SWIFT – the Future Library System for Victoria's Communities

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The SWIFT Initiative is a proposal for Victorian public libraries to collaboratively share the operation of one library management system to achieve improved service outcomes for library users plus operational and cost benefits for the participating libraries. It is envisaged that over time all Victorian public libraries would participate. This paper is about two aspects of the SWIFT Initiative. The paper covers the underlying reasons that prompted consideration for the proposed project and an overview of the business case prepared by PricewaterhouseCoopers. Through substantiation of the validity of the proposal, the business case was intended to persuade libraries and Councils of the merits of the project and to participate and for the victorian State Government to provide a special funding grant to assist with the initial establishment costs of the collaborative venture.

SWIFT Initiative Concept

Victoria - Public Libraries

Victoria is a State in the south east corner of the Australian mainland with a population of nearly five million people and covering 227,000 square kilometres. There are forty-two separate local government public library services in Victoria serving two and half million registered members through two hundred and seventy-five static service points and thirty-one mobile libraries. There are nine million of items in the collections of the libraries and forty-seven million annual loans. Internet services for the public are available at all static service points and some mobile libraries.

Local and State Government share the responsibility for the funding for the recurrent operational costs of public libraries. On a state-wide basis the proportions of the funding by the two levels of government are 78% local and 22% state. Once the funding contributions were more equitable:over the last two decades there has been definite shifting of financial responsibility for public libraries from the state to local government. This situation has had implications for the amount of funding available for investment in Information and Communication Technology (ICT) at a time when the utilisation of ICT has increased significantly. The limited amount of available funding has curbed the ICT aspirations of most or all Victorian public libraries. This is a matter that is not unique to Victorian public libraries. It is therefore important for libraries to consider collaborative arrangements to better use the existing financial resources to maximum advantage.

Cooperation

Sharing and cooperation is a precept that underpins public libraries. As organisations, public libraries are about the sharing of collections and resources for the benefit of the community that they serve. For many years public libraries have been distinguished by the implementation of various collaborative and sharing ventures to enhance their performance for the benefit of their users. To some extent, in recent times Victorian public libraries have not embraced collaboration with the enthusiasm of past eras. This is in part a disturbing outcome of the aftermath of our various experiences of the restructure of Victorian Local Government in the mid-1990s. This change was coupled with an ensuing short-term harsh regime of Compulsory Competitive Tendering of services in the late 1990s.

Gulliver

There is some change back to a more cooperative spirit. An example is the Gulliver consortium project. This project is a cost-affordable shared purchasing of access for library members to a range of authoritative and expensive databases. The Gulliver consortium project is a particularly notable and successful exception to the recent reluctance to collaborate. Gulliver started with a State Government grant and is now an ongoing and sustainable venture between all Victorian public libraries. No one Victorian public library could afford the cost of the access to the range of database resources available through Gulliver. The SWIFT Initiative is intended to emulate and build upon the collaborative essence of the Gulliver success.

Library Management System Affordability

A number of Victorian public libraries still use legacy library management systems that have been due for replacement for some time. Replacement has been delayed because of insufficient funding to finance the change to a new system. As well, libraries face financially difficult situations with their capacity to afford the operational costs of library management systems plus all the associated and necessary ICT requirements. With the present funding levels for Victorian public libraries the situation is not expected to improve in the foreseeable future. Many libraries now cannot individually afford to appropriately provide, maintain and regularly upgrade the required ICT infrastructure to provide quality services for their users.

Integrated Searching

A key issue is that overall Victorian public libraries do not provide easy-to-use high level integrated access to information sources. The value and relevance of libraries is under some challenges and threats from competition from the Internet and through products such as Google. The key strategic value of the public library is the availability of authoritative information. This strategic value is of not much significance if all the necessary infrastructure and skills required to provide the effective access and deliver services are either lacking or inadequate.

For the users, ease of access and comprehensive content are of paramount importance. How it is done and the source is of little or no relevance to the library user. Increasingly, many users will not want to visit the library to obtain the information that they may require. The ultimate challenge for SWIFT is to enable the libraries to have a user-friendly and sophisticated system front end that retrieves and delivers reliable authoritative information from all sources better than Google. With the inclusion of federated searching capabilities in the project, there is the potential to retrieve, from a single search, catalogue records, information from bibliographic and full text databases, web site addresses and other sources.

