to library services with collaborative potential include:

- *Co-ordinated Collection Development*: Collection development is the process of planning a stock acquisition programme to build a coherent collection over a number of years to meet users' needs. With the development of a 'system-wide' approach to New Zealand's portfolio of research and learning programmes signalled in the Tertiary Education Strategy, there is potential for more emphases to be placed on co-ordinated collection development. In the New Zealand context Renwick's paper provides the most recent exploration of the challenges associated with co-ordinated collection development.<sup>46</sup>

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<sup>45</sup> Renwick, p 58.

<sup>46</sup> Ibid., pp 9-16.

- *Shared Purchase of Electronic Content:* As we have noted in Chapters Two and Three, one of the most common areas for collaborative endeavour internationally, and also within New Zealand at a sub-sector or regional level, is clubbing together to purchase electronic resources. Publishers offer significant discounts to consortia. The size of the discounts is difficult to measure, but is estimated to range from 5-75 percent. Deals are based on negotiation, market share and dollars available rather than a standard discount on list price. While New Zealand TEIs are involved in consortia arrangements already, our survey suggests that smaller institutions, particularly the polytechnics, have more limited access to electronic resources. While consortium purchase offers the potential for cost savings, it also has the potential to greatly enhance the quality of information available to smaller institutions.
- *Shared Technical Services:* Technical services encompass those activities and processes associated with obtaining, organising and processing library materials for use. The functions include: ordering or acquisition, cataloguing, classification, and the physical preparation of the item for use.<sup>47</sup> Public libraries have done some collaborative work in this area. They have found that the benefits include:
  - Reduced administration costs (through for example amalgamation of invoices);
  - Increased vendor discounts (which tend to benefit smaller players rather than large ones that may already be receiving maximum discounts);
  - Reduction of unit title costs through bulk purchase; and,
  - Vendor provision of shelf-ready stock.
- *Collaborative Reference Service:* Sharing expertise to answer user requests for information, both within New Zealand and overseas.
- *Reciprocal Borrowing/Lending:* Face to face and remote direct borrowing (not interloan) from collections of other participant libraries
- *Access to New Zealand Research:* There is scope to make New Zealand research publications and other research outputs more accessible to New Zealand and international researchers by providing access to citations and abstracts and, in time, full text copies of published papers, reports and books and theses on a common (or linked distributed) database.

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<sup>47</sup> Ibid., p 31.

## 4.2 Establishing the priorities – decision criteria

The Sub-group considered all the identified areas for potential collaboration have significant potential. Limited time and resource meant the sub-group focused on some key areas, where we considered there was potential to add value in the time available.

The Sub-group ranked the areas for collaboration in priority order by applying the following criteria:

- Fit with the Tertiary Education Strategy
- Mutual benefits
- Ease of implementation
- Speed of implementation, and
- Return.

The results of this process are summarised in the following table:

<b>Priority Ranking of Collaborative Options</b>						
<b>Project</b>	<b>Fit with TES</b>	<b>Mutual Benefit</b>	<b>Ease of Impl.</b>	<b>Speed of Impl.</b>	<b>Return</b>	<b>Priority</b>
Shared system	High	High	High	2-5 years	High + Public Good	1
E-resources consortium	High	High	Medium	3 years	High + Public Good	2
Co-ordinated collection development	High	Medium	Low	5 years	Med-High, but richer collections	3
Shared technical services	High	High	Low	2 years	High	4
Access to NZ Research	High	Medium	Medium	2 years	Med-High + strong public good	5
Shared storage	Medium	Medium	High	2 years	Medium	6
Reciprocal borrowing	High	Low	Medium	1 year	Public Good	7
Collaborative reference service	Medium	Low	Low	2 years	Low	8

## 4.3 Selected options for further analysis

As a result of this analysis the sub-group set aside the reciprocal borrowing and collaborative reference concepts. Of the other potential collaborative areas we have produced substantive chapters on:

- Māori development options (which was an established requirement, outside the prioritisation matrix)

- Shared systems;
- E Resources consortia;
- Access to New Zealand research; and,
- Shared storage.

While co-ordinated collection development and shared technical services rated more highly than shared storage and access to New Zealand research, the sub-group did not have sufficient time or resource to explore these important areas of potential collaboration.

The sub-group would like to reiterate, however, that it considers both co-ordinated collection development and shared technical services have significant potential. They are areas that should be further explored as a matter of priority by the Office of Library Co-operation.

#### **4.3.1 Co-ordinated collection development**

As already noted, Renwick's paper for CONZUL and the NZVCC explored the issues associated with co-ordinated collection development. Her report made the following observations:

It appears sensible at first sight that collections should be rationalised on a national basis. On reflection, however, it is evident that collections follow and support academic interests. Where a subject is taught, a collection will be required to support it; and, while teaching is informed by research, and academic promotion is related to publication, there will be an expectation that the collection will serve both undergraduates and researchers. These points underlie collection development in university libraries and cannot be over-emphasised.

Recent competition in New Zealand's tertiary sector has seen a proliferation of disciplines and programmes... and many subjects are common. It is anticipated that the Tertiary Education Commission will address the question of disciplines and their distribution among tertiary institutions... Rationalisation of teaching would naturally encourage a rationalisation of library collections."

Despite identifying a number of barriers to collaboration in this area, Renwick presents a sensible agenda of steps toward co-ordinated collection development for the universities, which can readily be extended to the broader public tertiary and research library sectors. These include:

- Maintaining undergraduate collections locally

- Negotiating national site licences for access to electronic information
- Existing collections of strength should be recognised as such and supported as national resources
- Specialist collections should be co-ordinated at research levels
- Inactive collections should be relocated to other institutions, where support is ongoing
- Ensuring relevant JSTOR serials background are purchased for a national archive
- Ensuring that retention of last copies be rationalised through a national store, and
- Ensuring acquisition of expensive materials is co-ordinated to avoid duplication.<sup>48</sup>

#### **4.3.2 Shared technical services**

The Office of Library Co-operation should undertake a feasibility assessment of the potential for achieving both cost-savings and improved service levels from shared technical services in the areas of ordering or acquisition, cataloguing, classification, and the physical preparation of the item for use.

*Recommendation 7:* That the development of a national strategy for co-ordinated collection develop form part of the work programme for the Office of Library Co-operation.

*Recommendation 8:* That assessing the feasibility of shared technical services initiatives form part of the work programme for the Office of Library Co-operation.

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<sup>48</sup> Renwick p 116.

## 5 Māori responsiveness

### 5.1 Introduction

Te Rautaki Mātauranga Māori – contributing to the achievement of Māori development aspirations – is a central theme and primary strategy in the Government’s Tertiary Education Strategy. Accordingly, it is a key issue we have sought to address when considering how library services should respond to Māori needs.

In doing so we have focused on four key issues that need to be addressed by tertiary sector libraries:

- *Partnership*: Partnerships and relationships between libraries and Māori communities are required in accordance with the principles of the Treaty of Waitangi;
- *Māori Library Staff*: The recruitment, training and retention of Māori library professionals needs to be a priority. Increasing the numbers of Māori staff working in libraries has a flow-on effect, positively impacting on the numbers of Māori clients comfortable with using library services;
- *Māori Information – Access & Protection*: Libraries need to ensure Māori information is accessible to users and also cared for in a culturally appropriate manner; and,
- *Māori Youth and Literacy*: With the Government’s emphasis the development of foundation level skills as a priority for the tertiary sector, there is a need for libraries to consider how they might contribute to the development of print literacy skills, particularly among Māori youth.

#### 5.1.1 A note on consultation and sources

Given the time constraints associated with producing this report, proper consultation is yet to occur. However we trust that this report will provide a reasonable basis for engagement between Māori and tertiary library service providers on required next steps.

The sub-group has developed this chapter drawing on:

- The results of a review of the literature conducted by Tui MacDonald, the author of *Te Ara Tika: Māori and Libraries* (1993)
- A focus group discussion amongst library staff of the University of Waikato

- A paper solicited from Dr Rowena Cullen, and
- The anecdotal evidence and the experience of sub-group members.

The results of the literature review and the anecdotal evidence of the focus group had a high correlation, thus adding weight to the validity of the issues and barriers raised.

## 5.2 Background

There are two parallel constructs to take into account when considering what is meant by Māori responsiveness in the tertiary education sector:

- The first recognises that most of our existing tertiary libraries are Pākehā institutions built on Western European traditions of information access and management.
- The second rests on the fundamental issue of partnership and how this can be addressed in practical terms.

Within the Eurocentric tertiary model, there is a substantial history of research and reporting on libraries and the extent to which they are meeting Māori user and non-user needs.

MacDonald (1993) noted a 30-year history of discussion focusing on bicultural issues and services to Māori within the library profession. Garraway and Szekely's 1994 report identified a range of bicultural initiatives carried out in over 60 libraries and related institutions, including 13 tertiary libraries. Hobson (1999) provided an overview of bicultural initiatives in New Zealand university libraries.

Szekely's (1997) *Te Ara Tika: guiding voices* documents an extensive consultation exercise with users and non-users of all types of libraries, including tertiary libraries. A number of themes emerged as particularly important, which were also consistently raised at the hui held to help develop the sub-group's thinking:

- Issues relating to intellectual access and information literacy
- The need to focus on Māori youth, the development of print literacy and the relationship between libraries and schools
- Issues relating to Māori staffing
- The need to have Māori libraries
- The need for outreach services to Māori communities and to increase promotion of library services, and

- Intellectual property issues.

Hobson's (1999) summary of the themes that continually recur in the literature relating to Māori and library services strikes a similar chord:

- There is increasing emphasis on legal obligations inherent in the Treaty of Waitangi
- Priority should be given to increasing the recruitment of Māori library staff
- More effort needs to be given to attracting Māori clients into libraries
- Improved physical and intellectual access to Māori information is needed
- There is a need to examine the assumptions under which libraries operate and the cultural context in which information is stored, retrieved and communicated, and
- There is a need for planning and co-ordination of these issues at both national and local levels.

New Zealand's libraries can point to many institutional initiatives that contribute to improving Eurocentric institutional library responsiveness to Māori. We have, however, not yet seen any cohesive or coherent national plan that reflects a true and valid partnership in the world of tertiary information access and management; in particular one that addresses the second Māori-centred construct.

Much of what Linda Tuhiwai Smith (1992) has to say in an article addressing the issue of research and Māori can be applied to our need to come up to speed with Māori responsiveness within the tertiary education sector and the tertiary library world. She asks, for example:

Can a discipline which has been conceptualised, defined and controlled by a Western tradition work within another culture such as mine without redefining that culture, locating aspects of it in alien contexts, marginalising the parts which are perceived as inappropriate or irrelevant by ignoring them or divorcing them from our cultural links, creating new views of the world by distorting old views of the world?

## 5.3 Partnership responsibilities

### 5.3.1 Crown obligations

Government departments and public institutions are required to recognise the principles of the Treaty in their policies and activities and to promote biculturalism. This includes public and tertiary sector libraries.

While tertiary libraries have statements in their defining documents that acknowledged Māori as tangata whenua and demonstrate commitment to meeting Treaty of Waitangi obligations, Cullen rightly questions whether the fundamental issues of partnership and shared sovereignty are being grappled with now that the initial learning period is coming to an end. She describes a fundamental dilemma of bicultural policies in libraries – how to be true to the implications of partnership under the Treaty of Waitangi – and how the reality of sharing power and resources with Māori is not at this stage being addressed.

The key factors that contribute to the bicultural development of each TEI library include:

- Clear statements of intent
- Well defined strategies
- Continuous monitoring and evaluation of performance
- Supporting the role of the Māori specialist position and bicultural groups within the library, and
- The importance of defining the nature of partnerships and consultation.

### 5.3.2 Frameworks

Mason Durie provides a framework that can be used by tertiary libraries as a basis for thinking about their approach to supporting the achievement of Māori development goals.<sup>49</sup>

He suggests no one approach can meet the diverse needs of Māori. He outlines three broad pathways:

- *The Māori-centred pathway* – which is largely under the control and direction of Māori with a focus on the goal of increasing access to te ao Māori.

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<sup>49</sup> Mason Durie, The Hui Tamata Mataurana and a Framework for Considering Māori Educational Advancement. An address to the Ministry of Education, 9 August 2001.

- *The Māori-added pathway:* A Māori dimension is added on to an existing framework. This Māori dimension may exist as a relatively autonomous unit within the wider institution or may be integrated into all aspects of the institutions operations. To survive and flourish it requires critical mass, adequate space sufficient curriculum time and community support.
- *The collaborative pathway:* The third pathway is concerned more with collaborative effort than a sole effort. Collaboration might involve a wānanga and a university or polytechnic working together. In outlining this pathway Durie notes: “*Institution loyalty is a value worth preaching; but institutional solitude may not be in the longer terms interest of student or whānau.*” Collaboration, he suggests can only bring positive results if it is associated with a genuine and mutual respect for the autonomy and integrity of each institution.

The challenge for TEI libraries is to:

- Determine which pathway is most appropriate for their organisation
- Develop a strategy for giving effect to the chosen pathway, and
- Engage iwi and other stakeholders in the development and implementation of that strategy.

