

**National Library of
New Zealand**

**Public Libraries
Shared Systems
Consortium**

FEASIBILITY STUDY

**As at 30 September
2008**

Version 1.4 FINAL

Commercial in Confidence

1 EXECUTIVE SUMMARY

Introduction

The National Library of New Zealand (the Library) is building on the success of the Aotearoa Peoples Network and EPIC to investigate the feasibility of establishing a consortium for public libraries providing a shared library system service. Sue Sutherland, the Deputy Chief Executive, and John Truesdale, Director National Digital Library have led the development of this feasibility study. Following review by public libraries and other stakeholders, the Library will decide if it will proceed to the next stage – preparation of a business case.

Background

The Library has championed and led the development of the Aotearoa People’s Network (APN), a managed network providing internet connectivity, computers and training at public libraries for citizens. The rollout of APN is occurring in phases as funding is provided from relevant government strategic funds.

Public libraries have been very positive about the quality of service and IT support received for the APN. Some libraries are now suggesting that a consortium managing a shared library system service along the lines of eLGAR could be of value to public libraries across New Zealand.

There has been considerable consolidation of the longstanding international library systems vendors and rationalisation of their library systems. SirsiDynix will stop supporting its old library systems used in 33% of New Zealand public libraries in the next three to five years meaning that those libraries will need to migrate to other systems. This provides a unique opportunity to help establish a shared library system service.

The architecture of library systems is also changing; driven by development of digital asset systems, separation of front and backend systems predominantly to provide access functionality to both digital and physical material.

The opportunity for a consortial hosted library system service was flagged in the Public Libraries Strategic Framework, “Public Libraries of New Zealand: a Strategic Framework, 2006 to 2016”.

Approach

The feasibility study has been prepared based on data gathered from:

- interviews with public library managers and managers of other library consortia;
- analysis of the LIANZA statistics;
- a literature review;
- a workshop of 21 library managers.

Is a shared library system feasible for public libraries?

A shared library system is definitely feasible for public libraries in New Zealand for the following reasons:

- There is strong support from existing central and local government strategies and some precedent of central government supporting local government IT systems initiatives
- The two existing public library consortia, eLGAR (in particular) and Infoshare (to a lesser extent), confirm they have generated the benefits they expected and more. This sentiment was echoed by LCoNZ (the consortium of university libraries) and Swift (the Victoria State consortium for public libraries)
- There are no technical impediments to establishing a nationally available shared library management system – there are many instances of these systems internationally
- The timing is good for establishing a shared system. Twenty three public libraries use library system software that will cease to be supported by SirsiDynix within three to five years. A shared system would be a viable option for those libraries. Assuming most of them choose to transfer to the consortium rather than upgrading their own systems, it would provide a sound basis for the viability of the consortium
- While there are mixed messages internationally and in New Zealand about the cost savings generated from consortia (from large savings to some additional costs), the economic value derived from the scale and synergies of operating collectively are universally acknowledged
- Most library systems are now at least five years old. Assuming a minimum of a two-year lag before a consortium was operational, the library systems would have been operating for at least seven years and, depending on each council's IT policies for system refreshes, may be beyond the systems' economic life
- There are many examples of shared library system consortia internationally, some that have been operating for many years. In Australia, the Swift consortium in Victoria and the Tasmanian consortium are good examples for New Zealand.

Achieving the establishment of the shared library system is based on some major assumptions eventuating:

- Obtaining funding to establish and operate the consortium and the shared systems until there are sufficient libraries using it to make it financially self sufficient
- Setting up the shared systems in time for the SirsiDynix libraries that choose to transfer (within two to three years)
- Gaining the confidence and support of council executives and public library managers throughout the development phase.

Christine Pullar

Hexad Consulting Group Limited

1 October 2008

TABLE OF CONTENTS

1	Executive Summary	2
	Introduction	2
	Background	2
	Approach	2
	Is a shared library system feasible for public libraries?	3
	TABLE OF CONTENTS	5
2	Introduction.....	6
	Introduction	6
	Background	6
	Purpose	6
	Scope	7
	Approach	7
3	Strategic Framework.....	8
	Public Libraries Strategy	8
	Local Government Impetus	9
	Central Government Support	9
4	Current Position.....	10
	Library systems in public libraries	10
	Support for library systems	11
	Funding pressures	11
	Existing consortia in the NZ public library domain	13
	International public library consortia	14
	Association of Public Library Managers	14
	Drivers for a nationally available public library consortium	15
5	Proposed Business Model.....	17
	The Subscription Model	17
	The Collective Model	18
	Why the Subscription Model is better	19
	How the Subscription Model could operate	20
	Critical success factors	24
6	Benefits and Risks	25
	Benefits	25
	Risks	26
7	Next Steps.....	27
	Appendix A – Business Requirements	28
	Appendix B - People Involved	31
	Appendix C – Documentation Reviewed	34

2 INTRODUCTION

Introduction

The National Library of New Zealand (the Library) has decided it is timely to look at options for establishing a public library consortium to provide a hosted library system service and assessing its long term viability. Sue Sutherland, the Deputy Chief Executive, engaged Christine Pullar from HEXAD Consulting Group Limited to work with John Truesdale, the Director National Digital Library and herself, to develop a feasibility study for the establishment and operation of a public library hosted library system service.

