



## BRIDGING THE DIGITAL DIVIDE IN GAELIC<sup>1</sup> LIBRARIES: REPORT ON THE INVESTIGATION

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<sup>1</sup> GAELIC: Gauteng and Environs Library Consortium, FOTIM's major programme

# BRIDGING THE DIGITAL DIVIDE IN GAELIC<sup>2</sup> LIBRARIES:REPORT ON THE INVESTIGATION

## EXECUTIVE SUMMARY

### 1. Background

GAELIC continues to be recognised as a successful FOTIM (Foundation of Tertiary Institutions of the Northern Metropolis) project. Since the establishment of the consortium in 1996, members have enjoyed the benefits of various collaborative initiatives, the most significant of which was the implementation of a state-of-the-art integrated library system software, namely Millennium from Innovative Interfaces Inc.

During the past 11 years, members of GAELIC have experienced various challenges and changes in the higher education landscape in South Africa. Furthermore, members have also experienced enormous changes and opportunities in the digital library environment.

### 2. Problem statement

During 2005 GAELIC undertook a comprehensive survey of all its libraries in order to assess the digital status of each, to determine the consortium's membership profile, and to identify needs and problems to be addressed by the consortium. The survey highlighted the considerable differences in the use of the Millennium system, including the age of the servers supporting the systems on campuses, the versions of the software and the modules and functionality being utilised, in campus ICT support and in library staff skills.

These differences, as well as the fact that institutions need to embark on reviews of systems and processes after a number of years of operation, prompted GAELIC to initiate this investigation, which is focused on the Millennium system, infrastructure and the skills of staff as well as on maximising the use of the available system functionality. The usage of the system was also to be benchmarked against other libraries and consortia, both nationally and internationally.

### 3. Planning Grant

The FOTIM Board and its members were fully supportive of this initiative, and supported GAELIC in their application in July 2007 for a planning grant from the Andrew W. Mellon Foundation to embark on this exercise.

Dr. Zodwa Magwenzi, FOTIM Director and Dr Judy Henning, Co-ordinator of this project discussed the proposal for a planning grant with a representative of the Mellon Foundation and explained that the focus of the investigation was to enhance the use of the system and the

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investment made in it. After the implementation of the interventions identified in this investigation the institutions themselves will support ongoing research and development. FOTIM will continue to support collaboration between member institutions in order to ensure cost-effectiveness. The GAELIC Governing Board confirmed the commitment of members to future sustainability and to ensuring continued optimal usage of the system.

FOTIM/GAELIC made it clear that the outcomes of the study might result in the need for interventions in key areas to ensure that this goal is achieved. Whilst it is understood that the award of the planning grant is no guarantee of a future grant, FOTIM/GAELIC would like to submit a full proposal based on the recommendations of the investigation and to be judged on its merits. The Mellon Foundation supported the GAELIC initiative and awarded the planning grant to FOTIM/GAELIC in 17 September 2007.

#### **4. Management of the project / project leaders**

The GAELIC Governing Board reviewed its goals and objectives in February 2007 and this investigation is one of three priority projects started with the intention of achieving these. The Board appointed a team of three board members to lead the project, take accountability, facilitate communication and monitor progress. This approach ensured commitment and support from the highest level in GAELIC and FOTIM. The management team members were:

- Dr J Henning (co-ordinator): Chief Operations Officer – Unisa Library
- Mr F Ubogu: University Librarian: University of the Witwatersrand
- Mr T Larney: Director Library Services: North-West University (Potchefstroom Campus).

The four-member technical team are experts in the field and focused on the technical aspects of the project and reported to the Management Team and ultimately to the GAELIC Governing Board and the FOTIM Board. The team members were:

- Ms L Erasmus (co-ordinator): Manager: Library Technology Services: Unisa Library and leader of the GAELIC Innovative System Focus Group,
- Mrs S Swanepoel: Head: Information Management and Procurement Services, University of Pretoria
- Mrs M Sibanda: Head: Technical Services and System Administrator, University of Limpopo (Medunsa Campus)
- Mrs C Malan: Library System Administrator, University of Johannesburg.