Collaboration

Because of the increasing costs of ICT and limited financial resources, collaboration provides a viable and affordable option to meet the challenge. Through collaboration it will be possible to harness the collective ICT resource capacity of Victorian public libraries to achieve quality service outcomes for the users. There are far greater similarities between the operations of public libraries than there are differences. There are no defensible valid reasons or demonstrable benefits for different libraries to have their own discrete library management systems. With recent advances in technology and the availability of broadband services it is now very feasible to share a system yet maintain local identity, policies and procedures. By sharing there would be a positive emphasis upon interdependence and partnership for better service outcomes.

The collective investment and negotiating capacity of Victorian public libraries has enabled Gulliver to develop from a specific purpose grant-funded two year project operation to a successful ongoing consortium-funded viable venture. The same can and needs to happen with library management systems and ICT. Many public libraries overseas and in other library sectors in Australia have found it necessary to form consortia to do exactly what SWIFT is intended to do.

Consortia Examples

Some smaller ventures have developed and positively demonstrate benefits of sharing library management systems in Victoria. Murray Link is a group of Victorian country public libraries that provide joint online access to their catalogues and the sharing of collections. History shows that Victorian Public Libraries have over many years collaborated in various ways with the utilisation of ICT resources. There have been some successful and some not so successful ventures. We need to build upon the successes and learn from the experience of those that did not succeed.

Outside Victorian public libraries there are significant numerous examples of the collaborative provision and use of a single library management system and or portal software by groups of libraries for their mutual benefit. Shorelink in Sydney comprises the libraries of the five lower North Shore Councils of Lane Cove, Manly, Mosman, North Sydney (Stanton) and Willoughby. The Victorian university libraries and the State Library of Victoria collaborate to provide a union catalogue of their collective resources.

WYLD Cat in the state of Wyoming in the United States is a library management system collaborative venture between Wyoming's twenty three public library systems, seven community college libraries, some high school and special libraries and the Wyoming State Library. Recently, in New Zealand, a library consortium called CONZULSys was started. It currently consists of four of the eight university libraries, namely the Auckland University of Technology, University of Otago, University of Waikato, and Victoria University of Wellington. These four libraries have joined together to purchase a single Information and Resource Access Management System. There are many other similar examples in the United States and United Kingdom with collaborative use library management systems.

Reflecting back to the 1960s and 70s, when computers were first introduced to various operations in Victorian public libraries, no one library could afford to purchase its own computer system. Initially libraries purchased services from bureaus, and later some shared systems. That all changed in the late 1970s when the prices of systems dropped markedly and became affordable for individual libraries. Today with the overall costs of ICT for individual libraries, the matter of affordability has come almost full circle. It is a case of back to the future.

SWIFT Concept

SWIFT is just a strategic aspiration or concept proposal at this stage, albeit with a sophisticated business case to justify the potential viability of the project. SWIFT is a proposal for Victorian public libraries to collaboratively share the operation of one library management system, to achieve improved service outcomes for library users plus operation efficiencies and financial benefits for the participating libraries. Initially it is expected that the project would commence with a representative group of libraries. Over time it is expected that all Victorian public libraries would participate.

There is nothing spectacularly new or innovative about the concept or proposal. As stated above, many libraries elsewhere are already engaged in similar projects, some of which have existed for many years. SWIFT is a strategy to overcome a number of actual or probable threats and to enhance the community's image of public libraries.

The threats are:

- A declining funding base
- Present relatively moderate to low service delivery performance both individually and collectively and
- Potential decline in ICT infrastructure development and sustainability.

SWIFT is about Victorian public libraries maximising a collective advantage by sharing ICT resources, to achieve a number of strategic and beneficial outcomes including:

- Improve public library service delivery on a state wide basis
- Make available high level ICT hardware and software across all public libraries
- Develop and utilise a pool of library staff with high level ICT skills and knowledge to enhance system and organisational performance
- Ensure ongoing library ICT development and sustainability.
- Expand the level of State Government funding of public libraries and
- Improved inter Government Partnership.