Background

The Library has championed and led the development of the Aotearoa People's Network (APN) over the last few years. This is a managed network providing internet connectivity, computers and training at public libraries for citizens. The rollout of APN is occurring in phases as funding is provided from relevant government strategy funds.

Public libraries have been very positive about the quality of service and IT support received for the APN. Some libraries are now suggesting that a consortial hosted library system service along the lines of eLGAR could be of value to public libraries.

There has been considerable consolidation of the longstanding international library systems vendors and rationalisation of their library systems. The dominant library system used in New Zealand public libraries is being phased out, meaning that the libraries will need to migrate to other systems.

The architecture of library systems is also changing; driven by development of digital asset systems, separation of front and backend systems predominantly to provide access functionality to both digital and physical material.

The opportunity for a consortial hosted library system service has been flagged in the document, "Public Libraries of New Zealand: a Strategic Framework, 2006 to 2016" (the Strategy) along with a range of other IT-based services such as a national public library card.

Purpose

The purpose of the feasibility study was to:

- ascertain the feasibility of establishing and operating a consortial hosted library system service for public libraries,

- demonstrate to public libraries how a consortium could work for them, the benefits they could achieve and the organisational and operational issues they would need to resolve.

Scope

Assessing the feasibility of a shared library system service included developing a business model for the establishment and operation of a consortium:

- Public libraries profile, their current situations and their business need for library systems and IT support
- A summary of the libraries business requirements
- Environmental scan of library systems and their future direction
- Critical success factors
- Ownership and governance constraints
- Hosting and management options
- Principles on which to base pricing strategies; options and their strengths and weaknesses
- Consultation with interested stakeholders representing public libraries
- Assessing benefits and risks at a high level

The feasibility study includes all the items listed above except for information about library systems and the development strategies of library system software vendors. There was very little data publically available that would contribute to the feasibility study.

Approach

The feasibility study has been prepared based on data gathered from:

- interviews with public library managers and managers of other library consortia;
- analysis of the LIANZA statistics;
- a literature review;
- a workshop of 21 library managers.

3 STRATEGIC FRAMEWORK

Public libraries development is fostered from two perspectives – the long term and operational goals of their councils and the professional direction of librarianship, library standards and technologies.

The viability of establishing and operating a consortium providing a common library system for any and all public libraries in New Zealand has strategic support from both the library and council perspectives. As well, a consortium could attribute to achieving central government initiatives.

This alignment supports the feasibility of a consortium as outlined below.

Public Libraries Strategy

The strategic framework to guide public libraries development published in March 2006 “Public Libraries of New Zealand: a Strategic Framework 2006-2016”, advocates strongly that public libraries need to collaborate to face the challenges of technological change, broadening customer expectations and funding pressures. This is presented in various messages such as:

- Explore opportunities for collaboration to achieve greater efficiencies through service rationalisation between libraries
- Collaboration can keep public libraries abreast of technological developments
- Collaboration will give participating libraries greater buying power
- Regional collaboration can accrue benefits from economies of scale
- Develop plans for new governance structures and models to help libraries work together
- Nationally coordinated approaches to create digital content and services done once for the benefit of all
- Assess the viability of one library card for all New Zealanders facilitating access to any public library
- Review public library ICT capacity and capability.

The concept of a national shared public library system operated by a consortium on behalf of the participating public libraries, while not specifically listed in the strategy’s action zones, would create an environment for proposed actions to be undertaken. Such actions are:

- Addressing access inequality and service variability
- Resource sharing via loans and co-operative buying for people with language, cultural or physical needs

- Evaluation of customer and community expectations of service
- Supporting current and future initiatives to create and access digital content in conjunction with other specialist groups. Act as a catalyst for development of a common resource to build a single digital library for public libraries in conjunction with National Library
- Provide ICT tools and training for participating libraries' workforce
- Providing a nationwide buying and distribution base for foreign language materials.

These themes are incorporated in the feasibility study. The Strategy did not mention the current state of library management systems in the public libraries and the potential constraints these systems and supporting them has on providing service to library users.

Local Government Impetus

The strategic direction provided by councils and through the Local Government Act, is more passive but is still supportive.

The Local Government Act 2002 s14 (1) (e) requires councils to collaborate “a local authority should **collaborate** and co-operate with other local authorities and bodies as it considers appropriate to promote or achieve its priorities and desired outcomes, and make efficient use of resources”.

There are examples of councils collaborating for infrastructure, such as GIS systems, water and emergency services, however these are at regional level only.

Individual councils via the LTCCP process (updated every three years) may commit to library development investment as part of a broader citizen initiative.

Central Government Support

A consortium for public libraries would support the action priorities in the Digital Strategy 2.0 such as:

- More effective use of digital technologies;
- Using new digital business models;
- Connected communities.

Central government is inviting local government to comply with e-GIF standards and would support a consortium operating to those standards.

4 CURRENT POSITION

There are many examples that can be used to demonstrate that public libraries are ready to establish a nationally available consortium for their library systems. This section summarises:

- the current penetration of library management system systems/suppliers;
- common problems libraries have supporting and funding library management systems; and
- consortia operating in New Zealand.

These factors provide the drivers for establishing a consortium.

Library systems in public libraries

The current penetration of library management systems in the public libraries is summarised below.