#### **5. National implications**

As part of the investigation to encourage optimal use of the Millennium system by GAELIC members, the use was benchmarked against other libraries and consortia – nationally and internationally. Discussions were held with other consortia that are embarking on reviews of their own operations and systems. Presentations and discussions were held at a conference of DITCHE (Developing Information Technology Capacity in Higher Education) between GAELIC, SEALS (South East Academic Libraries) and CALICO (Cape Library Consortium). A meeting was also held between GAELIC and CALICO to discuss the reviews that are under way. It was agreed that the outcomes of the reviews would be shared.

The focus of the reviews has been different because the consortia use different systems and have different needs and priorities. However, because of this, sharing the outcomes will benefit the various consortia as we would learn from the differences as well. There is also commitment from the consortia to collaborate and share information over the next few years.

The investigation and sharing of outcomes of regional investigations will inform FOTIM/GAELIC's strategic direction in the area of library systems, as well as the role of the library system in view of the latest technological developments that impacting on digital library services and library services in general.

## **6. Methodology, findings and recommendations**

### **6.1 Methodology**

The methodology of the investigation included the following activities:

- 6.1.1 A system survey was conducted among the GAELIC libraries in order to gain a better understanding of the differences in support and use of the Millennium system as well as the problems experienced in the GAELIC libraries.
- 6.1.2 Visits were made to all the libraries in GAELIC and SEALS in order to discuss various aspects of the Millennium system with a management group from the Libraries, as well as groups of staff members representing the users of each instance of the system.
- 6.1.3 A discussion with representatives from CALICO on their experience in a shared server environment was held.
- 6.1.4 Visits were made to library consortia in Spain and Estonia in order to benchmark the GAELIC libraries against overseas libraries in terms of supporting and using the Millennium system and to gain more insight into an overseas library consortium sharing a Millennium server and an overseas library consortium based on a decentralised server model.
- 6.1.5 Benchmarking GAELIC against SEALS and the overseas consortia and libraries was done.
- 6.1.6 Comparisons of the shared and decentralised server models as well as the benefits and challenges of each of the two models were made.
- 6.1.7 A literature survey was done by researching specific subject areas related to problems identified for example library consortia, new developments in academic libraries, technology planning, IT support, managing a systems office, technology training, process ownership, corporate culture, benchmarking, open source software for libraries, and the cost of running a library system.

### **6.2 Findings**

The following areas of concern related to the Millennium system were explored and formed the basis of the findings of the investigation:

- 6.2.1 Lack of skilled library staff to support the Millennium system, and time constraints which mitigate against the ability to focus on development tasks.
- 6.2.2 Library staff's lack of commitment and willingness to take ownership of the Millennium system modules and functions.

- 6.2.3 Different functional areas in the libraries were found to operate in silos and there was a general lack of collaboration.
- 6.2.4 Keeping abreast of regular new releases and enhancements was seen to be a challenge.
- 6.2.5 There was a lack of appropriate infrastructure for example bandwidth and technically skilled staff.
- 6.2.6 Relationships with the University ICT Departments were cause of concern.
- 6.2.7 Integration with University systems was another factor.
- 6.2.8 Support from Innovative is a problem for some of the libraries.
- 6.2.9 Costs of running and maintaining the system were also a concern.

In general all the GAELIC libraries were satisfied with the Millennium system's positive impact on their library processes and the value added to their services.

### **6.3 Elements for recommendations**

The recommendations based on the findings of the investigation are available under Part 4 of this report in more detail. The following elements formed the basis of the recommendations and should be considered by each GAELIC library to ensure that the Millennium system is used, supported and developed according to the library's needs:

- 6.3.1 Formal system support structure with adequately skilled staff
- 6.3.2 Shared responsibility (ownership) between system staff and functional experts to support and develop the Millennium system
- 6.3.3 Full responsibility to develop expertise within the Library through training and coaching, regular assessment and feedback on progress of staff
- 6.3.4 Formal procedures for planning and budgeting to ensure progress and development, as well as coordination of new purchases in a consortium environment
- 6.3.5 Importance of building relationships with various stakeholders on strategic and operational level is acknowledged
- 6.3.6 Costs should be managed by considering hidden costs, costs in using the system and ensuring that the Millennium system is used optimally and serves the Library's needs
- 6.3.7 Active participation and involvement in user group activities by library management and staff
- 6.3.8 In general make use of the opportunities that consortium membership presents, such as
  - 6.3.8.1 Joint negotiations for new products and services
  - 6.3.8.2 Sharing expertise and information
  - 6.3.8.3 Sharing training opportunities
  - 6.3.8.4 Proposals for the funding of joint projects
  - 6.3.8.5 Project management.
- 6.3.9 An assessment of the GAELIC libraries in terms of the management and support of the Millennium system should be repeated in a year or two in order to establish whether any progress has been made in addressing the problem areas.

#### **6.4 Conclusion**

The Project Team concluded that no technological interventions will be proposed for GAELIC before progress is made in addressing the problem areas. Only after these problem areas have been eliminated, will a library be able to take the development of digital library services to a higher and more effective level through maximum use of the functionality available in the Millennium system.

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## BRIDGING THE DIGITAL DIVIDE IN GAELIC<sup>3</sup> LIBRARIES: REPORT ON THE INVESTIGATION

### Part 1: Investigating GAELIC libraries

#### 1. Problem statement

During 2005 GAELIC undertook a comprehensive survey of all its libraries in order to assess the digital status of each, to determine the consortium's membership profile, and to identify needs and problems to be addressed by the consortium. The survey was conducted by the Centre for Information Literacy at UCT (led by Prof Peter Underwood and Ms Gretchen Smith). Follow-up meetings were held with GAELIC Library Directors and a strategic workshop on the survey results and recommendations was held on 16 March 2006. The GAELIC Governing Board wished to proceed with several of the major issues that emerged:

- Interventions that are required in the short term to reduce the different levels in the use of the Millennium system at FOTIM member institutions;
- In the longer term, interventions required to bridge the digital divide that exists between the institutions, their libraries, and their staff.

The GAELIC Survey highlighted the considerable differences in the use of the Millennium system. These included the age of servers supporting the system on campuses, the version of the software and the modules and functionality being utilised, campus ICT support, and library staff skills. These problems have in several cases been reduced by the institutional mergers which took place recently, and which reduced FOTIM's membership from sixteen to nine institutions. FOTIM would like to find ways to bridge the digital divide that exists between its member institutions, including upgrading all libraries to the same, current version of Millennium, and to take the development of digital library services to a higher and more effective level through maximum use of the excellent functionality available in the Millennium system.

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The GAELIC Governing Board recognised the importance of the survey findings, and recommended that a thorough investigation be undertaken, to

- 1.1 Assess the Millennium system functionality being used in the institutions, identify problem areas, and suggest ways of overcoming different levels of usage. The areas to be assessed included:
  - 1.1.1 Servers.
  - 1.1.2 Workstations.
  - 1.1.3 Modules and/or functionality of the system not used by the library, used incorrectly, or not currently available.
  - 1.1.4 Processes.
  - 1.1.5 Connectivity and networks.
  - 1.1.6 Level of staff expertise in using the system.
  - 1.1.7 Level of expertise of the Millennium site coordinator or system administrator in each library.
  - 1.1.8 Problems resulting from the mergers.
  - 1.1.9 Training needs.
  - 1.1.10 Level of support available from the University's ICT Department.
- 1.2 Benchmark the use of Millennium against other libraries and consortia in South Africa and abroad, both as a gap analysis and for supporting the digital library environment.
- 1.3 Assess the current cost and return on investment of running and supporting the Millennium system at each institution, and the problems encountered.
- 1.4 Investigate new models for the sharing of servers and identifying the advantages or disadvantages of each model.
- 1.5 Consider initiatives needed within GAELIC in order to address issues and resolve problems.
- 1.6 Produce a comprehensive report detailing the findings of the investigation and making recommendations on future strategy.