There has been a series of progressive events that influenced the commencement of the SWIFT project.

The Country Public Libraries Group (CPLG), with a grant from what was the then Local Government Branch of the State Government Department of Infrastructure (DOI), engaged a consultant to undertake a brief study regarding the possibility of a collaborative venture with a library management system for non-metropolitan library services. Following the last State Government election, the ministry responsibility for local government moved to the Local Government & Regional Services Division of the Department for Victorian Communities.

At almost the same time the large Regional Library Corporations in metropolitan Melbourne started discussions about the possibility of sharing a single library management system and whether there were any cost advantages.

Then the Library Network Unit (LNU) from the State Library of Victoria (SLV), together with Viclink (the peak body for Victorian Public Librarians), conducted a three day project-planning workshop in early 2001. At the workshop the above two investigations came together and the matter of sharing a library management system was developed under the banner of **Seamless Service**. The project was given a high priority.

Subsequently an approach was made by some library managers to DOI for a project grant. The basis of the approach was a specific purpose project grant for an ICT collaboration program for Victorian public libraries, similar to the mobile libraries and building infrastructure programs funding programs. Over the past six years the State Government has funded two multi-million dollar capital works programs for libraries. One was the replacement of sixteen mobile libraries with new units. The second program was the renovation, refurbishment, extension or relocation of existing branch libraries. Each of the two programs went for three years and required the

recipients of grants to make a financial contribution. Neither of these funding programs impacted upon the declining value of the State Government grant recurrent funding program situation.

The simple response from DOI for funding for the seamless service project was: prepare a business case to justify the proposal.

With the support of Viclink and CPLG, a request was made for a Statewide Grant from LNU, to fund the appointment of a consultant to prepare the business case. LNU funds a range of project including the initial grant to start Gulliver. The request for a grant to fund the business case preparation was approved. A project team was established and tenders were called for a consultant. PricewaterhouseCoopers (PWC) was the successful tenderer and David Cochrane was the lead consultant. The business case document is finished and following is some information from the Business case proposal.

The specification for the business case tender started with a mission statement:

"To investigate and identify the potential benefits including service outcomes for library users, financial and infrastructure resourcing of a joint venture for investment in a collaborative library management system for Victoria's public libraries. To both prepare a draft business plan to promote the case for a collaborative library management system and to advocate to and gain support for the project from potential participants, funding sources and other partners or stakeholders. The business plan would recommend a preferred model for consortia governance and financial responsibilities, propose a process to be followed with the establishment of the consortia and advise on ongoing sustainability."

The Swift Initiative, from a strategic position, has definite advantages and benefits for libraries and their users.

Service Delivery

Today the delivery of many aspects of library services is substantially reliant upon ICT. The interaction of library users with their own library is in many instances via ICT in some way. In the future ICT is going to be an even more integral element of service delivery than it is now. To succeed and be viable, libraries need to be able to be better than Google and Amazon. The reliance upon ICT for the delivery of a range of services plus connectivity between libraries and their users will continue to expand.

Primarily, this project is about obtaining some grant money and, together with the combined financial resources of the participating libraries, to improve the collective ICT performance. It is intended that no matter where the libraries and users are located in the State, the level of ICT performance will be virtually the same. If somebody accesses or uses a library in the metropolitan area and somebody else does so in a remote rural community, they both should receive the same level of ICT service performance. Whilst much of the behind the scenes system operation will be shared, libraries will still be able to have their own local brand identity front-end look and feel and incorporate local policies and procedures.

Some library web sites are increasingly being developed with the inclusion of enriched content for the benefit of library users. The web sites are important community portals and are well-used virtual libraries. The availability and integration of integrated or federated searching capabilities into a catalogue search will expand the opportunities for library users to access information from a range of sources.

ICT hardware and software

Many presently operating library management systems in Victorian public libraries are not latest generation technology. As a consequence, the level of performance and functionality of individual library management systems and networks throughout Victoria vary considerably. The result is vastly different standards of service delivery. With a standardisation on one system there would be definite operational and purchasing benefits. Any system improvements would impact system-wide. To maintain currency of the system, upgrading would be on a regular scheduled basis. Through working together we can do more than if we operate in isolation.