Within libraries this planning occurs within the context of the rest of the institution and the wider community of which it is a part, including engaging with iwi. Furthermore, student needs at the tertiary level are in part at least, determined by the grounding they have had in the world of information and education prior to taking up tertiary options. Thus the issue of Māori responsiveness needs planning and co-ordination at *both* national and local levels; across types of libraries (school, public, tertiary); and across levels of education (primary, secondary, tertiary).

### **5.3.3 Māori-centred models of library delivery**

The emergence of three wānanga and an overall growth in Māori student numbers, which is predicted to increase significantly, provides opportunities for positive and rapid change in the library community’s response.

For example, Te Wānanga o Aotearoa EFTS grew from 6118 in 2001 to well over 20,000 in 2003. Library services for these staff and students has been reliant on contracting services from another tertiary provider, with self-sufficient capability not due to occur until the academic year 2004.

The development of this capability provides opportunities for Māori information professionals and a potentially significant training ground for the future. We might also expect to see the development of a different model of “library” provision grounded in Māori approaches to information.

As the capability of wānanga continue to develop, so will the scope for stronger partnerships between the wānanga and other TEIs along the lines envisaged by Mason Durie.

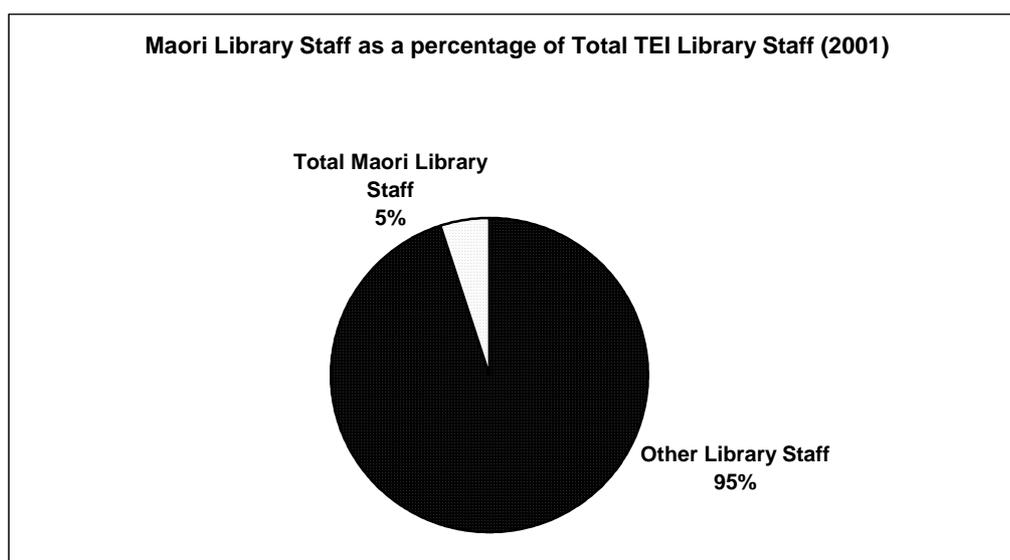
## 5.4 Increasing Māori staff in tertiary libraries

### 5.4.1 Introduction

In 1993, MacDonald found that while the numbers of Māori librarians employed had increased, many held junior positions within their institutions, lacked formal library qualifications and so had little influence within the profession. While library managers were often receptive to the idea of employing Māori, they have found it hard to attract suitable applicants.

### 5.4.2 Current situation

A decade later, the issues appear to be the same. University of Waikato library staff participating in the focus group in the first quarter of 2003 considered that the principal barrier to increased responsiveness to Māori to be the small number of Māori staff working in libraries.



Our survey of the sector confirmed this view. As we noted in Chapter Two, only 5 percent of library staff members identify themselves as Māori. 35 percent of these staff members hold a library qualification. There is some variation around this average:

- 7.9 percent of university library staff members identify themselves as Māori, with 31 percent of these staff holding a library qualification;
- 5.6 percent of polytechnic library staff members identify themselves as Māori, with 48 percent of these staff holding a library qualification;
- 1.6 percent of library staff members at colleges of education identify themselves as Māori;
- All library staff at wānanga identify themselves as Māori.<sup>50</sup>

### 5.4.3 The need

While 5 percent of the library staff are Māori, nearly 18 percent of all enrolments in tertiary institutions were from Māori in 2001.<sup>51</sup> As we noted in Chapter Two, the proportion of Māori in tertiary education is expected to continue growing.

The experience of Waikato University library staff is that Māori students often feel more comfortable dealing with a Māori staff member and are more likely to persevere with learning to use the library effectively. There is a strong relationship between the deployment of Māori librarians and the corresponding use by Māori students of their institutions' libraries. Effective use of library and research materials will contribute to academic success and future employment prospects.

The creation of a Māori Liaison Librarian position within the University of Waikato library has been instrumental in contributing to a steady increase in the numbers of Māori students using the library. The library actively recruits Māori staff.

While still recognising the responsibility of non-Māori librarians to respond effectively to the needs of Māori teachers, researchers and learners, the most immediate need is to increase the pool of Māori librarians. Māori staff with library qualifications are in such high demand that they are often lost to other libraries and professions, leaving gaps in the original library's ability to provide consistent service, and a "lost" investment that the individual library has made in training.

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<sup>50</sup> See Appendix B for further details.

<sup>51</sup> Ministry of Education, *New Zealand's Tertiary Education Sector: Profile and Trends* p 56.

There must be guidelines, strategies, and targets in place that are continuously monitored and improved so that TEI libraries can help ensure rapid improvement in service is achieved for the growing number of Māori in the population.

#### **5.4.4 Retention, workload and isolation**

Māori working in libraries had concerns relating to the pressure of providing services, feelings of cultural isolation and coping with heavy workloads. However, they were enthusiastic about the importance of their roles in providing information to Māori.

The Māori library workers network, *Te Roopu Whakahau*, was considered to be a supportive influence in fostering a growing confidence amongst Māori library workers and facilitating professional networking.

Waikato University staff suggest that recruitment efforts be increased in order to persuade Māori school leavers and graduates that librarianship can be an exciting career option and one that allows them to assist other Māori and contribute towards Māori development. One suggestion was that Māori recruiters promote librarianship as a career in schools.

#### **5.4.5 Training and qualifications**

One option for tertiary libraries is to employ unqualified Māori staff and to provide them with the necessary training either in-house or by means of external training providers. The University of Waikato, for example, retains one position for an unqualified Māori appointee who is provided with ongoing support and training. Modern Apprenticeships offer a possible model for realising this type of initiative.

Another barrier that Waikato University staff identified is that some Māori members of staff do not have the qualifications and background needed to fill some of the positions within the university system, hence there is a lack of a realistic career path for those staff members. Extensive training needs to be provided for those staff in order to retain them and assist them in their career development.

Cullen notes that Māori users have been making increasing use of libraries in recent years, particularly for accessing historical material, and that there is a need to train users in effective research skills. The need for improved access to Māori materials is ongoing and systems should be reviewed continually; the harder job will be to change the practices of the institutions themselves.

It is also difficult to recruit Māori graduates to undertake postgraduate training in information work, even with the inducements of scholarships, because of the many openings available to Māori graduates in both the private and public sectors. Two urgent, but different gaps in Māori staffing are therefore emerging: staff with understanding of Māori knowledge and communication able to care for Māori collections, and Māori staff with communication skills but knowledge of mainstream library systems to cater for Māori students and staff, along with other clients of the tertiary library. This second group also need to be encouraged to apply for senior management positions in libraries.

A rapid increase in the number of Māori knowledge workers with the competencies to carry out key reference/information service work in TEIs is required to change this situation. The sub-group considers the tertiary sector needs at least an additional 90 qualified librarians, to meet the growing number of Māori in our tertiary and research institutions.<sup>52</sup>

At present there are graduates emerging from three existing programmes: Victoria University Master of Library and Information Studies (MLIS) programme, the Open Polytechnic's Certificate and Diploma programmes, and the Wānanga o Raukawa has recently introduced a Bachelor of Māori and Information Management (BMIM).

Each of these programmes has different strengths. There is a need to ensure that students seeking a career in New Zealand tertiary or research libraries have the broad range of skills that are required by tertiary and research libraries. This may involve enabling students to draw from the best of each of the currently available programmes to develop all of the competencies required.

Library and information work must be a financially as well as a personally rewarding career, with potential for advancement that can compete with the many other options available to talented Māori individuals.

Some limited scholarship assistance to support Māori graduates and undergraduates in information courses are currently available. It is not reaching the intended audience and is not significantly increasing the pool of Māori staff. Further, holders often leave their library employment after completing the qualification and some have been lost to the profession. The number of scholarships needs to be increased dramatically and need to cover the actual cost of study in total.

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<sup>52</sup> This target is based on the raising the number of Māori library staff holding a library qualification to 15 percent of the total number of library staff with library qualifications (90 of 598). It assumes 18 qualified staff will leave the profession over the period it takes to recruit and train these staff.

## 5.4.6 Options

Several possible options have been explored to fill the gap in the number of professionally trained Māori knowledge workers as rapidly as possible, while at the same time building capacity for the future (including Māori staff teaching in the mainstream LIS education programmes). Possible options include:

- Using the Government's Modern Apprenticeships, in which young people would gain work experience at the same time as being sponsored through a training programme at the national certificate/diploma level (however, non-graduates are unlikely to be placed in the key positions in tertiary libraries-managing Māori collections or serving students and faculty as information specialists);
- Providing fuller scholarships to increase Māori participation in existing programmes at Wānanga o Raukawa, The Open Polytechnic of New Zealand and Victoria University of Wellington; and,
- Reviewing the curricula of existing programmes, acknowledging the two library and information constructs, and developing a revised model of education for library and information practitioners.

## 5.5 Māori information – access and protection

### 5.5.1 Intellectual access to Māori information.

Cullen (1996) suggested that individual libraries seem less willing and able to share resources with local Māori communities and to alter their systems of bibliographic organisation and their management structures. Hobson (1999) alluded to this issue too, when urging us to examine the assumptions under which libraries operate and the cultural context in which information is stored, retrieved and communicated.

The National Library has developed principles for the care and preservation of Māori materials and tested their approach to improving access to material relating to Māori through initiatives such as the Cultural Property Pilot Project - Wairarapa, the results of which were reported in 1999.<sup>53</sup>

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<sup>53</sup> Grant Pittams, *Te Arotakei I Te Kaupapa Tiaki I te Mauri o te Matauranga – Wairarapa: An Evaluation of the Cultural Property Pilot Project – Wairarapa* (Wellington: National Library of New Zealand, 1999).

While it was concluded that this particular project had achieved its aims of describing, cataloguing and creating greater access to the National Library's collections of materials relating to the Wairarapa, there were substantive issues raised.

- There is a need for contextual information and descriptive attributions that acknowledge the mauri of taonga and their connections to iwi and hapu. This caused internal debate within the Library over the extent to which standard library practice was challenged by these requirements. Extant issues around ownership and guardianship, especially acknowledging that taonga have mauri, a living spirit that connects a physical object to the kinship group involved in its creation. The western paradigm of ownership needs to incorporate a wider perspective in terms of partnership, which demands different approaches.
- Broadening access to Māori resources. Ultimately web access to full text material is ideal. Online availability was seen as a reasonable compromise between having the material located in the library, versus being re-located to the Wairarapa. The issue of access was seen to be connected with the process of identification of resources by Wairarapa iwi. The need to add value to the material through interpretation of the material was a contentious issue between iwi representatives and traditional library practice, which needs to be resolved.

### **5.5.1 Heritage collections**

A survey of 23 tertiary libraries conducted in 1994 by the Heritage Responsibilities Group of the N Strategy focused on the issues of caring for heritage collections.

Approximately half of the libraries with heritage collections had material in Te Reo Māori. However, most libraries estimated that less than five percent of their users were Māori. Another finding was that access to heritage material was affected by the lack of suitable finding aids. The report recommended that a more consistent approach to the care and development of heritage collections should be encouraged by the library profession.

*Te whare pukapuka me te Ao Māori: the accessibility of Māori studies information in the University of Canterbury Library* (King, 1994) found that access to Māori materials needed improvement. It was considered important that materials of interest to Māori Studies students were not scattered throughout the library but rather brought together in one central place as material integral to New Zealand culture deserving of special recognition. Existing methods of classifying library materials were seen as a barrier to ease of access to Māori materials.

The report refers to the specific information needs of Māori Studies students in tertiary institutions and suggests that libraries make more effort to make unpublished resources of interest to Māori students more widely available.

### **5.5.1 Māori language subject headings**

The need for Māori subject headings has been a recurring theme in library literature. The difficulties of using Library of Congress subject headings have been well documented.

In 1994 the National Library launched a Māori thesaurus as an online database - *He Puna Kupu Māori*. The Library hoped that other libraries would participate in introducing more Māori terms when the thesaurus became available. It appears that the thesaurus had little effect on cataloguing and indexing practices outside the National Library and was largely unused by the wider library community.

Feedback suggests libraries would use Māori subject headings once they are complete enough but at present they are not in a form to be generally used. Most libraries use records from Te Puna, created by National Library staff. If the National Library led the way by using Māori subject headings in the records they create, acceptance and use by other libraries would follow, including their use in specialist bibliographies such as the Waikato Bibliography and Māori Bibliography.