## **2. Methodology**

### **2.1 GAELIC System Survey**

In order to gain a better understanding of the different levels of support and use of the Millennium system as well as the problems experienced in the GAELIC libraries, the project team conducted a survey in which a questionnaire was sent to 11 GAELIC libraries, including the 2 new GAELIC members, University of Namibia and University of Botswana.

The questionnaire was divided into 5 sections:

- 2.1.1. Section 1 sought information about the Millennium system and infrastructure.
- 2.1.2. Section 2 dealt with questions about the existing library system support structure.

- 2.1.3. Section 3 included questions about competencies and training required to use the library system.
- 2.1.4. Section 4 covered system usage and the available functionality
- 2.1.5. Section 5 focused on the Library and its staff relationship and experience with the system.

All the libraries completed the questionnaire and after processing the feedback, the project team analysed the results and compiled a report.

The survey results provided the project team with sufficient information to identify the areas to be explored further during the site visits in order to understand the causes of the differences and problems experienced by the libraries and how to address these and other problem areas.

## **2.2 Site visits to GAELIC libraries**

The survey was followed by site visits to all the GAELIC libraries in order to discuss various aspects of the Millennium system with a management group from the Library, as well as with a group of staff members representing the users of the system.

The discussions during the site visits focused on the following:

- 2.2.1 Library system support structure.
- 2.2.2 Site coordinator and system administrator roles and responsibilities.
- 2.2.3 Ownership of processes.
- 2.2.4 Training in the use of the system.
- 2.2.5 Relationships with stakeholders with a role in the support of the library system.
- 2.2.6 Costs of running and maintaining the system.
- 2.2.7 Budgeting and planning for software, hardware, network infrastructure and connectivity.

Some additional issues were also addressed during the discussions, namely:

- 2.2.8 Suggestions on how problem areas could be addressed.
- 2.2.9 Merger challenges and benefits.
- 2.2.10 Role of GAELIC.
- 2.2.11 Readiness for the challenges of the digital environment.

An individual report for each of the 13 sites visited was compiled.

## **2.3 Literature survey**

Specific subject areas were identified to research and explore in the course of the investigation, including library consortia, new developments in academic libraries, technology planning, IT support, managing a systems office, technology training, process ownership, corporate culture, benchmarking, open source software for libraries and the cost of running a library system.

The literature study provided the project team with a better understanding of the problem areas identified during the investigation. The literature survey was extended all through the

investigation because new issues were identified and it resulted in a useful list of resources consulted by the project team. The literature survey is available from the Project Team.

### **3. Analysis of findings**

#### **3.1 GAELIC System Survey**

After analysing the results of the questionnaire the project team concluded that

- 3.1.1 The GAELIC libraries are not all on the same software release and some libraries are lagging far behind with their releases. As soon as a library lags behind with the latest release, they will not have the benefit of using the new or enhanced functionality that becomes available with each release. A variety of reasons for falling behind were given which were discussed in more detail during the site visits.
- 3.1.2 There are problem areas in the existing system support structure at some of the libraries, for example no formal support structure, no full time dedicated system administrator, poor relationships with the University ICT, and the relationship with Innovative needing to be improved.
- 3.1.3 Most of the libraries have structures in place to train staff in the use of the system, although most of the libraries indicated that they required training from GAELIC in the use of various features of the system.
- 3.1.4 The libraries have not fully realised the usefulness of the various resources available for support, troubleshooting, problem solving, creating an awareness of the various features of the system for example CSDirect documentation, IUG listserv and archive and the IUG Clearinghouse.
- 3.1.5 The libraries do not use all the available functionality for example Collection development and Course reserve features. Not all the libraries purchased additional products (functionality) and some still have the basic system. The basic system is continually enhanced with every new release. New functionalities are available without additional costs. Many libraries do not have formal procedures in place to create awareness among their users of the new system functionalities.
- 3.1.6 The formal planning and budgeting according to the library's strategic goals and process changes/developments for new products are neglected in some of the libraries.
- 3.1.7 Four libraries indicated that they do not have any problems or difficulties; according to them the system operates very well. Others identified the following as problems or difficulties:
  - 3.1.7.1 Lack of skilled staff and time constraints which do not allow staff to focus on development tasks.
  - 3.1.7.2 Lack of appropriate infrastructure e.g. bandwidth.