Software Supplier	Library Management System	Number of sites	Penetration (%)
Civica	Spydus	9	12.5
Contec	.eLM	7	9.7
Geac	Advance. Plus	2	2.8
In-house	NA	1	1.4
Innovative Interfaces	Millenium	5	6.9
LibLime	Koha	3	4.2
MUSAC	MUSAC	1	1.4
Napier Computer System	NCS	6	8.3
SirsiDynix	Various, mostly Horizon	24	33.3
Softlink	Liberty	13	18.1
TLC Carl	Carl	1	1.4
TOTAL		72	100

Table 1 – Penetration of software suppliers for library management systems in public libraries. Based on LIANZA statistics mostly 2006-07, some libraries 2005/06 or 2004/05.

It is likely that, apart from the five eLGAR libraries that began operating Millennium in 2005, library systems have already been in use for more than five years. Assuming a minimum of a two-year lag before a consortium was operational, the library systems would have been operating for at least seven years and, depending on each council's IT policies for system refreshes, may be beyond the systems' economic life.

Support for library systems

Supplier support for library systems is generally poor, with the result that libraries are hampered in being able to provide improved services for their patrons. Larger libraries have some system librarian expertise support which mitigates this problem for them.

All the libraries interviewed reported frustration obtaining application support. This problem was endorsed in the public libraries workshop.

- The software supplier is generally not a New Zealand company and does not have New Zealand based representation (three suppliers are New Zealand based covering 13 libraries). Support is provided from Australia or the US. Because New Zealand public libraries are small by international standards, they have very little influence in attracting and then keeping supplier attention to solve their problems.
- Council IT departments provide the IT infrastructural support (hardware, backups etc) but are less likely to be familiar with the applications.
- Libraries have mixed experience with local software developers because of their budget constraints and lack of in-house IT capability.

These issues will also apply when libraries wish to develop new IT based services. All libraries commented that it was almost impossible to get their library system supplier to develop enhancements for them.

SirsiDynix (being a merger of Sirsi and Dynix in mid 2005) is rationalising its product suite and expects to stop supporting all the products used by libraries in New Zealand other than Unicorn in the next three to five years. This means that 23 of the 24 SirsiDynix libraries will need to upgrade or replace their library systems within that timeframe.

Funding pressures

IT budgets for public libraries are low compared to empirical data for **industry sector averages**. The LIANZA statistics define IT budgets to cover:

“total costs associated with library computer systems, including software licences, support agreements, upgrades, data circuits, bureau charges and automated telephone notification and item renewal systems. Excludes capital expenditure”

Library Level	Number of Libraries (No of NA responses)	Average IT Budget (% of total budget)
Level 1 ¹	21 (0)	3.0
Level 2	18 (2)	3.9
Level 3	33 (3)	4.1
Average	72	3.7
Informal industry comparison		5 to 6

Table 2 Average IT budgets for public libraries compared to industry averages. Based on LIANZA statistics 2006-07, 200506, 2004-05 depending on the last year the library provided cost data.

The total IT budgets for the 72 libraries was \$13,178,402 against a total budget of \$354,439,973. If libraries were funded on average at 5% per annum being the lower range of **the industry average**, their total IT budget would be \$17,721,999 an increase of \$4,543,597.

The capital budgets and depreciation policies for the libraries are not surveyed. As well, council’s expectations for refreshing IT systems or funding libraries capital projects for library systems do not appear to be publically documented in their LTCCPs making it impossible to assess the priority they place on this type of investment.

Anecdotal findings from other consortia have mixed messages on how effectively a consortium lowers the cost of ownership of library systems. For some, there have been large savings, for others costs have increased. All libraries have reported greater value from being in a consortium than operating alone. As well, per table 2, some libraries spend proportionately more than others on IT. Based on this, it is too early to say whether a consortium would lower IT costs for public libraries. There will also be new costs that libraries and their councils will need to consider when assessing the value of a consortium offsetting other benefits, such as data communications. Libraries will need to be able to itemise their IT budget including the transfer costs from IT departments to be able to make a valid comparison with a consortium proposal.

¹ Banks Peninsula Council was absorbed into Christchurch City Council. The Banks Peninsula library statistics (2004/05) were added to Christchurch City library totals. This reflects the difference in the number of libraries in New Zealand from the figures in the Public Library strategy.

Existing consortia in the NZ public library domain

Formal examples of public libraries collaborating to provide better services have in the main, been successful, giving confidence to public libraries to investigate this consortium. Thirty-one public libraries have been involved in or investigated library system consortia so far, which is 43% of the public libraries. Their involvement has arisen from being involved in establishing and then operating consortia or being involved in consortia that did not go ahead. The experience gained and lessons learned would be very valuable in establishing a national consortium.

At this stage there are two operating public library consortia providing common hosted library management systems for their members:

- **eLGAR** in the Auckland region, using Millenium. eLGAR is five libraries (Manukau, Rodney, North Shore, Waitakarere, Auckland City) and will add in Papakura as a branch of Manukau
- **Infoshare** in the Bay of Plenty using Horizon. Infoshare is four libraries (Tauranga, Rotorua, Whakatane, Western Bay of Plenty) and will probably add in Taupo and Kawarau.