The National Library has advised that the current situation is as follows: Stages I and II of a project to further develop Māori subject headings have now been completed and reports relating to each stage have been published. Additionally, guidelines for the application of the subject headings have been agreed and published following Stage II. This issue has been progressed further with a three-party meeting between the Library & Information Association New Zealand Aotearoa, Te Ropu Whakahau and the National Library in April 2003. A project is being scoped for the final stage and costings are being developed

### **5.5.2 The challenge of preserving indigenous knowledge**

Henry (2001) stresses the need for collaboration between libraries and Māori in order to enhance the preservation of indigenous knowledge. Henry suggests normalization of the partnership between libraries and the tangata whenua and other Māori groups of any community. She suggests that a memorandum of understanding may be an appropriate way of setting out the parameters of the relationship.

The accumulation and acquisition of traditional Māori knowledge can be developed in consultation with whānau, hapu and iwi in a partnership process envisaged by the Treaty.

In addition, the following initiatives contribute to a strategy to maximise access to Māori information:

- A Māori language interface to the Web online catalogue;
- Listing of all items in the online catalogue in Te Reo Māori;
- Production of the Māori bibliography - a unique resource used to locate information not readily retrievable from the library's online catalogue;
- Conducting surveys that attempt to discover what the general needs of Māori students are; and,
- The creation of a database by the Māori information librarian that builds a profile of the needs of Māori students.

### **5.5.3 Training for non-Māori staff**

Another barrier to ensuring in some tertiary institutions is insufficient awareness and support by some non-Māori staff of the needs and aspirations of Māori clients.

Ongoing education of library staff is needed on issues such as the provision of appropriate services, study methods favoured by Māori students, and Treaty of Waitangi issues.

*He Puna Taunaki: Te Reo Māori in Libraries* is a resource compiled specifically for librarians. It provides some background information on the historical development of the Māori language and offers some practical suggestions in how libraries can support Te Reo. It underscores, for example, the importance of librarians being able to correctly pronounce Māori words, particularly personal names.

## **5.6 Māori youth and literacy**

The increase in Māori second chance learners adds some urgency to the call by Szekely (1997) for the need to focus on Māori youth and the concomitant development of print literacy skills and the relationship between libraries and schools.

Szekely's highlighting of print literacy skills is crucial to fostering use of our traditional libraries as an integral part of the education experience. Some sort of linking, target setting, monitoring between the Government's *Adult Literacy Strategy* and libraries and their role in improving information literacy skills that contribute to a more holistic education experience, would be beneficial. Indeed, Garraway and Szekely (1994) suggested a model for bicultural development: a four stage process of awareness, analysis, action and monitoring.

## 5.7 Conclusions

There has been definite progress in some areas of libraries' responsiveness to Māori. Barriers remain, however, to achieving Māori development aspirations.

The foundation upon which libraries can develop the services that will support the achievement of Māori development aspirations is one that needs to be based on:

- A clear understanding of the institution's preferred approach to meeting Māori needs (Māori-centred, Māori-added or Collaborative)
- Development of a strategy for giving effect to the chosen pathway, and
- Meaningful engagement with Māori users and iwi in the development and implementation of the strategy.

A key part of most library strategies will need to be the recruitment and retention of Māori staff. The strengthening of the Māori workforce in libraries must be a priority. Institutions should consider options for working with iwi to identify and recruit suitable candidates. There is a strong relationship between the deployment of Māori librarians and the corresponding use by Māori students of their institutions' libraries. Effective use of library and research materials will contribute to academic success and future employment prospects.

Hand in hand with increasing the proportion of qualified Māori librarians in the workforce will be a need to continue enhancing the bi-cultural competencies of existing staff. As part of the Māori responsiveness development process libraries will need to consider what changes are required to offer a research and learning environment that can meet the needs of Māori students. This may mean they need to be welcoming and nurturing for the whole whānau, not simply the individual student.

Equally, library development strategies must ensure they have policies and process that ensure access to, and care and protection of, Māori information and taonga in their care. Consultation with the tertiary sector and with Māori users of tertiary library services is needed in order to develop innovative policies in this area.

**Recommendation 9:** That each TEI library develop a Māori responsiveness plan that can form part of its institution's profile, including specific action plans and targets to:

- Give effect to their partnership responsibilities to iwi
- Increase the number of qualified Māori library staff
- Provide a research and learning environment that meets the needs of Māori researchers and students
- Improve the access to, and protection of, Māori knowledge and taonga, and
- Contribute to improvements in Māori literacy, particular among youth.

**Recommendation 10:** That the Tertiary Education Commission:

- Develop benchmark standards for Māori responsiveness, in consultation with TEIs
- Monitor progress with the implementation of TEIs' Māori responsiveness plans through the Charters and Profiles review process
- Ensure consolidated time-series reporting on Māori library staff numbers takes place, and
- Review, in consultation with the Ministry of Education and Te Puni Kōkiri, scholarship funding for developing Māori librarians.

**Recommendation 11:** That the Tertiary Education Commission facilitate meetings between Victoria University of Wellington, Wānanga o Raukawa and The Open Polytechnic of New Zealand to develop options for:

- The cross-crediting, stair-casing and development of qualifications required to produce bi-cultural knowledge workers, and
- Increasing the number of Māori learners taking and completing library qualifications.

**Recommendation 12:** That a specific position within the Office of Library Co-operation be dedicated to facilitating enhancements in Māori responsiveness in tertiary libraries by addressing defined project areas including:

- Communication of Māori responsiveness best practice within the libraries and their communities
- Attraction of Māori to librarianship
- Negotiation with Victoria University of Wellington, Wānanga o Raukawa and

The Open Polytechnic of New Zealand to enable students to take some courses from each institution and cross credit them to create a tailored qualification

- Participation in developing standards for New Zealand's tertiary libraries (client services, collection management, physical environment, ownership and access)
- Develop draft documents for iwi and libraries entering into arrangements over ownership and access to taonga, and
- Prepare draft policy relating to management of collections e.g. intellectual property.

## 6 Technology Infrastructure

### 6.1 Introduction

In order for TEI and CRI libraries to realise the potential for the range of collaborative activities outlined in this report there is a need to examine the technology infrastructure that underpins all library activity.

The ease to which libraries could engage in the following activities is dependent upon the will of the sector to make it happen and each library system talking to the others:

- Shared purchasing and cataloguing schemes
- Implementing patron-initiated inter-loans by searching accessing and borrowing across a number of library catalogues, and
- Committing to a national collection management approach.

The technology infrastructure incorporates the following components that enable or enhance these forms of library service collaboration:

- The Integrated Library and Resources Access Management System (IRAMS)
- The Internet bandwidth that carries the enquiry and delivery traffic
- The protocols which ensure the interoperability between these systems, and
- The authentication mechanisms to identify valid users.

The vision of a tertiary and research library network, facilitated by either a single common library system or several compatible library systems, capable of sharing data across robust and secure telecommunications architecture, is an attractive proposition worth pursuing.

The development of a national infrastructure to facilitate collaboration has the potential to significantly enhance the teaching and research capability and effectiveness of the New Zealand tertiary and CRI sectors. Rather than each institution maintaining different software, networking and licensing solutions for their IRAMS, this approach could mean that a degree of standardisation in IRAMS architecture could be achieved.

Enhanced bandwidth for the tertiary and research community and a mechanism for libraries to join existing IRAMS consortia are two vital strategies if New Zealand is to support a knowledge-rich research sector. The Government's Collaborating for Efficiency initiative provides a unique and timely opportunity to invest in infrastructural support, and achieve results which individual institutions would not be able to do alone.

The issues surrounding the technical infrastructure that must be considered are:

- The opportunities for shared hosting and maintenance of an IRAMS between institutions, such as hardware rationalisation through a single scalable server or clusters of servers
- The cost benefits of moving to a single IRAMS for the entire tertiary and research sector
- The issues surrounding software, hardware and communications infrastructure that would need to be considered if these solutions were implemented
- The Internet bandwidth requirements and constraints of such cooperative arrangements, and
- The implementation of standards across the sector that ensure all library systems comply with interoperability and authentication protocols.

## **6.2 Benefits**

Benefits from an investment in shared infrastructure would include:

- Equity of access across the sector
- The possibility of shared IRAMS (systems and expertise)
- Shared access to local and international databases of information
- High speed network delivery of information to researchers regardless of location
- The ability to search across library collections nationwide
- A common user interface to library catalogues and databases
- A reciprocal borrowing system between libraries
- Reduced duplication of information resources in different libraries
- Greater bargaining power when negotiating subscription costs
- Cross-institution delivery of information-use training programmes

- Shared technical expertise in the management and development of systems
- Cost savings or more value for money due to economies of scale
- Access to digital resources
- Digitisation of learning objects, and
- Teaching and e-learning opportunities.

### **6.3 Australian and other international experience**

In Australia, the Department of Education, Science and Training's Information Infrastructure Advisory Committee, is making recommendations under the Systemic Infrastructure Initiative. Although this initiative maintains a research focus and excludes teaching and learning contexts, it is a useful model for the current New Zealand proposal.

Projects currently under consideration cover information creation (including digitising projects); information discovery (including subject gateways, authentication/ authorisation and digital rights management) and access; use and delivery of information (including research storage, and the acquisition of commercial publications such as large aggregated databases).

Australian tertiary libraries have made significant progress towards achieving a collaborative online learning and information services model. Key initiatives are the COLIS and AARLIN projects, which have been developed in response to concerns that the technical and information infrastructure has not kept pace with the expansion of electronic delivery of information and online learning. They are grounded in the view that a partnership between government and the tertiary sector is the best way to ensure that Australian research information systems are developed in a scaleable manner according to international standards.

COLIS is a five-university consortium, funded by the Department of Education, Training and Youth Affairs as part of the education technical standards interoperability agenda. Its main focus is on exploring technical and organisational interoperability issues.

AARLIN is a 21-university project, funded by the Australian Research Council and DEST under its Systemic Infrastructure Initiative. It has been given priority status by the Council of Australian University Librarians (CAUL). AARLIN aims to provide a collaborative research information infrastructure using portal technology based on international protocols to ensure interoperability with other systems. It will streamline information access and enhance resource sharing. As a result authenticated users can search for quality research information in a single search interface, across multiple databases, with as much ease as they would search multiple resources on the Internet using a standard search engine. In effect, this will create a national virtual research library system. A pilot national portal system has been developed and is in the process of being rolled out to all members. Although its initial focus is on researchers, its model of service can be extended to support e-learning and undergraduate services.

A range of collaborative information infrastructure initiatives are also underway in other countries, including the United Kingdom and Finland. In many countries, the tertiary and research sector is recognising that the development of a shared technological infrastructure is vital to rationalise the cost and duplication of effort that currently goes into evaluating, supporting, maintaining and upgrading the many IRAMSS and other information systems across the sector.

## **6.4 The New Zealand situation**

### **6.4.1 Scale and diversity**

In New Zealand, the tertiary and research sectors are served by a diverse range of libraries, each with unique characteristics and varying levels of investment in information technology.

Some libraries were early adopters of bibliographic databases and full text electronic delivery of information. With the support of their institutions, they have taken a proactive approach to creating an electronic information environment. Others have begun subscribing to electronic resources more recently, but many are constrained by their budgets. They cannot deliver the information resources their learning and research communities require in order to remain competitive in the global context.

The significant funding differences between the libraries in the tertiary and research sector mean that the students, staff and researchers working in the various institutions have inequitable levels of access to information resources.

An increasingly common scenario in the tertiary sector is the delivery of academic programmes from large institutions via e-learning, often with a base in polytechnics or satellite campuses in smaller centres. The current diversity of IT support and technological systems between institutions creates unacceptable barriers to the delivery of this essential mode of learning.

Many different IRAMS are used within the New Zealand tertiary sector. These range from New Zealand-produced systems to large overseas-based systems with sizable international customer bases. The decision about which IRAMS is purchased by a library is frequently a trade-off between budget and functionality, with many smaller libraries being forced to compromise because of budget constraints. In recent years, however, the New Zealand IRAMS environment has begun to change.

#### **6.4.2 CONZULSys**

During 2002, four university libraries undertook the CONZULSys project, the first consortial IRAMS purchase in the sector. A considerable investment in time and expertise in the university library sector will result in the first three libraries installing the IRAMS by mid-2003. The roll out for the remaining universities is planned for the end of the year. CONZULSys wanted “to use and develop the best enabling technologies in a pioneering collaboration which will enhance the innovative delivery of library and information resources to the New Zealand learning and research community.”

CONZULSys objectives include:

- Provide leadership;
- Improve access to information resources fundamental to the advancement of teaching, learning and research;
- Work together on common issues which no one organization is able to accomplish by itself;
- Provide a common interface with familiar functionality for the benefit of Library patrons and the New Zealand research community;
- Maximise the intellectual investment involved in purchasing and implementing new systems; and,
- Provide a strong development group to work in partnership with vendors.<sup>54</sup>

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<sup>54</sup> CONZULSys, CONZULSys Culture, 24 March 2003.

### **6.4.3 Several reviews underway**

Several other tertiary and research libraries are currently in the process of evaluating replacement IRAMS, and are aware that a consortium approach may be an option for them. For a significant number, however, affordability of a new system is an issue.

The time is right to investigate and implement a consolidated solution to the development of the information infrastructure in this sector, before there is a new round of fragmented IRAMS purchases and local initiatives.