- 3.1.7.3 Relationship problems with the University ICT.
  - 3.1.7.4 Lack of commitment and willingness to take ownership of modules and functions.
  - 3.1.7.5 Integration with other University systems.
  - 3.1.7.6 Collaboration between the various sections in the library.
  - 3.1.7.7 The challenge of keeping abreast of regular new releases and enhancements.
  - 3.1.7.8 Support from Innovative is a problem for some of the libraries.
  - 3.1.7.9 Costs of running and maintaining the Millennium system are a concern.
- 3.1.8 All the responses were positive on the question about the effect of the Millennium system on the operations of the library. The libraries supplied specific examples to illustrate the positive impact on library processes and the value added to their services.
- 3.1.9 The mergers created some challenges for all the libraries who were involved in the merger process over the past few years. After the initial difficulties of the merger most of the libraries are experiencing some benefits as well for example access to more skilled staff and opportunity to review the organisational structures in order to address problem areas of the past.

## **3.2 Site visits to GAELIC libraries**

Most of the problems identified in the system survey were confirmed during the site visits to the GAELIC libraries and their impact became clearer. The Millennium system itself is not the problem; the following areas of concern were discussed in more detail:

### **3.2.1 Library system support structure**

Some of the libraries do not have a dedicated skilled person to perform library system support tasks and have an informal library support structure and procedures. In these cases the libraries find it difficult to support and develop the Millennium system to meet the library's needs. They find it difficult to keep up with the latest releases and the system is not optimally used.

### **3.2.2 Site coordinator and system administrator roles and responsibilities**

The site coordinator and system administrator roles are not always clearly defined and the emphasis is in most cases on the system administrator role – the technical tasks. Important tasks like coordinating and communicating changes made to the system, addressing the library's requirements and the users' needs regarding the system, building relationships with the University ICT Department and Innovative, monitoring the level of services received from University ICT Department, Innovative and other service providers are neglected or do not receive the level of attention as required. The impact of neglecting the coordinator role is a Millennium system that does not fulfil the library's needs, and support from University ICT Department and Innovative will not meet the library's expectations and needs.

### **3.2.3 Ownership of library processes**

There is a general lack of ownership of library processes and understanding of what that means. There is a passive attitude among the library staff users of the system. The library staff is not committed and willing to take ownership of the Millennium system modules and functions.

They do not acknowledge their direct role in exploring available functionality, developing and promoting the optimal use of the system. If this is the case, the development of expertise in the use of the Millennium system within a broader staff group will be limited and all the available system functionality will not be explored to improve processes and services.

#### **3.2.4 Training in the use of the system**

There is a general perception that the library system training is the sole responsibility of the library system administrator. Training should be a shared responsibility with a core group of expert users of the library system in the library. If the system administrator carries the responsibility for all the system training, if the system administrator is absent for a long period or suddenly leaves the services of the library, then all system training could come to a standstill until another staff member takes over the training responsibility. The Millennium system is complex and the functionality is extended with each release therefore the project team is of the opinion is that it is impossible to expect the system administrator to be responsible for all system training.

There is also a perception that Innovative should be more involved in providing training to the individual libraries. Innovative will provide training to individual libraries when new products are purchased or if a group of libraries arrange for training by Innovative at a cost. Innovative and the system administrator have a limited role in the library system training.

When it comes to the actual and ongoing training in usage of the Millennium system within the processes, it is the responsibility of the expert users of the process to train the other users of the system. They should be acknowledged for performing this role.

#### **3.2.5 Relationships with various stakeholders who have a role in supporting the library system**

The building of relationships with various stakeholders is neglected by some of the libraries. The importance of this task and the understanding that it is an ongoing task is not fully grasped by the libraries. If good relations are not maintained with the University ICT Department, Innovative, etc., the library will not receive the level of services it expects. These relations should be maintained on both strategic and operational level and specific staff members should be responsible for these relations.