Libraries in **Otago/Southland** (Waitaki, Dunedin City, Invercargill City, Central Otago, Queenstown Lakes, Clutha, Southland and Gore) are looking to establish a consortium using SirsiDynix Symphony software. It is being led by Dunedin City and will be externally hosted.

Two consortia were planned but did not eventuate being **Greater Waikato** made up of nine libraries (Thames, Waikato, Waipa, Hauraki, South Waikato, Matamata Piako, Waitomo/Te Kuiti, Otorohanga, Hamilton) and **Wellington/HuttValley**. Valuable lessons from these two consortia initiatives have been identified and included in this feasibility study.

There are a range of informal groupings of public libraries working collectively for purchasing resources.

EPIC (Electronic Purchasing in Collaboration) provides access to electronic resources to 185 libraries (public, school, tertiary and special libraries). It is self funded by the libraries.

By early 2009, the **Aotearoa People's Network** (APN) will be providing free broadband access and a range of other services to over a third of the local body funded public library systems. This figure will increase during the following two years. It has been funded initially through the Community Partnership Fund and subsequently by other government funding to the National Library of New Zealand under the Government's Digital Strategy.

International public library consortia

There are examples of library consortia in many countries. The International Coalition of Library Consortia website, while somewhat out of date, had about 150 member consortia in 2000². Most of the listed members are from the US and are either academic libraries or a mix of types of libraries within a state. There were very few national consortia. Two well known examples are OhioLINK and Solinet.

In Australia there are two examples of state library consortia providing library system shared services for their public libraries. Both these examples are regional consortia.

- The State Library of **Tasmania** is a state wide library and information service which administers and funds all public libraries in Tasmania under the Libraries Act 1984. There are seven city/suburban lending libraries and 39 smaller branch libraries located in the main cities, regional and rural centres throughout the state. All libraries share a single catalogue and the collection circulates freely between the libraries.
- **SWIFT** – established by the State Library of Victoria and VICLINK (Victorian Public Library and Information Network) established a shared library system service using Sirsi Dynix Unicorn. Currently there are 15 libraries using the system with up to eight other libraries scheduled to join in the next 18 months out of a total of 42 public libraries in the state. Recently, the consortium upgraded from Unicorn to Symphony.

Association of Public Library Managers

The Association of Public Library Managers (APLM) was formally established in July 2008. Some of its aims directly support establishment of a consortium:³

- To facilitate Public Library development opportunities.
- To formulate direction & policies for the Public Libraries of New Zealand.
- To share collective knowledge & resources.

APLM supports development of this feasibility study.

² <http://www.library.yale.edu/consortia/>

³ Association of Public Library Managers, Constitution, April 2008-09-17

Drivers for a nationally available public library consortium

In summary, there are compelling drivers for the establishment of a consortium:

1. Sirsi Dynix intends to consolidate its product set meaning that, all products, other than Unicorn will not be supported after 2011/2013. This will mean that 23 libraries will need to upgrade or replace their systems providing a window where these libraries could join a national consortium instead.
2. Most existing library systems have been in operation for at least five years and public libraries should be looking to upgrade or replace their systems in the next three to five years.
3. The functions and architecture of library systems are changing from monolithic systems to decoupled front and back end products with industry standard application programme interfaces (API) to facilitate interfaces to supporting systems such as federated searching, fine payments and debt collection and text messaging functions. While these developments will provide flexibility and cheaper software they will need more local systems librarian support and skills. A consortium providing that capability would make these systems more available to public libraries.
4. eLGAR and Infoshare have demonstrated to other libraries the value of regionally developed library system consortia. The Otago/Southland consortium is another example.
5. EPIC and APN have demonstrated the value of belonging to a nationally established consortium for resource access (commercial databases and bandwidth).
6. There are valid arguments and precedents on which to build a business case for access to central government funding to establish and underwrite a consortium.
 - The purpose of this consortium should contribute to the Digital Strategy's outcomes 'High value economy' and 'Vibrant communities and culture'.
 - Central Government has funded the establishment of the Government Shared Network (GSN) via a revolving line of credit that is expected to be repaid through revenue generated by central and local government agencies signing up to use the service.

- Establishing a new library system based on e-GIF standards will mean these standards are adopted by local government entities.
- Central government is contributing a portion of funding to support other local government initiatives through for instance Digital Strategy funding.

5 PROPOSED BUSINESS MODEL

Two business models on which to base a consortium were explored – a **Subscription** model and a **Collective** model. The strengths and weaknesses of each were tested at the public library workshop.

This section introduces the two models and then describes how a consortium could operate using the subscription model from five perspectives:

1. Governance
2. Potential services
3. Operating environment
4. Pricing
5. Funding

The feasibility study assumes that the consortium would be built on a subscription model. This view was supported by the public library workshop attendees.

A list of the factors critical to the success of establishing and operating the consortium provide a summary of the proposed business model.

The Subscription Model

A generic description:

Capability and capacity is established to provide a set of services to a defined market segment by an organisation structured to be able to deliver sustainably the service to agreed standards and service levels at a defined price. The customer commits to the service in advance for a contracted period at the agreed price. The financial risk is carried by the organisation that is also responsible for ensuring there is adequate capacity for all contracted customers. The infrastructure needed to provide the service will be owned by the organisation and may be supported internally or outsourced. The organisation is expected to exist separately from and beyond the tenure of the original people setting it up. The customers, as stakeholders, may/may not be represented in the governance or user structures of the organisation.