While one option is to apply a single IRAMS solution to all libraries in the tertiary and research sector, this may not be possible, or may need to be phased in over several years. While different IRAMSs are still maintained in the sector, it may be possible to utilise the Z39.50 standard to facilitate cross-platform access to information, and there is the possibility of increased connectivity between IRAMS user groups.

Minimum standards, interoperability, hosting mechanisms and governance arrangements – which are discussed in the next section of the report – are all issues that need to be addressed in order to achieve a scaleable solution that does not disadvantage anyone.

## **6.5 Shared system options for hosting and software licensing**

The most successful international models are those where the State has removed the barrier to participation by centrally funding the computer system.

Five hosting options have been identified that could be investigated as part of the technical assessment:

- Libraries could join an established shared system
- A national research system centred on and managed by the National Library could be established
- A separate hosting agency could provide the hardware and software which is then delivered to subscribing libraries
- Smaller scale arrangements of local clusters of libraries with common objectives could share the hardware and/or management of an agreed IRAMS, and
- All libraries could host a compatible system and each contribute to a distributed database.

The extensive work done by the CONZULSys project to establish the first consortial shared system in the tertiary sector should be built upon, either by adding additional libraries to the CONZULSys consortium, or contributing to a new framework that is developed using the knowledge and experience generated by that project, and leveraging off existing New Zealand tertiary institutions and the National Library who use a common IRAMS.

The perceived common interests within the CONZULSys group has enabled these four universities to invest the time and energy to work together on this project. Other clusters of libraries are beginning to recognise the opportunities these collaborations may provide and are keen to develop in a similar way using geographic or established partnerships as the basis for progress. Time and funding are required for further progress to be made.

It needs to be established whether the National Library has a role to play in assisting or hosting tertiary library systems. The National Library could be charged with providing a hosting model for those institutions wishing to take advantage of the existing infrastructure and connectivity already provided by the National Library along with its expertise in library computer systems.

Governance issues, based on a commitment from institutions to participate in a resource sharing environment, and software and networking interoperability based on international standards, would need to be carefully managed to allow the seamless sharing of online learning and scholarly information resources. As discussed above, such shared infrastructure arrangements have been successful overseas in, for example, Australia, the United States and Europe and provide models to build on.

## **6.6 Financial benefits**

It would be possible to achieve economies of scale through shared hosting of IRAMSs in tertiary and research libraries.

The investment in hardware by the sector could be rationalised by clusters or a single host mounting the IRAMS. In addition, considerable savings can be made on the consortial purchase of library software, both platform systems (IRAMSs and learning management systems) and information databases, as a larger group of libraries has more negotiating expertise and power. This would have an ongoing benefit as future purchases would be also be negotiated at a consortial rate. Centralising staff resources would result in significant savings to individual members.

## **6.7 Bandwidth**

The extent to which the internet has shaped and transformed library services in the last ten years is extraordinary, and bandwidth has become an increasingly critical issue for tertiary and research libraries. The speed of file transfer to researchers' desktops or satellite campuses and affiliated institutions is a key service-delivery issue for libraries.

Adequate bandwidth within the sector, at a much greater level than is currently available, is essential to cope with the ever-growing demands for e-learning, increased reliance on vendor hosting of databases (with internet delivery mechanisms rather than local hosting), and internet-based corporate systems, as well as with the general use of the internet as a research tool in our communities. Without adequate bandwidth, New Zealand researchers will be unable to keep up with their international colleagues. High-speed access is essential both nationally and internationally.

Work is underway to address this. The NGI Consortium has been formed to create the Next Generation Internet in New Zealand. Its objective is to provide affordable bandwidth to member institutions that will significantly benefit researchers in this sector. There is considerable support for this initiative: members include all universities, some CRIs and the National Library.

## **6.8 Shared technical expertise**

The size and capability of the information technology departments in tertiary libraries in New Zealand vary more than any other aspect of library operations. Consequently, we have a tertiary sector where some libraries are served by a sophisticated, well-managed IRAMS, while in others sole charge librarians struggle to maintain IT systems with extremely limited resources.

One important outcome of a shared infrastructure is that there would be opportunities for smaller libraries to draw on the expertise and resources of the wider sector, especially if the IRAMSs that are implemented are common across the country.

All libraries would need IT support to a specified level to ensure that they could maintain national interoperability, but the wider group could contribute to assist with training and recruitment, as well as creating national standards for IT support levels in the tertiary sector. Skill enhancement, sharing best practice and collaborative development could be fostered through this initiative, to the greater benefit of individuals, libraries, institutions and, ultimately, researchers. Internationally, the pooling of technical support staff has resulted in ongoing savings to individual members.

## **6.9 Access and outcomes**

As well as cost benefits, increasing the ability to share IRAMSs through investing in the infrastructure of increased bandwidth and systems hosting options would greatly enhance the research capability of the nation by providing easy access to the collective resources of all tertiary and research sector libraries for New Zealand's tertiary students, academics and researchers.

The benefits for the smaller institutions would be the most significant. However, the benefits to the research and learning communities across New Zealand is the relevant gain that should be emphasised.

More work is needed on identifying the collaborative strategic advantages between institutions. In regions where user access to information is limited by the scale of the tertiary library, the provision of an IRAMS would be significantly improve access to services.

Through enhancements such as user activated requests between tertiary libraries, common search interfaces, searching across multiple databases via shared systems, the use of standards such as Z39.50, the development of a single portal to access all New Zealand research outputs, an increased research capability and a true knowledge society may be achieved.

## **6.10 Conclusions**

An interoperable IRAMS is the single most important enabler of collaboration across the library system. International examples suggest government funding removes barriers to participation particularly for smaller institutions.

The sub-group is firmly of the view that national funding of an interoperable system should be a high priority for any funding targeted at improving the performance of the library sector through collaboration.

Initiatives already underway have the potential to support the development of an interoperable IRAMS, most notably the CONZULSys project. A number of other libraries within the tertiary sector will need to make decisions on the renewal of their information management systems over the next 12 months, some have already started the feasibility assessment process.

There is a need to establish as a matter of priority the best means to build on the work of CONZULSys to ensure equity of access to an interoperable IRAMS for all tertiary library services.

**Recommendation 13:** That all tertiary and research libraries in New Zealand should operate an interoperable IRAMS.

**Recommendation 14:** That the Office of Library Co-operation, working closely with CONZULSys and the National Library:

- Identifies the best option for ensuring inter-operable systems for the tertiary and research libraries is developed;
- Identifies a funding and governance model for the development and ongoing support of an inter-operable IRAMS for the sector
- Develops a business case for submission to the TEC for national funding, or contributory national funding that maximises the removal of barriers to participation by smaller institutions.

**Recommendation 15:** That the National Library, working through the Office of Library Co-operation, lead the establishment of appropriate standards for IRAMS across the sector to maximise interoperability.

**Recommendation 16:** That all TEI and CRI libraries endorse the concept of the Next Generation Internet (NGI) Consortium initiative to ensure adequate bandwidth is available to the tertiary library and research New Zealand community as quickly as possible and support the consortium proposal to seek seed funding from the TEC.

## 7 Access to New Zealand's research outputs

### 7.1 Background

Government currently invests over \$660 million in research undertaken by TEIs, CRIs and private researchers.<sup>55</sup> Over 20,000 publications and other research outputs are produced annually.

The Foundation for Research and Technology (FRST) requires all recipients of funds to report on progress and achievement of their research programmes and to list citations to published outputs. This information is not, however, entered into a database, so it is not searchable. Researchers have considerable difficulty in locating what has been published on a given subject in New Zealand. Crown Monitoring Agencies such as CCMAU and TEC do not yet require the research providers to itemise their research, but merely ask for the total number of publications produced for a given period. MORST is currently looking into better ways to assess the quality of the publications produced as part of this process.

There is no central place to find information about New Zealand research. Some material is indexed in international citation databases such as Science Citation Index, while other records can be found in subject-specific international databases such as Georef. However there is no one place to look for this material, and it is often difficult to isolate the New Zealand citations. It is, therefore, very difficult to locate such material quickly. This contrasts with other countries that rely on readily accessible databases.

Each university publishes an annual research report, which lists the research output of staff and graduate students, but these are not collated into a single national publication or database. The theses produced in New Zealand tertiary institutions are indexed in the print publication *Union List of Higher Degree Theses in New Zealand Libraries*, but this publication is always several years out of date (the latest edition covers 1998-99). Its print-based format also means it is not readily searchable. Some theses are added to the Te Puna National Bibliographic Database, but this is not comprehensive, and it is often necessary to check the

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<sup>55</sup> Vote RS&T currently standard at \$500.485 million (2003/03) budget. The vast majority of this funding passes through the Ministry of Research Science and Technology to its three purchase agents – the Foundation for Research, Science and Technology, the Royal Society of New Zealand, and the Health Research Council. These purchase agents invest the money in several hundred projects every year. See <http://www.morst.govt.nz/funding/overview.html>. Under Vote Education the Performance Based Research Fund will allocate over \$134 Million each year (at present the majority of this funding is allocated to TEIs through the EFTS funding formula), while the Centres of Research Excellence operating expenditure in the 2002/03 Budget was forecast to be over \$26 million per annum.

research reports of tertiary institutions or their library catalogues to discover what research has been undertaken.

In order to maintain a competitive edge, researchers must have access to full and timely information in their fields in order to create new knowledge. It is particularly important in scientific fields to have ready access to the latest discoveries to ensure that time is not wasted on already completed research, and to incorporate new knowledge from other researchers. With increasing links between academic research and the private sector, inadequate or outdated information could have direct negative economic consequences.

## **7.2 Improving access: the requirement**

Many New Zealand research outputs (scientific papers) are already indexed in international commercial databases such as Elsevier Science Direct and ISI products. Provided tertiary and research libraries have ready access to these databases this material may not need to be indexed again.

The remaining citations, abstracts and full text need to be accessible also. The best model would be to provide access to a comprehensive centralised database, or a suite of databases, covering all research activity that can be concurrently searched by all New Zealand researchers and librarians.

The Dublin Core metadata standard should be used to create the index record of each research output. This includes author, title, key word, subject area, and perhaps some extra metadata containing FRST or Marsden programme, year, and author affiliation (i.e. which CRI or TEIs the work has been undertaken in). This would allow searchers to readily download the records into standard bibliographic software such as ProCite or EndNote.

The database should consist of:

### *Citations and abstracts of published papers, reports and books:*

This would assist both researchers (who need to know who is working in their field in New Zealand) and monitoring agencies (who need to know they are getting value for money).

### *Citations of theses:*

The ability to confidently identify unpublished work in a particular subject area is essential both for established researchers and for students about to embark upon their own theses.

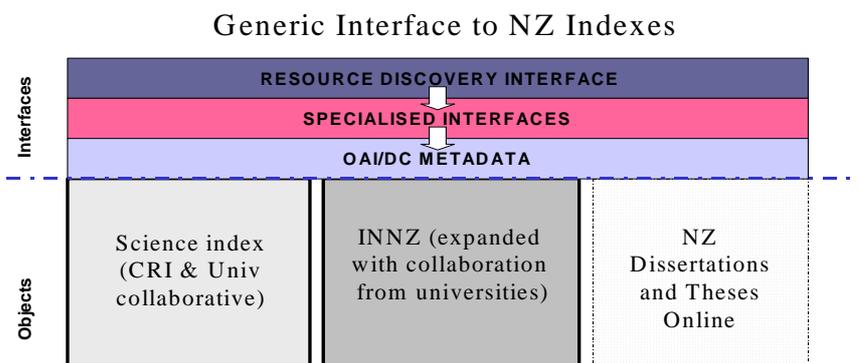
While the initial focus should be higher degree theses from New Zealand institutions, this could be expanded to include theses on New Zealand subjects from overseas institutions, and possibly to include smaller pieces of research that are undertaken as part of graduate diploma and similar programmes. Making theses available electronically would increase their availability to the research sector. Intellectual property issues would need to be addressed.

*Links to full text electronic documents:* Major strides are being achieved internationally in providing access to full text electronic documents. This work is being led by leading publishers, and some research disciplines such as Physics. Providing tertiary and research institutions have licenced the journals, it is now technically easy to make links using modern library software, from a citation to a full text journal article, through the internet.

With published articles, the intellectual property rights are usually held by the publisher, and although some publishers, such as the Royal Society of New Zealand, are willing to make their material available, in other cases publishers retain tight control on access. While the intellectual property rights of student theses remain with the students, there is the possibility that an initiative such as the Australian Digital Theses Program could be undertaken. Many theses and research reports contain sensitive or confidential material that cannot be made available in the public arena, and this would need to be accommodated.

### 7.3 Co-existing indexes

Various indexes can co-exist, as illustrated in the following diagram. Provided the indexes are developed using international standards and protocols it will be possible for a researcher to search, for example, the science index or to do a generic search across all indexes using the federated search functionality of the resource discovery software.



## 7.4 Existing working models

While each university maintains its own research report, these are published annually and are not available as a cumulative, electronic searchable database.

Databases of research that is underway are available in some universities, but these are designed for internal use rather than as a national resource.