It is important that the emphasis be upon the front-end and service delivery to the user and that there be the same level of system-wide performance and functionality regardless of where the user is located. This can be more easily achieved with a single system and network. It would be technically difficult or impossible to achieve the same outcomes across a number of library management systems at different stages of development and performance, with variations in network bandwidth capacity and supported by staff with differing skill levels and expertise. The bringing together of a number of different library management systems and making them work together is a more expensive and complex task than using one system. Why spend money doing this when the money could be better spent developing and refining one system for optimum service delivery performance?

ICT skills and knowledge

Staff ICT expertise, skills and knowledge in Victorian public libraries are not sufficiently developed to provide high level in-house system advice, development and support. This is a critical issue. With a pooling of staff resources, there would be an opportunity to engage appropriate staff or consultants to provide the required high level skills to make systems work to the optimum. The operation of a central help desk to provide support and advice would be an advantage to some libraries.

There would be obvious improved opportunities for staff training programs through the shared experience of one using system.

ICT Development and Sustainability

If the ICT services that libraries provide are not comparable in both performance and the look and feel of available alternative simple to use products why should ratepayer and taxpayer monies be provided to public libraries? Continuous improvement and development are particularly important features of ICT that require ongoing planning and funding. The potential magnitude of the SWIFT Initiative will helpto provide an affordable ongoing program of system development and upgrade replacements through collaboration and the collective purchasing capacity.

State Government Funding

The portion of State Government funding devoted to recurrent funding for public libraries has declined in real terms over recent decades. There are no obvious compelling reasons why this situation will improve dramatically in the foreseeable future. The State Government has chosen to provide additional funding through specific purpose limited term funding programs. Two programs are the mobile libraries and building renovation replacement mentioned above. Neither of the two programs impacted upon recurrent funding requirements to any extent.

The SWIFT initiative is intended to take advantage of a potential opportunity for there to be funding-specific ICT purposes for public libraries to support State Government policy programs. The State Government would probably be more interested in a specific purpose grant than increased ongoing recurrent funding. As expenditure for ICT has a considerable recurrent component, there would definite budget advantages with a specific purpose grant to start the SWIFT Initiative project.

Government Partnership

The State Government is strongly committed to improving the delivery of all government services to the entire Victorian community regardless of where people live. This commitment is clearly demonstrated by various recent policy directions and actions. These include the establishment of the Department of Victorian Communities and the emphasis upon partnership and 'joined up' government. The State Government intends to achieve some of the delivery of better services through its eGovernemnt program and ICT. The SWIFT Initiative fits very neatly with the State Government objectives.

Summary

There is a range of compelling reasons and advantages for Victorian public to share one library management system to be able to more effectively and affordably provide better library service for the Victorian community across the entire state.

<u>SWIFT – the Future Library System for Victoria's Communities</u> <u>A Strategic Business Case, PricewaterhouseCoopers</u>

PricewaterhouseCoopers was engaged in November 2002 to undertake an independent business case evaluation into a collaborative library management system for the Victorian public library network. The final report was submitted in March 2003. Firstly, I wish to reiterate my thanks to all the library services and other organisations which have shown immense interest in this project and provided important inputs and feedback.

Above are some important insights into the core benefits which both communities and libraries will enjoy from the SWIFT initiative. Importantly, the benefits in the areas of service delivery, procurement of ICT hardware and software, skills sharing and system development are outcomes which are, to quote from the concluding finding of our business case evaluation, critical to the continued development and relevance of the Victorian public libraries network. The initiative presents an important catalyst for achieving equitable user outcomes and shared financial savings which are not achievable singly by any library.

The following discussion will focus on some of the service, structural and financial elements of the SWIFT business case. Over a period of 4 months, we conducted a series of workshops and discussions with library services and corporations, and representatives from the State Government, Councils, library bodies and system vendors, to identify potential model options, development needs and costs and the overall viability of the SWIFT initiative.