Examples are ProQuest or Emerald providing subscription access to electronic journals, a sports club, a cell phone contract.

For the public libraries system consortium:

- A separate organisation would be established with responsibility for setting up the library system infrastructure to meet agreed

requirements. A representative group from the public libraries would be involved to define how the public libraries wanted to operate together initially and over time.

- The organisation would negotiate contracts with chosen library management software supplier(s), hardware vendors and hosting organisation(s). Public library representatives would be involved as subject matter experts supporting the selection of solutions.
- Funding for the establishment of the consortium and the infrastructure would be lent by central and/or local government. Sponsorship may be an option.
- Public libraries transferring to the consortium would contract separately with the consortium, paying for the transition and then use of the systems on an agreed pricing model.
- Governance and ownership of the organisation and its assets would be controlled by the funders with representation from public libraries.
- There would be established entrance and exit processes for public libraries transitioning in or out of the consortium.

The Collective Model

A generic description:

Capability and capacity is established to provide a set of services to a defined homogeneous group by representative members of the group to agreed standards and service levels. The cost of setting up and operating the service is split among the members (the collective) by an agreed algorithm. Each member commits to being part of the collective in advance for a contracted period at the agreed price. The financial risk is carried by the collective, capacity and the mix of services available is constrained by the ability of the members to fund it. The infrastructure needed to provide the service will be owned by the collective and may be supported internally or outsourced. The collective is expected to exist separately from the original members setting it up but may not live beyond the tenure of the original members. The members will be represented in the governance and user structures of the organisation and are more likely to be geographically close.

Examples are eLGAR, Infoshare, a body corporate.

For the public libraries system consortium:

- A group of public libraries would commit in principle to setting a consortium to provide library systems for themselves. The group would define how they wanted to operate together initially and over

time. The group would set up a separate organisational structure to represent the consortium.

- The consortium would negotiate contracts with chosen library management software supplier(s), hardware vendors and hosting organisation(s). Representatives of the group would be involved as subject matter experts supporting the selection of solutions.
- Funding for the establishment of the consortium and the infrastructure would be provided from the member public libraries/councils.
- Each public library transferring to the collective library system would contract separately with the consortium, paying for its share of the infrastructure and operation of the systems on an agreed algorithm. The total costs would be covered each year by the member libraries payments.
- Governance and ownership of the consortium and its assets would be controlled by the member councils.
- There would be established entrance and exit processes for public libraries transitioning in or out of the consortium.

Why the Subscription Model is better

The feasibility study is recommending that a public libraries consortium be built on the subscription model for the following reasons:

- **A nationally available service is proposed** – take-up of the service is likely to be independent of regional groupings and so tight regional relationships would be less necessary for the success of the consortium. Each library's relationship would be principally with the consortium, which would be a separate body.
- **A central, national governance/management/hosting function with mix of resourcing** – the consortium would operate from a single location. It would be geographically remote from most public libraries. Public libraries would expect and be required to be involved at the governance/management and developmental levels but would not be expected to lead these roles.
- **Base services are common, local library variations are not required** – the business requirements for the base functionality would be assumed to be the same for all libraries, with the bar set to match the larger libraries current requirements (as a minimum). There would be no software customisation for individual libraries. The base service provided would therefore be the same for all libraries and so could be commoditised in how it is packaged and priced.

- **Set up for each library would be simpler** - a standard transition process would be in place for each library irrespective of when it transferred to the consortium. The consortium would have access to the expertise needed to help each library make the changes.
- **Size of the library becomes less relevant** – as the base service is the same, every library would receive the same base level service regardless of size. The pricing model may be used to reflect sizing differences. Additional support may be required for libraries that have less local expertise, however, this would be provided additionally to the base service and be separately priced. Additional value added services could be provided at cost or a similar pricing model used to spread costs across a subset group.
- **A national service would be professionally operated and would provide a robust infrastructure** – providing a base level of service at a national level would require robust hardware infrastructure, hosting services and operating processes. The level of service would be higher than most libraries currently have but would be available because of the economies of scale. They would also be necessary because of the number of libraries and the volume of transactions being processed by the system.
- **Take up** – the rate of take up of libraries joining a consortium is unknown, but would be progressive over a five to seven year period. It is unlikely that all 72 public libraries would join within the first five years, if ever. The subscription model assumes that the infrastructure would scale over time as more libraries join, but that the initial investment would be greater than the libraries joining in the first two to three years could fund. The financial risk of failure would be held by the funder(s) and owners who could be expected to require a more simple standardised based service to lower the risk of cost overruns.
- **Decoupling libraries from library systems operation** – the subscription model allows for the consortium to provide a professional service (based on libraries requirements) at a price. It decouples each library from the minutiae of managing its library system and delegates that role to a consortium. While there is a loss of control for each library, it is expected to be in areas that do not affect local identity or council policies.

How the Subscription Model could operate

Details of how the consortium could operate across the five perspectives are provided below.