*Australian Digital Theses Programme:* This is a national collaborative database aimed at making Australian research theses and dissertations widely available in electronic form. It was initially instigated from the University of Sydney and now has six other collaborative members.<sup>56</sup> One of the important aspects of this project is that it is truly collaborative and distributed with each university partner being responsible for archiving its own theses and where there is no digital copy, theses are digitised on request. There are good opportunities to investigate expanding the model and establishing a trans-Tasman collaboration.

Using the Open Archives Initiative (OAI) a small percentage of international researchers are publishing their own research online and as part of this process are contributing their own metadata. The Open Archives Initiative Protocol for Metadata Harvesting (referred to as the OAI-PMH) provides an application-independent interoperability framework based on metadata harvesting.<sup>57</sup>

The benefits for the research community of using these international standards are:

- The experts applying description; and,
- The low cost distributed model.

International databases such as BIOSIS, Georef and Chemical Abstracts index and abstract the research publications from a wide range of countries in subject specific fields. Science Direct provides not only citations, abstracts and full text of published articles, but also articles that have been submitted, but are not yet published.

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<sup>56</sup> . Further information about the program is available at <http://www.library.unsw.edu.au/thesis/etd.html> .

<sup>57</sup> For further information on OAI refer to the following: <http://www.openarchives.org/OAI/2.0/guidelines.htm>.

Some indexing is already occurring in New Zealand. There are, however, no common standards for the records and they are not being loaded into one database. The two major hosts of New Zealand indexes both provide access to research, but neither is comprehensive and there is little overlap. The Knowledge Basket hosts the New Zealand Science database, a index of scientific publications in New Zealand and international publications from the CRIs (NIWA, Landcare, HortResearch, Institute of Geological and Nuclear Sciences [GNS]), a bibliography of New Zealand forests, and also the Royal Society of New Zealand Journals. This is, however, far from comprehensive.

The second database host, the National Library's Te Puna, provides access to catalogue records for some university theses through the National Bibliographic Database. Te Puna also hosts Index New Zealand (INNZ), which indexes articles that are more than half a page in length from scholarly journals published in New Zealand, and selectively indexes articles from overseas journals. In most cases, abstracts are included. Scientific articles are not indexed, as this was historically left to DSIR (now the CRIs, some of whom are no longer doing this work).

Individual organisations also provide access to their publications, such as the Royal Society of New Zealand, which provides abstracts for all Royal Society journals from 1994-2002, and full-text of these from 2002 onwards on its website for a fee.

## **7.5 Why is this work not being done systematically at present?**

Indexing and abstracting is a specialist skill that is part of the traditional role of librarians. Apart from specific initiatives involving dedicated staff such as INNZ or the Union List of Higher Degree Theses in New Zealand Libraries, however, there has been no co-ordinated effort to undertake indexing on a national level in recent years. It is necessary to index at the article rather than the book or journal level, which is time consuming (20-25 minutes per record) and requires knowledge of the subject area, so critical key words and descriptors can be provided for electronic access to the record.

As this reporting of outputs into a database is not currently required, and therefore funded, by the funding agencies, it is not being undertaken.

The new standards such as the Open Archives Initiative and the global move to make theses available online, plus technical capability for federated search, is leading organisations to rethink the indexing model with authors applying discoverable metadata at the time of authorship.

## 7.6 Options

### **Option 1 Publications indexed overseas into established international databases**

*Benefits:* If New Zealand opted to use established international databases, it would be using an existing infrastructure. New Zealand research can be grouped with international research by subject, rather than being separated with a geographic focus.

*Costs and Risks:* It would, however, be difficult to find one database that covers a sufficiently broad subject area. It would also be necessary to lodge the records into different databases by subject area, rather than retaining a single cross-subject New Zealand database. This would defeat the point of a single database that records the New Zealand research output.

New Zealand has a small research output by world standards (20,000 publications per year). It would be difficult to get a sense of national research if it were part of many larger databases. Moreover, there would be no local control over turnaround time of records being added to the index, cost of access, software and host used, or comprehensiveness and level of indexing and abstracting.

Finally, it would be difficult to co-ordinate the reporting of research outputs to an international product – there is the risk that reporting would not be comprehensive.

### **Option 2 Collaborative indexing for a science database of citations and full-text co-ordinated by the National Library**

*Stage one:* The National Library would host a database of metadata, abstracts and sometimes full-text for the scientific publishing output of New Zealand CRIs and TEIs. The participant organisations would either add to the database dynamically through client or web-based forms similar to the existing model whereby New Zealand libraries add their cataloguing records to the National Bibliographic Database or National Library would harvest metadata using the OIA protocol.

*Stage two:* With a facility to pay copyright fees where required, the National Library would facilitate building a full-text component and expand membership building on the collaborative principles of the project and the technical capabilities for a distributed network.

*Benefits:* The National Library already indexes non-science publications for INNZ. An infrastructure for creating, maintaining, hosting and delivering these databases is well established.

Tertiary and research libraries could contribute records of a specified standard to the NLNZ INNZ database. This would be an extension of the existing system in place for the bibliographic records. The benefit to all agencies is free access to a comprehensive and searchable record of the New Zealand scientific publishing output.

There is the potential for the records to be on-sold to a number of international databases. This would provide some benefit to the National Library and contributors. Access to this database could be made available across the research sector using an appropriate funding model according to government priorities.

Recognising that there is some additional cost to the institutions in entering the data, and the system-wide benefits of more open access to information on New Zealand research, there is merit in providing tertiary and research users with unrestricted access to the database. This is something that has already happened for schools, through the Ministry of Education committing to fund the National Library for their loss of revenue to the schools market and the INNZ database becoming freely available to all school teachers and pupils through the Te Kete Ipurangi – The Online Learning Centre.

*Costs and Risks:* The costs involved in expanding existing National Library technical system capability to meet this project needs may require seed funding. The items for indexing will not necessarily be held by National Library. However, the National Library Bill points to changes in legal deposit requirements for digitally born publications.

The subject access and level of abstracting must be sufficient to allow reliable searching of the database. This would include geographic location so the records could be used in GIS systems.

### **Option 3    Publications indexed by tertiary and research organisations who contribute records to central New Zealand database**

*Benefits:* The Knowledge Basket already hosts the NZ Science database, which could be expanded and amalgamated into a broader database. An infrastructure for creating, maintaining, hosting and delivering these databases is established.

*Costs and risks:* The Knowledge Basket does not have one consolidated database, but a number of independent databases. These databases would need to be consolidated. There would need to be a requirement for compliance with the OAI protocol. Knowledge Basket is a small private company that may not have the capacity to expand effectively. A private company would control the consolidated point of access to the intellectual property of New Zealand's research community. Currently records contributed are of variable quality. The subject access and level of abstracting must be sufficient to allow reliable searching of the database.

## 7.9 Conclusions

At present the recording of the country's research output is fragmented, making searching for published information and theses very difficult. This needs to be addressed.

Technology has progressed to a stage where electronic access to citations, abstracts and some full text is easy, providing libraries have the technology and funding for these resources. Federated searching (searching a suite of databases from one interface) now means records do not need to be stored in one central database, providing they meet agreed international standards. This saves costs.

On balance we favour the National Library hosting a database of metadata, abstracts and sometimes full-text for the research output of New Zealand CRIs and TEIs. The participant organisations would add to the database dynamically.

In return for contributing data on their research outputs, the TEIs and CRIs should be given open access to INNZ, by removing the subscription charges that currently apply. This would require the National Library to recoup the lost subscription revenue either from a direct increase in the Government's vote to National Library or through some other form of funding agreement with the Tertiary Education Commission and the Ministry of Research, Science and Technology (MORST).

**Recommendation 17:** That New Zealand establish a database that provides access to all New Zealand published research outputs (papers, conference proceedings and books) for the research and tertiary community.

**Recommendation 18:** That the National Library works collaboratively with the tertiary and research sector through the Office of Library Co-operation, to determine the infrastructure and standards required to establish the database.

**Recommendation 19:** That the TEC, FRST, Health Research Council and Royal Society of New Zealand require research funding recipients to enter their research outputs to an agreed standard on the database as a requirement of government funding.

**Recommendation 20:** That the Office for Library Co-operation develop a business case for the seed funding required to establish and maintain the database and provide unrestricted TEI and CRI access to it for a three-year period for consideration by TEC and MORST.

**Recommendation 21:** That the Office of Library Co-operation should investigate an expansion of the [Australian Digital Theses Program](#) to become an Australasian programme capturing metadata and potentially full-text for theses from the tertiary sector.

## **8 E- resources: consortia for purchasing electronic databases, journals and books**

### **8.1 Introduction**

New Zealand must keep up with the changing information environment to sustain its increasingly knowledge-based economy, maintain a competitive edge and create new knowledge. Researchers in all areas must have access to full and timely information in their fields. This ensures that they do not duplicate research, and can incorporate the findings of other researchers. With increasing links between academic research and the private sector, inadequate or outdated information can have direct negative economic consequences. A precondition for success is the provision of current, relevant and comprehensive information resources available at any time, in any place.

Economies of scale are impossible to achieve unless they move to electronic resources. Without access to this core information neither academic staff nor students can succeed.

### **8.2 Growth in electronic resources**

Printed journals have limitations: they can only be used by one person at a time, and the same journal is often held by many different libraries. Prices increase 8-10 percent per year, but budgets have not kept pace with these increases. New Zealand tertiary and research libraries have repeatedly cut journal subscriptions, thus reducing exposure to international research. They have few spare funds for new initiatives.

Research information resources are very expensive, and some of the key resources are beyond the reach of all but the largest libraries. The growth in electronic publishing offers an opportunity to significantly improve access, because:

- For a marginal increase in subscription cost a huge increase can be achieved in the range of resources accessible to the end user;
- Electronic format is more current and removes barriers of time and place;
- Consortium buying options give better value for money; and,
- Library floor space is freed up for other purposes.

International publishers and vendors sell subscriptions to electronic journals and 'finding aids' as packages that contain thousands of journal articles, or citations and abstracts. There is no standard formula for purchasing these resources. A typical example, however, would provide access to current issues for 3 years into the future at a price that is guaranteed not to increase more than 6.5 percent per year, and continuing access to those issues for the future, even if the library stops subscribing. Back issues are often offered as a separate package at a one-off set price. Some packages allow libraries to select individual journals to subscribe to, but many only offer bundles of titles by subject areas.

### **8.3 How libraries add value**

To support access to these crucial electronic resources, libraries create metadata for online materials, link online index entries to individual journal articles, and provide access to printed articles through visits to the library and inter-library loan. Librarians offer individual and group instruction on research strategies, and help researchers to choose the most useful scholarly resources. Tertiary librarians work with faculty in planning and developing courses to integrate concepts of information literacy throughout the curriculum, emphasising the ability to articulate information needs, find appropriate information resources and critically assess the results of an online search.

### **8.4 Current situation**

All universities and some other TEIs and CRIs (usually the larger ones, with more funds) have subscribed to some electronic resources. Without Government assistance, smaller libraries are unlikely to be able to switch from paper to appropriate electronic resources. They lack the funds, the information required to make the case to management, the negotiating skills, and the negotiating power. International vendors are not interested in giving discounts and special services to smaller libraries.

CONZUL has entered into a number of license agreements for consortial subscription to electronic databases for New Zealand universities; these include New Zealand and international databases. There is no formal central CONZUL body for negotiating, trialling and billing resources: one person does the bulk of the work, and a new position is being established to assist. This position will be funded by a levy charged to all the universities. This is a useful model and could be extended. To date, polytechnics, wānanga, colleges of education and CRIs have not been invited to join this consortium.

Polytechnics have also collaborated to purchase some licenses at better prices, as have CRIs, but the buying power of these groups is limited.

It is unlikely that the CONZUL consortium would be sufficient to provide all resources for all New Zealand tertiary and research organisations, as there are clear cost advantages for the universities to work within the CEIRC consortium based in Australia. However, it is very common for libraries in other countries to be part of several different consortia, so a hybrid model should be considered.

The National Library of New Zealand is currently facilitating a cross-sectoral investigation of models for a national consortium, and to summarise the commercial content requirements of the sectors. The National Library has committed to funding the engagement of a project manager to manage the pilot proof of concept for six months. This pilot will determine if it is possible for a contract to be negotiated for electronic resources with for example, PROQUEST or EBSCO to cover the whole of the library sector.

There would be clear benefits for all large library sectors to work with their Australian counterparts and/or with one another to save money in this area.

## **8.5 Successful overseas models**

There are many successful models of consortia overseas, ranging from sectoral buying clubs to national initiatives to provide specific electronic resources to a research and tertiary sector. For brevity, only two relevant overseas models are outlined here.

Successful working models have key features in common:

- Initiatives are a key part of a government strategy for improving the country's economy in the long term. Government therefore has a strong, sustained commitment to the project;
- Consortia include the tertiary sector, research organisations and sometimes the national library of the country concerned;
- Organisations contribute some funding, often in relation to their size;
- Government also contributes significant funding for the initiative, both at set up, and for funding continuing subscriptions; and,
- Where equity of access is a feature of the plan, all organisations in the sector are part of the consortium, irrespective of size, location and individual funding level.

### 8.5.1 Canada

The federal government in Canada launched its innovation strategy in February 2002. The goal is to double government investment in R&D and to have Canada rank among the top five countries in the world in terms of R&D performance by 2010 by delivering cutting-edge, commercially-applicable research.