The Concept of a Collaborative Library Management System

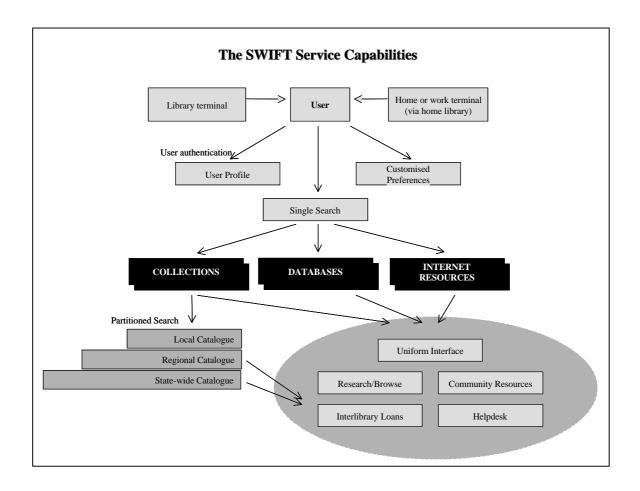
Public library services currently operate separate library management systems, although in some cases it is possible to access the shared catalogues of distinct but limited groups of libraries. This predominantly stand-alone approach restricts the scope and expediency of access, services and resources available to the user.

This service framework gives rise to some broad inconsistencies in access across the network and limits the information resources available to the user. This framework is not sustainable into the future.

The provision of seamless access to any library service across the State is a shared vision of library managers. As identified in the business case, the appropriate approach to achieving this vision is through the progressive expansion towards a unified state-wide system.

The SWIFT Framework

The *SWIFT* user service framework is represented in the following.



The initiative requires the application of a common public interface, data management framework and circulation system, on the basis of a shared resourcing of systems, IT and communications requirements. Sustained improvements in the library telecommunications backbone becomes the service imperative over the long term, to meet the burgeoning requirements of web-based transmission.

Features of a Victorian collaborative system are extensive. Some of these include:

Information Resources

- Total Victorian collection search capability covering collections and electronic resources
- Single cross-search of online catalogues, databases, full text articles, etc (known as 'federated' or 'broadcast' search)
- Uniform search outcomes
- Access using any Internet-enabled computer outside the library
- Partitioned searches which allow search of home library catalogue, expanded regional level catalogue or state-wide catalogue according to user selection
- Personalised searching capabilities according to user preference for library resources, subjects or locations, etc.

Library e-Services

- Online reservation and renewal capability
- Unmediated interlibrary loans requests, including review of book availability at the nearest library or across total state-wide network
- Loan status review, including loan return alerts
- Subject guides and literature alerts (eg. for collection additions)
- News and events update across the Victorian network
- Online help-desk service with direct response to user's account.

Membership Services

- Online registration capability and updates of user details
- User authentication checks with home library service
- e-Forum discussions and 'chats' functions amongst users and librarians
- Access to extended resources including regional community sites, specialised services for special needs (eg. people with disability, children, audio/visual resources, multicultural resources), etc.

Core Benefits of the SWIFT Initiative

The SWIFT initiative will deliver significant long term and sustainable service benefits to the Victorian communities and their library services, including:

- Equitable state-wide access.
- Integrated view of all available print and electronic resources with a single front end web portal.
- More rapid and effective research.
- Uniform navigation which reduces barriers/confusion.
- Expanded service to all users through partnership and connectivity.
- Increased mobility of collections through interlibrary loans.
- Personalised services.
- Single library card.
- Improved library staff IT knowledge and skills.
- Coordinating Victorian collections management practices.
- Increased bargaining power, resulting in cost savings plus enhanced availability, development and maintenance of library system infrastructure for all libraries especially in rural areas.

State Government Policy

Growing Victoria Together is the Victorian Government's broad vision for regional Victoria and identifies important policy issues for the future. The SWIFT initiative is built on a number of these strategic issues:

- Valuing and investing in lifelong education.
- Growing and linking all of Victoria.
- Building cohesive communities and reducing inequalities.
- High quality community services.
- Promoting rights and respecting diversity.