Governance

The elements of the governance arrangements for a subscription based model for the consortium are:

- The consortium is a separate legal entity, such as a company, limited liability partnership, trust or incorporated society
- National Library would have a significant role
- The entity would be established during the set-up phase rather than at a later stage and be operating for the first public library transitioning to the new systems
- The consortium would enter into supply contracts with the software and hardware supplier and any other suppliers required to operate the service to the libraries
- The governance body would be composed of a mix of public library, funder and other specialist representatives including experienced director(s)
- The consortium may provide services to museums, archives or schools that operate within public libraries. How these entities are represented is yet to be decided
- The consortium would own/lease all the components of common infrastructure used by more than one library such as:
 - Software licences
 - Software applications developed for common use
 - Hardware
 - Office equipment
- Libraries would be responsible for their own local policies, fees and charges
- The consortium (represented by libraries) would be responsible for setting and maintaining commonly agreed business rules and standards, such as basic cataloguing standards
- Each library may/may not continue to own its cataloguing and patron data. Experience from existing consortia is that moving to a common ownership model for data is prudent as it becomes very hard to distinguish in practice.

Services

The consortium would provide:

- A shared/common library management system providing cataloguing, circulation, acquisitions and OPAC with additional application software modules for serials, federated searching and other services
- The system would be designed to scale to support all sizes of public library
- Software for supporting business functions such as fines, interfaces to other council systems, reminder notices, authentication
- Communications functions such as texting/email/phone message and notice functions
- First and second level help desk support for all applications provided by the consortium
- Access to resourcing (business analysis, developers etc) for development of new services for library patrons; project management
- Ultimately, regional/national access to catalogues and resource lending
- Support for digital repositories for local material, museum and/or archival software
- Training expertise on an as required basis

An overview of potential business requirements is included in Appendix A.

Operating environment

- The consortium would be managed by dedicated staff providing management and administration, systems librarian and IT capability
- The systems would be hosted. The hosting provider would be responsible for all support and maintenance of the core infrastructure and databases
- Each library would commit to using the shared systems for a minimum of five years
- The consortium would manage the transition of each library to the shared systems and would support the library through the transition with project and change management expertise
- The consortium would coordinate user groups for development of new functions and services.

Pricing models

The pricing model will cover:

- A fee to cover the project costs to transfer to the consortium and a portion of the establishment costs
- A monthly charge to cover usage of the base systems used by all libraries.
- A monthly charge to cover the usage of each of the additional services used

The algorithms used to calculate the rate for each type of service need to be determined. The algorithms could be based on population, rating address, membership or usage. Pricing models need to be defined as part of the establishment of the consortium.

The prices need to be set at a level that:

- is affordable to the public libraries. This is unlikely to be much less than current costs. Instead the services provided are expected to be greater than libraries currently are paying
- covers the depreciation costs allowing for system refreshes without seeking extra funding
- generates sufficient revenue to repay establishment loans and be self funding within the agreed timeframe.

Libraries will need to be able to cost accurately all their current system costs to make a valid comparison. When making this comparison, libraries will need to assess both the quantitative (cost savings) benefits and the qualitative (service generation) benefits. The value proposition from using the library system service may well be much higher than the cost savings.

Funding

Funding will be needed to establish the shared systems and operate it until there are enough libraries using the systems to cover all costs and repay start-up loans. This is likely to be provided by loans (from central government the councils or possibly sponsorship).

The transition rate of libraries to the shared system is fundamental to the feasibility of the consortium proposal and if established, its viability. Identifying how the establishment of the shared system will be funded and developing a transition model will be the fundamental components of the business case.

Central government should be approached to provide the some financial support. Local Government New Zealand should also be involved. Finally,

financial support may be available from sponsorship or possibly a philanthropic organisation such as the Tindall Foundation or JR McKenzie Trust. Loans may need to be supported by commitments in principle from interested councils.

Research is needed to identify how the consortium could be funded to confirm the feasibility of the consortium.

Critical success factors

In summary, the consortium is feasible however, to succeed the following must be achieved:

- Funding must be obtained on terms that the consortium can operate within
- Interest and ongoing support from councils must be generated and then nurtured
- Obtaining approval to proceed and setting up the consortium must be completed within the three to five year period that SirsiDynix continues to support the old applications. The timeframe should be clarified with SirsiDynix as soon as possible
- Libraries must be prepared to signal their intentions in principle to transition to the consortium and their timeframe. Take-up assumptions would be based on these intentions
- Communication with council executives and the public libraries must be ongoing
- The business case must be robust and believable
- Pricing must be set at a level that provides economic value to councils
- The transition cost and business impact must be in line with or better than the risk and effort required for a library to select and implement a new system alone.

6 BENEFITS AND RISKS

The benefits of a shared system for public libraries are well documented by existing consortia and researchers. This section lists benefits identified by the three consortia operating now in New Zealand. It is not a formal benefits assessment.

As well, the risks identified during research and preparation of this feasibility analysis are listed. Again, this list is not a formal risk assessment.

Benefits

Benefits are attributed to four main stakeholder groups being:

Customers

- Have more user friendly access to a wider range of resources
- Have the potential to order resources directly from a library other than their own
- Have the ability to interact with an extensive range of services (such as notifications, membership support) regardless of the library they actually belong to.