As part of the Government's strategy, the Canadian Association of Research Libraries (CAR) has developed the Canadian National Site Licensing Project (CNSLP).<sup>58</sup> This is a consortium of 64 Canadian research libraries which licenses scholarly publications and research databases in science, technology, health and the environment and provides electronic 'desktop' access to academic researchers. Savings of 33 percent over the life of the project will be realised through adopting this national approach to database licensing. The CNSLP is a pilot project with enormous potential for expansion.

### 8.5.2 Australia

The Council of Australian University Libraries Electronic Information Resources Committee (CEIRC) enables participating institutions to take advantage of the purchasing power of the consortium. CEIRC has negotiated 55 agreements on behalf of its members, but the arrangement is very flexible. Participation in specific license agreements by non-tertiary libraries is with the agreement of the database vendors: in particular, agreements for which the pricing is based on student numbers may not be available to research organisations. The CEIRC model does not, therefore, guarantee equity of access to all participants.

The Australian Government has not in the past subsidised this initiative directly, so the price of electronic products has remained relatively high to the individual library, and not all can afford to join. Recently, however, approximately A\$3.5M has just been made available to the university libraries for purchase of additional databases to support research activities from A\$22 million of Systemic Infrastructure Funding allocated by DEST.

The two databases being considered are JSTOR (all or some JSTOR collections) and backfiles of Web of Science. CEIRC has been asked to undertake negotiations with JSTOR.

The annual levy for non-university participants is currently under review and is likely to increase to A\$2,000. The levy covers the costs of the central agency (1.5 staff) that provides a central clearinghouse for negotiation of agreements, trials, co-ordination and billing.

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<sup>58</sup> <http://www.uottawa.ca/library/cnslp/cfi/index-e.html>

CEIRC is really a buying club. It aims to reduce costs through discount for volume, increase access to information and reduce work through information gathering, trial co-ordination, license negotiation and price negotiation. From the publishers' point of view it provides a single point for wide distribution of product, a single point of contact for negotiations. a single invoice, and increased revenue.

CEIRC regards itself as an evolving functional model. In future it aims to work on cheaper agreements, access to more titles, to change license conditions to allow inter library loan, course packs, single institution licensing rather than multi-site licensing, unbundling of print from electronic and more trust leading to simpler licenses.<sup>59</sup>

## 8.6 New Zealand tertiary and research sector requirements

To provide equity of access to relevant information that is vital to high quality education and research, all tertiary and research organisations need to:

- Join consortia that meet their requirements and provide discounts from vendors;
- Accept that the costs of joining consortia and accessing electronic information are a vital part of providing international quality teaching and research;
- Transform their collections from paper to electronic, wherever possible, leading to more flexible access and up to date information, which in turn will lead to better research, teaching and learning outcomes. Effective resources should be a requirement of course accreditation; and,
- Receive targeted Government “infrastructure” funding to provide for core electronic resources, and any levies associated with consortia. One option for achieving this could be for the Tertiary Education Commission to annually pay “off the top” funding for specified key resources that are required by all universities or all TEIs, such as ISI Web of Knowledge for universities and Ebsco Megafile or Proquest 5000 for polytechnics. FRST could take the same approach for the CRIs. This would allow cost effective ready access to the same key information for Centres of Research Excellence, an issue that is a blocking success at present.

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<sup>59</sup> Other relevant overseas models include:

- OhioLink see: <http://www.ohiolink.edu/about/what-is-ol.html>
- CASL consortium see: <http://www.caslconsortium.org/about.html>.
- CEIRC consortium see: <http://www.caul.edu.au/datasets/ceirc.htm>
- JSCI's journal activities see: <http://www.nesli.ac.uk/>

## **8.7 Options for forming consortia**

### **8.7.1 Option 1 Join CEIRC**

*Benefits:* Joining CEIRC would enable TEIs and CRIS to take advantage of an effective consortium with proven buying power. The Australian environment is similar to New Zealand and CEIRC already has some New Zealand members. There would be increased discounts with increased number of users in an agreement. Moreover, CEIRC would have no difficulty if the New Zealand Government funded some resources for New Zealand participants.

*Costs and risks:* Membership of CEIRC would not provide access to all resources (e.g. New Zealand resources). It would not cater for all the needs of polytechnics, some of which require access to more general, public library-type information. Moreover, Australian university interests will always come first, although this has so far not disadvantaged New Zealand participants. Some tertiary and research organisations that are not currently participants would need to allocate additional resource to enable them to participate in CEIRC-negotiated licence agreements.

### **8.7.2 Option 2: Do nothing**

*Benefits:* Doing nothing has no additional cost associated with it.

*Costs and risks:* While more wealthy tertiary and research organisations will continue to provide access to some electronic resources, some will struggle to remain competitive with first class overseas organisations. The gap between the main centres and smaller centres for education and research will widen, with reduced equity of access for New Zealand students, research and teaching staff.

### **8.7.3 Option 3: Develop a New Zealand national consortium**

The development of a New Zealand national consortium could be based on a variation of the CEIRC, Canadian, or other international models, building on CONZUL and other initiatives already taking place in New Zealand.

*Benefits:* Under such an approach New Zealand interests would come first. It is the only solution for New Zealand resources. It could include government, public libraries and secondary schools for selected resources, as this would mean polytechnics could get better deals for the electronic resources they require

*Costs and disadvantages:* Such a consortium would have less buying power compared to joining Australian consortia. Moreover, it would not cater for all needs of all sectors – universities are already part of CEIRC, which is working well for them. If a wide range of library sectors (including National Library) was represented, they could dilute the tertiary and research focus and reduce the benefit to those sectors.

#### **8.7.4 Option 4: Join CEIRC and develop CONZUL as a New Zealand consortium for the tertiary and research sector**

*Benefits:* Joining CEIRC and developing a New Zealand consortium would provide access to most resources at good prices.

*Costs and risks:* There would be a need to extend the present administrative structure of CONZUL to accommodate this option.

#### **8.7.5 Discussion**

Participating in CEIRC is currently the most cost-effective solution, but this will not provide access to all resources. CEIRC has little interest, for example, in New Zealand resources. For this reason the New Zealand tertiary and research sectors also need to be part of a local consortium for access to these remaining resources.

There are two main options:

- An expanded CONZUL model, to open to polytechnics, CRIs and perhaps other organisations with common interests such as large public libraries. This would provide the advantage of slightly lowering prices for larger participants, but would lead to more administrative costs, which could be covered by an annual levy.
- The National Library running a national consortium on behalf of the New Zealand library community, or sectors that it is familiar with such as secondary schools and public libraries. There would, however, need to be a policy change for the National Library to take an active role in supporting or providing a co-ordination role for any possible national consortia. National Library expertise in the academic area is limited, so it would not be a favoured candidate as an organization to administer consortia for the tertiary and research sector.

On balance, therefore, the sub-group considers the CONZUL consortium should be expanded, so that all tertiary libraries and CRIs can acquire electronic resources that are not available through CEIRC.

## **8.8 Funding arrangements**

It is vital that government levers all tertiary and CRI libraries to a minimum standard required for excellence in research and teaching. Without extra funding, only the larger organisations will be able to afford these critical teaching and research tools. Smaller CRIs and polytechnics will become second-class teaching and research establishments, and there will be no equality of access.

In order to control costs, funding needs to be limited to critical core material that is really important to Government outcomes, and will allow the specific organisation to reach adequate standards for course accreditation in those subject areas.

In order to be accredited, institutions should demonstrate they have access to the appropriate core electronic resources to teach and undertake research, just as it has to demonstrate it has appropriate laboratory and computing facilities. A funding injection of several million dollars, spread over three years, is required to purchase access to research databases for universities and research libraries. A one off payment would also be required in the first year to purchase access to back files.

After the initial three years, there should be a government requirement for organisations to meet this basic standard.

The Tertiary Education Commission is the logical funder for all tertiary sector organisations. MORST is discussing reviewing the CRI infrastructure. A submission should be made to them, though ACRI, to emphasise the critical nature of the problem and the need for sustained long term funding in order for the CRIs to maintain their international credibility.

It is important that both funders communicate and work together to provide funding for the same relevant resources. This is critical as researchers from universities and CRIs who collaborate, or work in Centres of Research Excellence are usually not permitted to use one another's electronic resources, as agreements with vendors at present only allow members of a specific organisation to gain access under a specific licence.

There is already a general consensus that certain key resources are critical. The finer detail of exactly what is purchased could be worked through by the Office of Library Co-operation, on behalf of TEIs and CRIs as part of negotiation with vendors, after consultation with each sector.

## **8.9 Conclusions**

To meet the demands of their users, tertiary and research libraries need to provide access to electronic resources. Consortia offer a cost-effective means of providing access to these resources.

The sub-group considers extending access to electronic resources within New Zealand can best be facilitated by building on the foundations provided by CEIRC and CONZUL. To ensure that all TEIs and CRIs can have access to back issues and core research databases, there is a need for a funding injection from government.

**Recommendation 22:** That all universities, CRIs and the larger polytechnics are encouraged to join CEIRC.

**Recommendation 23:** That CONZUL expand its consortium to a model similar to CEIRC, so that all tertiary libraries and CRIs can join to acquire electronic resources that are not available through CEIRC.

**Recommendation 24:** To enhance access to international electronic resources for New Zealand tertiary teachers, researchers and students, the Office of Library Co-operation should develop a business case for the extra funding from TEC and MORST for the consortia to purchase:

- Back issues of key resources; and,
- Fund access to core research databases for a three-year period.

**Recommendation 25:** That an extended CONZUL committee, or the Office of Library Co-operation, represent the CRIs and TEIs in negotiations for e-resources, establish guidelines for the funds and, ensure the funds are equitably spent on core resources.

## **9 Shared storage**

### **9.1 Introduction**

The establishment of a shared library storage facility for “low use materials” was initially regarded by the sub-group as a positive collaborative opportunity.

A number of studies in New Zealand and abroad have examined the feasibility of establishing this type of facility. While the logistics of such a facility are feasible in New Zealand, the sub-group was unable to identify a governance and funding structure that would support the establishment of a store in the short term.

The initiative is not, therefore, among the immediate priorities for action identified by the sub-group, but it remains a significant opportunity for the medium term. For this reason the opportunity is developed further in this chapter for discussion purposes.

### **9.2 Background**

Investment in the tertiary library sector is significant. In 2001 tertiary libraries spent nearly \$100m in operating expenditure and a further \$54m in acquiring library materials. The university libraries – for whom we were able to access more detailed statistical information – hold approximately 10 million print items and handled 4.3 million loans in 2001.

The volume of library materials added to collections exceeded deletions by 237,000 and with deletions representing only 14 percent of additions, it is clear that librarians must continually find additional space to house their growing collections. As they bid for extra space, librarians are finding that external pressures are adding to their occupancy costs. For example, insurance costs have increased significantly, especially in earthquake-prone areas such as Wellington.

Librarians face competing priorities for their limited library space. They have a role to play in maintaining the heritage value of their collections and they have a constituency of academics, teachers and students who have a professional interest in their growing collections of knowledge. Yet they face economic pressures (tertiary funding barely keeps pace with local inflation) and a library environment where client needs and technology are rapidly changing. For example:

- There is a move from hard-copy monographs and journals to electronic databases for which access fees are paid on an annual basis as are the costs of print serials. The price of these online materials is increasing in \$US faster than the rate of inflation in New Zealand – see Chapter 8.
- There is anecdotal evidence that younger students prefer searching through online catalogues rather than physically browsing library shelves. Libraries have been traditionally configured to facilitate browsing by users.
- The advent of on-line materials and the growth of computer use have introduced competing claims for library space. Students want more PC workstations and bookable syndicate rooms to enable them to work in teams, in addition to individual study spaces.
- Librarians are gaining improved access to new powerful library systems potentially providing additional access to tertiary library sector databases.

### 9.3 Storage options

As librarians grapple with these trends and tightening resources they are increasingly turning to improved library systems (see Chapter 6) and fresh storage options to free up space in their prime library premises.

Some libraries, such as Otago University, have tackled their space problems by establishing alternative storage in local lower-cost accommodation. Otago considered storage options when they decided on a new library building programme, which included three major developments impacting across their whole system of six branches. Faced with the opportunity to start with a ‘clean slate’, they considered all the competing uses for library space and made a decision to provide less capacity for hard copy storage in the on-campus branches. They did this knowing they had lower cost space available within walking distance of the campus to accommodate “lower demand” material. Users have accepted the multi-storage arrangement because the additional storage could be browsed, with some reading space and limited staffing resources. Moreover, arrangements were made to guarantee the transfer of any requested materials to the main library within 24 hours or direct to users’ desktops in the case of scanned serial articles.

From a national point of view, the establishment of local storage overflow facilities may save space but they do not facilitate the efficient use of collection resources across the country. Taking a collaborative approach to this problem has been considered by a number of Library groups as significant benefits should be available from a national storage concept including shared logistics and the avoidance of duplicated holdings.

Several studies on national storage have been completed in New Zealand and internationally. One of the most recent was a national store feasibility study, completed in June 2001, by a working group from the New Zealand Vice Chancellors' Standing Committee on Libraries and the National Library. This followed on from an example in Australia where the universities in the State of Victoria combined with the State Library of Victoria to establish CAVAL (Co-operative Action by Victorian Academic Libraries). CAVAL established CARM (CAVAL Archive and Research Materials), a storage centre that is a single copy repository of low use research materials owned collectively by the contributors to CAVAL.