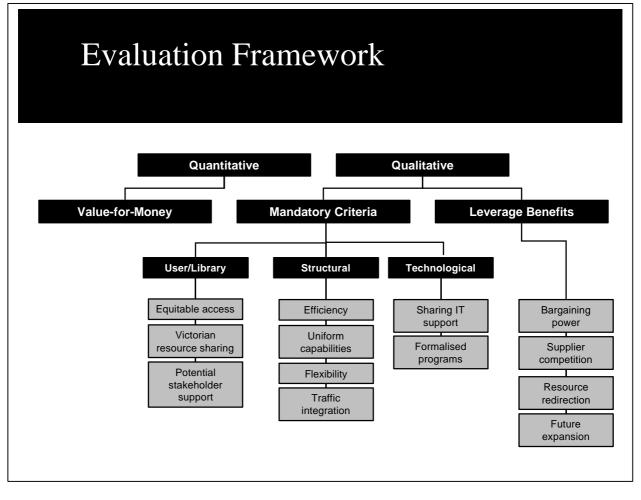
Growing broadband access across Victoria is clearly a key Government priority, particularly for regional Victoria. The SWIFT outcomes will promote and extend the Government outcomes.

Operational SWIFT Model Options and their Evaluation

While a significant number of benefits of SWIFT have been identified, it is clear that achievement of these benefits is dependent on the selection of the correct delivery model. Therefore, in considering this it was necessary to:

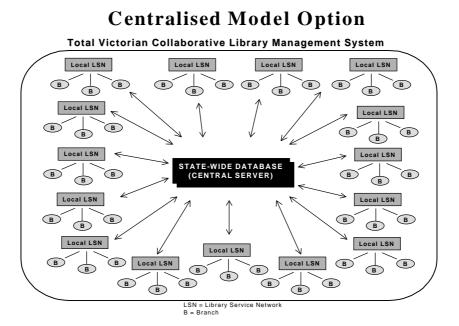
- Identify the possible delivery model options; and
- Develop an evaluation framework around which the alternative models could be evaluated.

Let us first consider the evaluation framework, the key elements of which are depicted in the following:



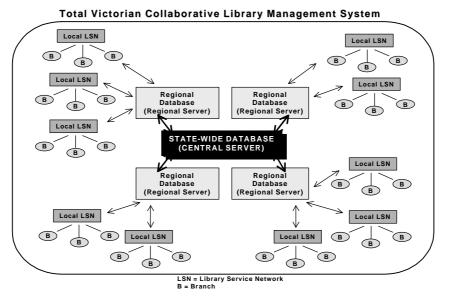
The business case identified and evaluated a number of models for the delivery of SWIFT. Two primary options emerged:

• *Centralised Model* – Establishing a single central server, linked to the main service points of all participating library services, which hosts the state-wide collections database and processes all enquiries/interrogations across the network regardless of location.



• *Cluster Model* – Establishing a few regional servers, each servicing enquiries from geographic clusters of library services, and all connected to a host server for access to the central collections database and for processing centrally targeted enquiries.

Cluster Model Option

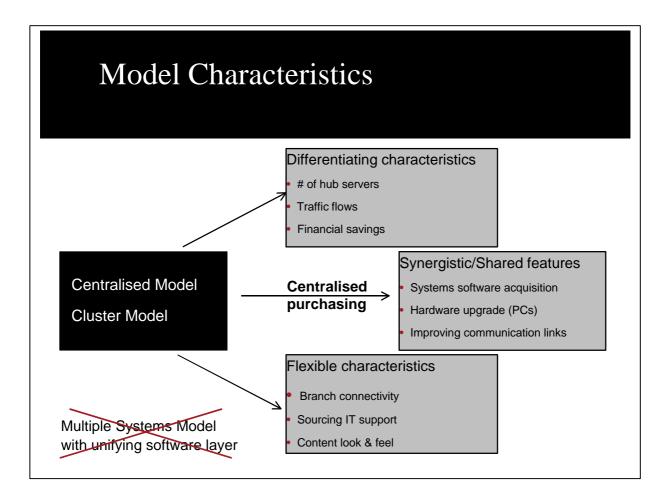


There was also a third option considered, the multiple systems model, but this was quickly rejected, based on the core evaluation criteria.