Libraries

- Smaller libraries are able to punch above their weight through use of a library management system with richer functionality than they would otherwise be able to afford
- Develop additional functions and services because there is better access to skilled expertise about the applications
- Do not need to access IT services themselves, it is done for them and they are less dependent on software suppliers
- Staff develop through working with specialists
- Have the potential to develop closer relationships with participating libraries which will generate further resource sharing providing economies of scale
- Extend their boundaries to operate regionally and potentially nationally.

Councils

- Are assured that their library systems are up-to-date, well managed and efficient, enabling libraries to better support Council community outcomes

- Effective use of public monies – either through cost savings generated by collaborative purchasing or through additional services for the dollar.

New Zealand Library sector

- Consortia provides for future initiatives to create and access digital content in conjunction with other specialist groups
- A common platform to build a single digital library for public libraries in conjunction with National Library.

Risks

Risks identified during development of this feasibility study are:

- Public libraries using SirsiDynix systems cannot wait for the establishment of a consortium and make their own arrangements. Take up of libraries then could be too slow for a consortium to be cost effective
- Adequate funding cannot be obtained to set up and operate the consortium effectively to meet expected service levels
- Libraries are dissatisfied with the proposed shared systems and decide not to commit
- The need to standardise base functionality and support processes to make the consortium cost effective leads to a perceived loss of control and stops libraries from transferring to the consortium
- Developing a national system is too removed/bureaucratic from many public libraries and stops libraries from participating in establishment decisions
- Influential people in the councils do not support the concept.

7 NEXT STEPS

The next steps are:

1. Seek feedback from local government through the LGNZ and presentations to councils' events as soon as possible.
2. Test central government's interest in providing funding support for establishment and initial operation of the consortium. Investigate the potential for obtaining sponsorship or grants.
3. Obtain funding to complete the Stage 1 business case.
4. Identifying alternative sources of funding in case central government does not support the business case within the planned timeframe.
5. Seek expressions of interest and commitment in principle from libraries interested in using the shared system. Use these commitments to support development of the cost benefit analysis.
6. Survey public libraries.
7. Identify SirsiDynix's rationalisation timetable and when support for the existing applications will stop.
8. Complete development of high level business requirements started during this analysis to support an RFI to the international market.
9. Identify the most appropriate legal structures to use for the consortium.
10. Ascertain the role National Library will hold in the consortium.

APPENDIX A – BUSINESS REQUIREMENTS

Consortium capability – Libraries requirements

Support

1. The consortium must provide a knowledgeable help desk service.
2. The consortium must manage the hardware and software environment including application upgrades.
3. Libraries may require the consortium to maintain:
 - a. OPAC – web based access to back end?
 - b. Configuration files
 - c. Interfaces with other council systems (examples are data export or exchange/standards based access/API for standards based council IT systems.
4. Support such as software application, front end development must be provided with 1st and 2nd level application support being NZ based.

Business continuity

5. The systems must have in built redundancy to meet reliability and availability criteria.
6. The system must include disaster recovery capability. Measures to be defined.

Resource sharing

The consortium must provide processes and services that support resource sharing across the member libraries such as:

7. Shared cataloguing
8. Need support for copy cataloguing and support for record up/download to OCLC and the NUC
9. Support for original cataloguing
10. Fines processing/payments/debt collection
11. Reporting/trend analysis to support resource purchasing
12. Text/email/telephone based communication with library patrons

Consortium capability – Councils' requirements

Quality of Service

13. Councils may require their libraries to have more reliable and supported IT systems.
14. Councils expect a consortium to operate professionally
15. Councils expect their CIO to be involved in the establishment of a consortium.

Budget

16. Library IT budgets are a small part of a council's overall budget. Future IT costs need to be clear.
17. Councils expect a cost effective solution. Councils may be either capital or operating constrained. Pricing must take this into account.

Functionality

Application Architecture

18. The library system must have a web services based architecture.
19. The consortium must be able to use open source products such as database search tools
20. The consortium must be able to offer components and modules as well as the complete library system. The base application software would be the back end applications and database. Optional components could be:
 - a. Serials module
 - b. Front end applications.
21. The consortium must provide a front end that can link to link to museum or archive systems as well as library systems in the future. Actually this will be possible if we separate back and front, comply with point 21 above and if the archive/museum system does also.
22. The library system must support standard web search protocols such as SRU (Search/Retrieval via URL) It must offer an API with the ability for partners to share API functionality they develop.

Personalised Services

23. The library system must support personalised services such as:
 - a. RSS feeds
 - b. Personalised OPAC 'studio environment'
 - c. Access to subscription databases
 - d. Fines notifications

Localisation and Centralisation

24. The library system must support local as well as centralised configurations for:
 - a. Terminology
 - b. Catalogue access
 - c. Catalogue record levels
 - d. One library card service
 - e. Other hosted catalogues such as schools

Interfaces

The library system must support APIs for interfaces to council systems, subscription databases, digital repositories, museum systems.

25. There must be interfaces between library systems and council financial systems for debt management to improve on the inefficient approach via reports
26. There must be common services for fines processes and resource retrieval or the ability to engage externals such as Baycorp
27. There must be the ability to handle multiple resource/customer identification systems.

Authentication

28. The library system must support authentication via independent federating databases such as OpenID. There needs to be a single shared authentication system for all libraries using the shared system. The type of security required will depend on the use of common data such as catalogue and patron records.