In 1999 CAVAL prepared a paper "The case for a National Information Research Centre – Towards a Business Plan." This advocated a case for an Australia and New Zealand Research Information Centre, a proposal to assist researchers gain access to monographs and serials by establishing a store for Australian and New Zealand university libraries. The proposal contained an interesting idea to transition to a full national store facility by proposing a 'virtual national store'. Under the proposal, collections would be merged into one coherent but distributed collection. The collections would remain substantially in their existing locations while any duplication would be eliminated bibliographically.

In New Zealand this concept could work with decentralised stores, such as the Otago storage facilities described above, linked together with a common database. Duplication could be avoided through the establishment of clear protocols and a firm commitment to retain and make available "last copies."

These studies have not yet resulted in positive action to implement the recommendations, possibly because of the difficulty in establishing an ownership and pricing model, which would be compelling to library owners.

## **9.4 Conclusions**

Work to date has focused on identifying whether a national store facility is feasible in logistical terms. There is no question that the feasibility in New Zealand is strong, in fact New Zealand has arguably the lowest cost next-day courier service in the world. A facility could be built at a number of sites in both islands and next-day delivery could be guaranteed to all institutions in major centres.

The economic case, the incentives available to attract users to a national facility and the readiness of users to contemplate using such a facility have not been quantified. Without these questions being answered, a national store concept is not feasible without significant government assistance. Such assistance is unlikely and arguably undesirable. If there are efficiencies and economies available from sector entities working together, then these incentives should be enough to drive the parties to unlock the benefits.

The work done by CONZUL to date shows that the sector is motivated to seek these benefits. Moreover, the National Library has indicated it would be a willing participant in any collaborative venture for outsourcing storage. Importantly it has a role in retaining and supplying New Zealand material, which has the potential to relieve other libraries of the need to retain the same material if it is low use.

Government help, if it can be made available, will be useful in funding the work required to demonstrate to tertiary institutions that benefits to all can arise from a national store concept.

The sub-group proposes that a project team be assembled by the Office of Library Co-operation, as a secondary priority, to establish “what governance and economic arrangements would be required to enable a national store facility to operate so as to attract the participation of a majority of the large libraries in the tertiary sector.”

To achieve this goal the Office may need to:

- Benchmark and establish best practice for the allocation of prime library space to the storage of hard copy materials;
- Benchmark and establish best practice for the monitoring of usage and subsequent ranking of library materials for storage purposes;
- Benchmark costs of prime library space;
- Benchmark costs of local offsite storage;
- Quantify the likely costs of a national facility;
- Estimate the sector storage savings which would result from an effective de-duplication policy based around holdings in a national store; and,
- Quantify the likely loan demand from a central facility;

The project team should start with the economics and incentives to test the overall feasibility of a national store before proceeding further.

**Recommendation 26:** That the Office of Library Co-operation, as a secondary priority, undertake a study to establish what governance and economic arrangements would be required to enable a national store facility to operate so as to attract the participation of a majority of the large libraries in the tertiary sector.

## 10 Conclusion

Collaboration across TEI and CRI libraries provides an important means of improving access to information that is vital to New Zealand's research and learning processes: processes that underpin the development of New Zealand's knowledge economy and unique society.

Some of the initiatives the sub-group has explored have the potential to make more efficient use of resources. Most will require either the parent institutions or the government to provide some additional funding so the potential benefits can be realised.

In the sub-group's view four key initiatives are required to provide the basis for strong cross-sector collaboration:

- A regular national forum for tertiary and research library managers in association with the National Library to foster a shared commitment to improving library service access and performance through closer collaboration
- An Office of Library Co-operation to facilitate the scoping, development and implementation of practical collaborative initiatives designed to improve the performance of the tertiary and research library sector
- A set of library service standards against which tertiary and research libraries can benchmark their performance, and
- A shared or inter-operable technology infrastructure to provide the basic capability required for a range of other collaborative initiatives.

Once this foundation is established the sector will be well placed to:

- Implement an approach to Māori responsiveness that gives meaning to the Treaty partnership, substantively increases the number of qualified Māori librarians, meets the needs of Māori researchers and learners, ensures improved access and appropriate care of Māori knowledge and taonga, and contributes to an improved literacy rate, particular among Māori youth
- Further develop consortia arrangements for the purchase of electronic resources
- Establish a database enabling easy access to New Zealand's research outputs
- Develop a national strategy for co-ordinated collection development
- Assess the feasibility of sharing technical services across the tertiary library sector
- Explore the feasibility of shared storage options for low use materials, and

- Further develop reciprocal borrowing schemes and cross database access.

# APPENDIX A

## Collaborating for Efficiency: Sharing of Library Services Sub-Group

### Terms of Reference

#### **1 Purpose:**

This sub-group will prepare a report that will provide the basis for the effective and efficient sharing of library services across the public tertiary education sector.

#### **2 Introduction:**

The requirement to manage available resources efficiently within budget combined with rapid technological advancement and increased student demand for quality library services and, in particular, electronic access to information has led to mounting pressure on library services for public tertiary education institutions. Libraries also have a key role in providing high quality services to researchers and teachers within institutions. Collaboration in the sharing of library services is likely to result in improved services to users, access to a wider range of publications and to provide financial benefits for public tertiary education institutions.

#### **3 Definition:**

Library services play a pivotal role in the teaching, learning and research programmes of tertiary education. Libraries provide access to electronic and print information resources. They also teach information literacy skills, crucial graduate and life-long learning competencies.

#### **4 Scope:**

The report will include a high level stocktake of existing initiatives and issues surrounding the sharing of library services and assess options for sharing services against the following criteria:

##### **4.1 Efficiency**

1. the extent to which the preferred options will facilitate and encourage efficient management processes of library services; and
2. the effects of the preferred options on the overall performance of the public tertiary education sector.

##### **4.2 Collaboration**

1. the extent to which the preferred options will encourage collaboration and responsiveness in the use of library services;
2. considering whether the options for sharing service should be extended to Crown Research Institutes; and
3. considering what assistance the National Library may be able to provide.

## **5 Key Considerations:**

In developing the report the sub-group will take into account:

- the need to develop stronger institutions that are better positioned for strategic change;
- the need to enhance collaborative opportunities both within institutions and between TEIs, including considering the cost versus benefits of collaboration;
- the strategic directions elaborated in the Tertiary Education Strategy and Statement of Tertiary Education Priorities and the need to enhance sector capability to meet those priorities;
- the needs of stakeholders (particularly students) for responsive services;
- opportunities arising from relationships with iwi, local government, industry and research organisations (including Crown Research Institutes) as appropriate;
- the ability to monitor and assess improvements in effectiveness and efficiency;
- identifying innovative practice in the sector;
- “best practice” in both a New Zealand and international context; and
- the government’s E-learning strategy.

**APPENDIX B: PROFILE OF LIBRARY SERVICES FOR PUBLIC TERTIARY EDUCATION INSTITUTIONS & CROWN RESEARCH INSTITUTES**

Institution	Year	Total Academic/Research Staff in Institution (FTE) *****	Total Other Staff in Institution (FTE) *****	Total Staff in Institution (FTE) ***	Total Students (EFTS) ****	Total Library Staff holding Library Qualification (FTE)	Total Other Library Staff (FTE)	Total Library Staff (FTE) *****	Total Māori Library Staff holding Library Qualification (FTE) *****	Total Māori Library Staff NOT holding Library Qualification (FTE) *****	Total Māori Library Staff *****	Total Library Staff Salary Costs	Total Acquisitions Budget (non-serials + serials, excl binding)	Total Library Expenditure (incl Library Staff Salaries & Acq Budget) *****	Library Asset Value (\$'000) (2001) **	Total Fixed Assets (\$'000) (for Institution) **	Library Assets as % of Total Fixed Assets **	Total n
<b>UNIVERSITIES*</b>																		
Auckland University of Technology	to 31 Dec 01	763	589	1,352	12,934	19	22.8	41.8	0	2	2	\$ 1,661,830	\$ 3,052,619	\$ 4,714,449	\$ 7,570	\$ 185,534	4.08%	1
Lincoln University	to 31 Dec 01	214	313	527	2,825	16.6	11	27.6	1	0.5	1.5	\$ 1,091,453	\$ 1,066,133	\$ 2,157,586	\$ 7,543	\$ 89,442	8.43%	1
Massey University	to 31 Dec 01	1,362	1,224	2,586	19,846	49.8	65.7	115.5	3	2	5	\$ 3,415,102	\$ 6,509,689	\$ 9,924,791	\$ 30,134	\$ 542,831	5.55%	1
University of Auckland	to 31 Dec 01	1,611	1,382	2,993	24,077	97.8	111.2	209	4	7	11	\$ 7,685,185	\$ 13,254,036	\$ 20,939,221	\$ 98,062	\$ 650,179	15.08%	1
University of Canterbury	to 31 Dec 01	617	916	1,533	11,254	55.3	47.2	102.5	2	1	3	\$ 5,044,251	\$ 6,225,174	\$ 11,269,425	\$ 49,130	\$ 375,670	13.08%	1
University of Otago^	to 31 Dec 01	1,039	1,384	2,423	14,422	44.1	110.7	154.8	Not available	Not available	6	\$ 5,575,654	\$ 7,878,167	\$ 13,453,821	\$ 41,127	\$ 516,624	7.96%	1
University of Waikato	to 31 Dec 01	711	793	1,504	10,884	38	61.8	99.8	1.0	6.1	7.1	\$ 3,198,160	\$ 3,571,940	\$ 6,770,100	\$ 18,886	\$ 229,036	8.25%	1
Victoria University of Wellington	to 31 Dec 01	811	483	1,294	13,750	41.5	39.9	81.4	1	1	2	\$ 3,337,189	\$ 3,315,486	\$ 6,652,675	\$ 10,948	\$ 290,401	3.77%	1
<b>TOTALS FOR UNIVERSITIES</b>		<b>7128</b>	<b>7084</b>	<b>14212</b>	<b>109992</b>	<b>362.1</b>	<b>470.3</b>	<b>832.4</b>	<b>12</b>	<b>19.6</b>	<b>37.6</b>	<b>\$31,008,824.00</b>	<b>\$44,873,244.00</b>	<b>\$75,882,068.00</b>	<b>\$ 263,400</b>	<b>\$ 2,879,717</b>	<b>66.20%</b>	<b>8</b>
<b>POLYTECHNICS</b>																		
Aoraki Polytechnic	to 31 Dec 01	69	39	108	1180	0.75	1	1.75	0	0	0	\$ 62,599	\$ 29,953	\$ 92,552	\$ 159	\$ 9,783	1.63%	1
Bay of Plenty Polytechnic	to 31 Dec 01	128	109	237	2151	8.5	2	10.5	0	0.5	0.5	\$ 380,000	\$ 295,000	\$ 316,000	\$ 395	\$ 36,759	1.07%	1
Christchurch Polytechnic Institute of Technology	to 31 Dec 01	434	308	742	5734	12.7	5.8	18.5	0.5	0.8	1.3	\$ 717,532	\$ 520,135	\$ 1,237,667	\$ 2,156	\$ 99,628	2.16%	1
Eastern Institute of Technology	to 31 Dec 01	185	126	311	3194	7.6	2.4	10	1	0.2	1.2	\$ 312,255	\$ 273,000	\$ 646,405	\$ 1,985	\$ 33,929	5.85%	1
Manukau Institute of Technology	to 31 Dec 01	365	354	719	6222	13.5	7.39	20.89	0	0.5	0.5	\$ 799,031	\$ 530,000	\$ 1,469,200	\$ 1,397	\$ 80,011	1.75%	1
Nelson Marlborough Institute of Technology	to 31 Dec 01	164	111	275	2142	6	4.72	10.72	0	0	0	\$ 334,993	\$ 179,550	\$ 638,691	\$ 775	\$ 20,774	3.73%	1
Northland Polytechnic	to 31 Dec 01	163	103	266	1712	4	1	4.8	1	0	1	\$ 205,000	\$ 240,000	\$ 445,000	\$ 1,037	\$ 22,739	4.56%	1
Open Polytechnic of New Zealand	to 31 Dec 01	173	296	469	6395	16	12	28	1	1	2	\$ 1,187,358	\$ 460,146	\$ 1,372,373	\$ 1,685	\$ 25,079	6.72%	1
Otago Polytechnic*****	to 31 Dec 01	308	165	473	3570	6	5	11	0	0	0	\$ 351,334	\$ 111,703	\$ 463,037	\$ 1,402	\$ 48,079	2.92%	1
Southern Institute of Technology	to 31 Dec 01	140	95	235	2526	1.5	2.6	5.1	0	0	0	\$ 142,288	\$ 370,623	\$ 199,210	\$ 581	\$ 21,405	2.71%	1
Tai Poutini Polytechnic	to 31 Dec 01	43	25	68	722	0.6	1.1	1.7	0	0	0	\$ 53,172	\$ 21,500	\$ 108,096	\$ 70	\$ 4,751	1.47%	1
Tairāwhiti Polytechnic	to 31 Dec 01	103	66	169	1275	1.93	0.72	2.65	0	0.46	0.46	\$ 95,882	\$ 40,600	\$ 162,548	\$ 150	\$ 12,960	1.16%	1
Telford Rural Polytechnic	to 31 Dec 01	19	18	37	363	0.5	0	0.5	0	0	0	\$ 19,986	\$ 8,449	\$ 28,435	\$ 14	\$ 2,575	0.54%	1
Unitec Institute of Technology^^	to 31 Dec 01	539	424	963	8309	19.8	13.1	32.9	1	1	2	\$ 1,242,283	\$ 880,000	\$ 2,122,283	\$ 2,082	\$ 90,804	2.29%	1
Universal College of Learning	to 31 Dec 01	208	130	338	3841	7	2.5	9.5	0	0	0	\$ 340,500	\$ 180,000	\$ 520,500	\$ 821	\$ 57,522	\$0	1
Waiariki Institute of Technology	to 31 Dec 01	339	304	643	2555	8	1	8.75	1	1	2	\$ 318,470	\$ 290,000	\$ 677,801	\$ 482	\$ 25,632	1.88%	1
Waikato Institute of Technology	to 31 Dec 01	339	304	643	5321	9.6	9.3	18.9	0	1	1	\$ 700,099	\$ 664,945	\$ 2,313,895	\$ 2,205	\$ 82,844	2.66%	1
Wanganui Regional Community Polytechnic (note: Now called Wanganui UCOL)	to 31 Dec 01	108	54	162	1397	3.5	1	4.5	0.5	0	0.5	\$ 166,000	\$ 67,000	\$ 233,000	Not available	\$ 11,808	Not available	1
Wellington Institute of Technology	to 31 Dec 01	230	158	388	2845	5	2.5	7.5	0	0	0	\$ 288,000	\$ 80,000	\$ 673,052	\$ 488	\$ 34,334	1.42%	1
Western Institute of Technology at Taranaki	to 31 Dec 01	114	78	192	1554	4	2	6	0	0	0	\$ 247,500	\$ 101,000	\$ 348,500	\$ 608	\$ 19,828	3.07%	1
Whitireia Community Polytechnic	to 31 Dec 01	144	106	250	2482	5.5	0.3	5.8	0	0	0	\$ 197,820	\$ 190,793	\$ 418,154	\$ 293	\$ 21,120	1.39%	1
<b>TOTALS for POLYTECHNICS</b>		<b>4315</b>	<b>3373</b>	<b>7688</b>	<b>65490</b>	<b>141.98</b>	<b>77.43</b>	<b>219.96</b>	<b>6</b>	<b>6.46</b>	<b>12.46</b>	<b>\$8,162,102.00</b>	<b>\$5,534,397.00</b>	<b>\$14,486,399.00</b>	<b>\$ 18,785</b>	<b>\$ 762,364</b>	<b>50.41%</b>	<b>21</b>
<b>COLLEGES OF EDUCATION</b>																		
Auckland College of Education	to 31 Dec 01	349	208	557	2891	11.5	11.36	22.86	0	1	1	\$ 814,500	\$ 227,100	\$ 1,041,600	\$ 262	\$ 50,337	0.52%	1
Christchurch College of Education	to 31 Dec 01	224	190	414	3124	16.72	4.04	20.76	0	0	0	\$ 774,000	\$ 324,000	\$ 1,098,000	\$ 1,423	\$ 51,878	2.74%	1
Dunedin College of Education*****	to 31 Dec 01	76	124	200	1211	3.7	0	3.7	0	0	0	\$ 117,111	\$ 52,300	\$ 169,411	\$ 862	\$ 8,567	3.02%	1
Wellington College of Education	to 31 Dec 01	107	71	178	959	12.1	1.5	13.6	0	0	0	\$ 505,570	\$ 173,555	\$ 716,953	\$ 541	\$ 22,160	2.40%	1
<b>TOTALS FOR COLLEGES OF EDUCATION</b>		<b>756</b>	<b>593</b>	<b>1349</b>	<b>8185</b>	<b>44.02</b>	<b>16.9</b>	<b>60.92</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>\$ 2,211,181</b>	<b>\$ 776,955</b>	<b>\$ 3,025,964</b>	<b>\$ 3,088</b>	<b>\$ 132,942</b>	<b>8.68%</b>	<b>4</b>