Both options entail the following features:

- One system type across entire network.
- Real-time updates of library transactions (eg. loans).
- Dedicated sources for infrastructure maintenance and support.
- Formalised software and hardware upgrades.
- Centralised approach to purchasing (software, hardware and communications).
- Improvements to existing bandwidth capacity through realignment of communications linkages to appropriately cater for the library Core Services as a priority (these services relate to collections access and loans management)

The main differentiating characteristics of the options, along with the similarities, are reflected in the following:



The analysis also incorporated the impacts arising from a sub-option to the Cluster Model – the Expanded Cluster Model. This option assumed a doubling of the communications expenditure under the Cluster Model, to achieve an expansion of bandwidth necessary for both library Core Services and various Internet services.

The Socio-economic and Financial Evaluation

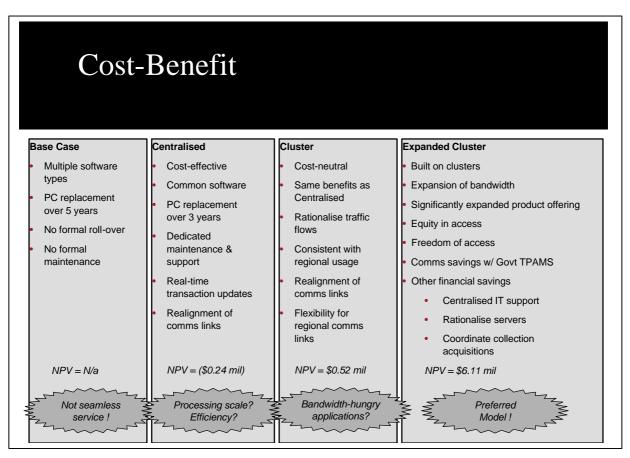
These primary model options were then subject to a more detailed socio-economic and financial evaluation. The socio-economic analysis indicates that the two Model Options have substantial capacity for achieving many of the mandatory criteria and leveraged benefits which may be expected from collaborative library management systems, for example:

Principles and Mandatory Service Outcomes
Equitable access to information and knowledge
Victorian resource sharing
Supporting Government policy objectives
Standardised system capabilities
Flexibility for local content requirements
 Structured delivery of advanced systems technology
 Sharing of systems support and maintenance
Reliable and timely IT support
Leveraged Service Benefits
Potential staff and resource redirection
 Bargaining power to negotiate systems and product development
 Enhanced customer service both physical and virtual
Encourage staff development through consortium skills sharing
Platform for future expansion eg. single library card
 Inclusion of regional service delivery centers

From a financial perspective, the Centralised and Cluster Model Options are estimated to:

- result in capital cost savings (whilst extending the range of services available to the user)
- potentially incur incremental recurrent costs to provide for the communications improvements/upgrades
- be cost-neutral as a result of the above resource redirection.

Ultimately, while the Centralised Model provides the most cost-effective outcome from a financial perspective, it is apparent from the socio-economic analysis that the Centralised Model does not deliver as many service and operating benefits as does the Cluster Model.



In view of the libraries' ongoing commitment to equity and freedom of access by any library user, the preferred model is the Expanded Cluster Model.

State and Local Government Funding

The preferred option for delivery of SWIFT, the Expanded Cluster Model, requires significant initial capital expenditure along with an increase in the level of recurrent expenditure (due to the substantial increase in bandwidth needs). Based on this it is proposed that:

- The Victorian State Government provide the funding for the capital costs associated with the implementation of SWIFT, as a separate grant.
- The SWIFT associated recurrent costs (eg. licence fees, contract management, communication costs) be centralised in the SWIFT delivery vehicle, with this vehicle being funded by Councils and the State Government under a specific cost-sharing model (to be developed).

The results of the evaluation can be summarized as follows:

The SWIFT Implementation

A staged implementation of the SWIFT initiative is considered appropriate. It is suggested that in the next 12 month period (Stage 1), a "proof of concept" pilot project be completed to trial the functionality and viability of the SWIFT initiative based on a substantial test region. This stage would be important to develop a definitive concept for implementation into a state-wide system.

Obviously, there are a number of significant key issues which need to be resolved if SWIFT is to be implemented, covering a number of specific areas:



Resolution of these issues is vital to the success of the project.

However, this should be achievable and, when implemented, SWIFT will provide significant benefits to a wide range of stakeholders.

SWIFT does provide the delivery framework for the future delivery of library services in Victoria.