APPENDIX B - PEOPLE INVOLVED

People interviewed:

Margaret Garland	Manager, Aotearoa People's Network, National Library of New Zealand
John Truesdale	Director, National Digital Library, National Library of New Zealand
Leslie Clague	Manager, Kapiti Coast District Libraries
Sue Smith	Library Manager, Matamata Piako Public Library
Ian Littlewood	Library Manager, Nelson Public Library
Faye Clark	Library Manager, Hamilton City Public Library
Bill McNaught	Library Manager, Puke Ariki
Sandra Mann	Library Manager, Hutt City Public Library
Anne Anderson	Manager Bibliographic Services, National Library of New Zealand
Colin Drew	Senior Policy Analyst, Infrastructure and Development, Local Government New Zealand
Simon Burge	Library Manager, Waimakariri District Public Library
Su Scott	Library & Information Services Manager, Waitakere Library & Information Services, Chair of eLGAR
Jean Ballantyne	General Manager, LCoNZ
Jill Best	General Manager Libraries, Tauranga City Public Library
Kevin Rusbridge	Project Manager, Swift Library Consortium Project Manager
Bernie Hawke	Library Manager, Dunedin City Public Library
Jim McLeod	Information Services Manager, Environment Waikato
Wallis Barnicoat	Manager, Museum Development, Te Papa

Research support:

Maria Nagelkerke	Senior Advisor, Information and Research, Strategic Policy & Communications, National Library of New Zealand
Ruth Miller	Customer Support Consultant, Digital Solutions, National Library of New Zealand
Jenny MacDonald	Manager Digital Solutions, National Library of New Zealand

Attendees at workshop on 8 September

Andrew Adams	Digital Library Services Manager, Christchurch City Libraries
Sue Fargher	Library Manager, Central Hawke's Bay District Libraries
Ewan Hyde	District Library Manager, Carterton District Library
Leslie Clague	Manager, Kapiti Coast District Libraries
Paula Murdoch	District Library Manager, Hastings District Council
Brian Anderson	Manager, City Libraries, Porirua City
Simon Burge	Waimakariri District Libraries Manager, Waimakariri District Libraries
Linda Hughes	District Librarian, Timaru District Libraries
Ian Littlewood	Manager Libraries, Nelson Public Libraries
Debbie Duncan	Library Manager, Upper Hutt City Library
Su Scott	Library & Information Services Manager, Waitakere Library & Information Services
Sandy Green	Customer Services Librarian, Masterton District Library. Library Management System and IT services manager.
Sheryl Reed	Manager, Napier Libraries
Geoff Chamberlain	Library Services Manager, North Shore Libraries
Joann Ransom	Horowhenua District Libraries
Jill Best	General Manager: Libraries, Tauranga City Council
Lisa Oldham	Libraries Manager, Tasman District
Heather Taylor	Library Manager, Tararua District
Chris Hay	Wellington City Libraries
Faye Clark	Library Manager, Hamilton City Public Library
Bill McNaught	Library Manager, Puke Ariki

Apologies for workshop

Bronwyn Hunt	Far North District Council
Lynne Walker	South Taranaki District Council
Susan Harris	Kawerau District Library
Vicki Darling	Clutha District Council
Glenn Webster	Marlborough District Libraries

Public Libraries Feasibility Study

Bernie Hawke	Dunedin Public Library
Sue Smith	Matamata Piako
Sarah Thompson	Westland District
Sandra Mann	Hutt City Library

APPENDIX C – DOCUMENTATION REVIEWED

Public Libraries of New Zealand, A Strategic Framework 2006 to 2016, Local Government New Zealand, LIANZA, National Library of New Zealand

Building shared services – more bang for your buck , Anne Anderson, Manager Bibliographic Services, National Library of New Zealand,

The Swift Story so far... how collaboration can benefit participants, Swift consortium, no date

Project SWIFT for Library Board of Victoria and VICLINK – Business Case

The Future Library System for Victoria's Communities, February 2003, PriceWaterhouseCoopers

The Renaissance of Library Consortia: Implications for New Zealand Libraries, report commissioned by National Library of New Zealand, Dr Daniel G Dorner and Judith Annear, June 2000

Networking and Consortia Management Techniques, Rama Malviya and Anil Kumar, Bulletin of Information Technology, vol 27 No 3, May 2007

A smart place in the sun: future proofing the Queensland Government Consortium, Richard Sayers, Library Management, vol 25, No 6-7, 2004

The very model of a modern Library consortium, Rona Wade, Library Consortium Management, Bradford 1999 vol 1 issue 1/2

Allocating costs in a consortial environment: a methodology for library consortia, Bernie Sloan, The Bottom Line: Managing Library Finances, vol 11 No 2, 1998

Association of Public Library Managers Incorporated, Constitution, Su Scott, 24 April, 2008

eLGAR Brief, eLGAR Establishment Manager, January 2007

NZ Public Library Statistics, 2004-05, 2005-06, 2006-07, <http://www.lianza.org.nz/community/pub-sig/stats.html>

Collaboration in New Zealand Tertiary Libraries: an explanatory study, Colleen Faye Finnerty, August 2004

The Critical Success Factors for School and Community (Joint Use) Libraries in New Zealand, the MLIS research project, Vivienne K.D. Matthews, January 2007