**APPENDIX B: PROFILE OF LIBRARY SERVICES FOR PUBLIC TERTIARY EDUCATION INSTITUTIONS & CROWN RESEARCH INSTITUTES**

Institution	Year	Total Academic/Research Staff in Institution (FTE) *****	Total Other Staff in Institution (FTE) *****	Total Staff in Institution (FTE) ***	Total Students (EFTS) ***	Total Library Staff holding Library Qualification (FTE)	Total Other Library Staff (FTE)	Total Library Staff (FTE) *****	Total Māori Library Staff holding Library Qualification (FTE) *****	Total Māori Library Staff NOT holding Library Qualification (FTE) *****	Total Māori Library Staff *****	Total Library Staff Salary Costs	Total Acquisitions Budget (non-serials + serials, excl binding)	Total Library Expenditure (incl Library Staff Salaries & Acq Budget) *****	Library Asset Value (\$000) (2001) **	Total Fixed Assets (\$000) (for Institution) **	Library Assets as % of Total Fixed Assets **	Total n
<b>WĀNANGA</b>																		
Te Wānanga O Aotearoa	to 31 Dec 01	196	203	399	6119	0	0	0	0	0	0	0	0	\$215,962.00	0	\$ 17,243	0	1
Te Wānanga O Raukawa	to 31 Dec 01	32	167	199	1448	3	2	5	3	2	5	Not available	\$ 120,000	Not available	\$ 290	\$ 7,597	3.82%	1
Te Whare wānanga O Awanuiarangi	to 31 Dec 01	27	10	37	693	1	1	2	1	1	2	Not available	\$ 65,091	Not available	\$ 135	\$ 2,263	5.97%	1
<b>TOTALS FOR WĀNANGA</b>		<b>255</b>	<b>380</b>	<b>635</b>	<b>8260</b>	<b>4</b>	<b>3</b>	<b>7</b>	<b>4</b>	<b>3</b>	<b>7</b>	<b>\$ -</b>	<b>\$ 185,091</b>	<b>\$ 215,962</b>	<b>\$ 425</b>	<b>\$ 27,103</b>	<b>9.79%</b>	<b>3</b>
<b>CRIs*****</b>																		
AgResearch Limited	to 30 Jun 02	616	332	948	N/A	9	5	14	0	0	0	Not available	Not available	Not available	N/A	N/A	N/A	1
Industrial Research Limited	to 30 Jun 02	276.49	116.19	392.68	N/A	9.3	2.26	11.56	0	0	0	\$ 524,700	\$ 953,759	\$ 1,478,459	N/A	N/A	N/A	1
Institute of Environmental Science and Research Limited	to 30 Jun 02	173	95	268	N/A	7	0	7	0	0	0	\$ 340,000	\$ 300,000	\$ 650,000	N/A	N/A	N/A	1
Institute of Geological and Nuclear Sciences Limited	to 30 Jun 02	190	66	256	N/A	5.96	1	6.96	0	0	0	\$ 287,000	\$ 422,000	\$ 765,000	N/A	N/A	N/A	1
Landcare Research New Zealand Limited****	to 30 Jun 02	Not avail	Not avail	387	N/A	4	3	6.15	0	0	0	\$ 234,650	\$ 498,216	\$ 756,787	N/A	N/A	N/A	1
National Institute of Water & Atmospheric Research Limited (NIWA)	to 30 Jun 02	429	153	582	N/A	6.5	0	6.5	0	0	0	\$ 300,000	\$ 640,000	\$ 1,050,000	N/A	N/A	N/A	1
New Zealand Forest Research Institute Limited	to 30 Jun 02	Not avail	Not avail	357	N/A	2	1.6	3.6	0	0	0	Not available	Not available	Not available	N/A	N/A	N/A	1
New Zealand Institute for Crop & Food Research Limited****	to 30 Jun 02	259.28	46.39	305.67	N/A	2.8	0.32	3.12	0	0	0	\$ 129,578	\$ 329,000	\$ 615,550	N/A	N/A	N/A	1
The Horticulture & Food Research Institute of New Zealand Limited	to 30 Jun 02	368	136	504	N/A	4	2.5	6.5	0	0	0	Not available	Not available	Not available	N/A	N/A	N/A	1
<b>TOTALS FOR CRIs</b>		<b>2311.77</b>	<b>944.58</b>	<b>4000.35</b>	<b>N/A</b>	<b>50.56</b>	<b>15.68</b>	<b>65.39</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>\$ 1,815,928</b>	<b>\$ 3,142,975</b>	<b>\$ 5,315,796</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>9</b>
<b>GRAND TOTALS</b>		<b>14765.77</b>	<b>12374.58</b>	<b>27884.35</b>	<b>191927</b>	<b>602.66</b>	<b>583.31</b>	<b>1185.67</b>	<b>22</b>	<b>30.06</b>	<b>58.06</b>	<b>\$ 43,198,035</b>	<b>\$ 54,512,662</b>	<b>\$ 98,926,189</b>	<b>\$ 285,698</b>	<b>\$ 4,087,824</b>	<b>N/A</b>	<b>45</b>
<b>KEYS / NOTES</b>																		
*All UNIVERSITY data gathered from CAUL website <a href="http://www.caul.edu.au/stats">http://www.caul.edu.au/stats</a>																		
***Total Staff in Institution extrapolated from Academic+Other staff data																		
****Total Students includes external students and 'other users' - Equivalent Full Time Students (MoE and Other including international/Full Fee-paying students)																		
***** Total Library Staff extrapolated from Qualified Lib Staff+Other staff data																		
***** All CRI STAFF (institution) data gathered from annual reports																		
*****Where research staff numbers unavailable for CRIs, total staff only used. For CRIs, Research Staff numbers do not include Research Support Staff																		
*****Extrapolated from Total Acquisitions Budget + Total Library Staff Salaries																		
*****Should cover all staff who identify themselves as Māori																		
*Māori staff data: Total for whole 'Information Services' section. Note that this number is those self-identifying as Māori, and staff have the option of declining to answer. Not broken down to qualification level due to small number of staff and privacy issues.																		
^^Total Acq budget fig differs from figure supplied as UNITEC supplied fig did NOT include book expenditure (capitalised)																		
^^^Total Acquisitions includes serials only - books purchased from science budgets																		
^^^^Not all library staff paid for by library budget. Acq costs includes databases but not books (bought with other budgets)																		
^^^^^ Numbers apportioned to 14.7 FTE staff working in The Bill Robertson Library between two institutions (Dunedin College of Education and the Otago Polytechnic), based on 75% Polytech and 25% DCE.																		

# APPENDIX C

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## APPENDIX D

### Glossary of acronyms

ACRI	Association of Crown Research Institutes
ACENZ	Association of Colleges of Education in New Zealand
APNZ	Association of Polytechnics in New Zealand
CAUL	Council of Australian University Libraries
CARL	Canadian Association of Research Libraries
CAUL	Cooperative Action by Victorian Academic Libraries
CEIRC	Council of Australian University Libraries Electronic Information Resources Committee
CNSLP	Canadian National Site Licensing Project
CONZUL	Council of New Zealand University Librarians
CONZULAC	Council of New Zealand University Librarians Acquisitions Sub-Committee
CONZULSys	CONZULSys is a consortium of four universities that have agreed to purchase an Integrated Library and Recourses Access Management System.
CRI	Crown Research Institute
ESOL	English for Speakers of Other Languages
FRST	Foundation for Research, Science and Technology
FTE	Full Time Equivalent
EFTS	Equivalent Full Time Student. The EFTS system is a method for counting tertiary student numbers. The basis of the EFTS system is that a student taking a normal year's

full-time study equals 1.0 EFTS unit and the courses taken by part-time students are fractions of one EFTS unit.

GDP	Gross Domestic Product
ICT	Information and Communications Technology
INNZ	Index New Zealand
IRAMS	Integrated Library and Resources Access Management System
NZVCC	New Zealand Vice Chancellors Committee
MORST	Ministry of Research, Science and Technology
PBRF	Performance Based Research Fund
PTE	Private Training Establishment. A private training establishment is defined in the Education Act 1989 as ‘an establishment, other than an institution, that provides post-school education or vocational training’. The category includes not only private providers, but also those operated by iwi, trusts and the like.
STEP	Statement of Tertiary Education Priorities. The Tertiary Education Reform Act 2002 provides for the Government to issue a Statement of Tertiary Education Priorities at least once every three years. The STEP is intended to take the Tertiary Education Strategy – which has a medium term outlook – and define the Government’s short to medium term priorities for government agencies and tertiary education organisations.
TALG	Tertiary Alliance Libraries Group
TEC	Tertiary Education Commission
TES	Tertiary Education Strategy
TEI	Tertiary Education Institution. Tertiary Education Institutions are Crown Entities. There are four kinds defined in the Education Act 1989: universities, polytechnics, colleges of education and wānanga. Each tertiary education institution is governed by its own council.

TEO

Tertiary Education Organisation. A Tertiary Education Organisation is a provider of tertiary education services. The definition encompasses, TEIs along with Private Training Establishments and Industry Training Organisations