#### **3.2.6 Costs of running and maintaining the system**

The libraries indicated that costs are a concern but the costs related to the library system are not really assessed by the library management in terms of cost of ownership, hidden costs and a formal calculation of return on investment (ROI). If an individual library does not take into account the process improvements and new and enhanced services, the costs of running and maintaining the system may be viewed as too high. The non-use of the available and relevant functionality, repeated training of library staff in basic system functionality and lagging behind the latest software releases all contribute to the hidden costs and should be kept to the minimum.

### 3.2.7 Budgeting and planning for software, hardware, network infrastructure and connectivity

No formal regular technology planning is done by some of the libraries to ensure that development takes place and to ensure that funding is available for the upgrading of hardware and software when required. Ongoing technological developments require timely planning for the expansion of the Millennium system, the upgrade or replacement of hardware, upgrade of the network infrastructure and bandwidth. If this planning and budgeting is not done the development of the system and the library services will be affected.

### 3.2.8 Assessment of the GAELIC libraries in terms of managing and supporting of the Millennium system

The project team assessed the GAELIC libraries in terms of managing and supporting the Millennium system. This assessment indicates how many GAELIC libraries experience problems and how many libraries are doing well with each element. This assessment should be repeated in a year or two in order to see how many libraries have made progress in addressing the problem areas.

<u>Criteria</u>	<u>Rating</u>		
	Unsatisfactory	Satisfactory	Good
1. Formal library system support structure in place: <ul style="list-style-type: none"> <li>• Skilled Library System Administrators</li> <li>• Desktop support from within the Library or from University ICT Department</li> <li>• Network and connectivity infrastructure support from University ICT Department</li> <li>• Formal problem reporting system</li> </ul>	f, g, k	a, e, h, j, m	b, c, d, i, l
2. Site coordinator and system administrator roles and responsibilities clearly defined	a, b, f, g, k	e, h, l, m	c, d, i, j
3. Regular assessment of library processes: <ul style="list-style-type: none"> <li>• Use of all available functionality</li> <li>• Consider new functionality that becomes available with each new release or product</li> <li>• Review and improve workflow</li> <li>• Use of all available documentation, user manual, tutorials, etc.</li> <li>• Identify business needs and requirements</li> </ul>	a, f, g, h, k, m	d, e, l	B, c, i, j
4. Responsibility for training and the identification of training needs clearly defined	a, g, k	b, d, e, h, f, m	c, i, j, l

5. Status of relationships with <ul style="list-style-type: none"> <li>• Innovative</li> <li>• University ICT Department</li> </ul>	h, k	f, g, m	a, b, c, d, e, i, j, l
6. Assessment of costs in running and maintaining the system is done: <ul style="list-style-type: none"> <li>• Return on investment</li> <li>• Cost of ownership</li> <li>• Hidden costs</li> </ul>	a, g, h, k, m	c, d, e, f, j, l	b, i
7. Annual planning and budgeting done for <ul style="list-style-type: none"> <li>• Latest software release</li> <li>• Hardware upgrade</li> <li>• Purchasing of new software products</li> <li>• Maintenance fee for hardware and software</li> <li>• Upgrading network capacity (bandwidth)</li> <li>• Workstation capacity</li> <li>• Human resources (capacity planning and building)</li> </ul>	a, f, g, h, k, m	d, j	b, c, e, i, l
8. Active participation and involvement in User Groups activities: <ul style="list-style-type: none"> <li>• GAELIC</li> <li>• National (IUG:SA)</li> <li>• International (IUG membership)</li> </ul>	a, g, h, k	c, d, f, l, m	b, e, i, j

On average, a third of the GAELIC libraries are able to support and develop their Millennium systems regardless of problems such as lack of sufficient technical staff, workload and limited funds available for the library system. Another third of the GAELIC libraries experience real difficulties and the areas of concern will have to be dealt with before they will be able to make optimal use of the Millennium system and experience the full benefits in their library processes and services.

The challenge for the GAELIC libraries will be for those that have been rated as good to maintain that level and for others to improve on their current level.

## **Part 2: Investigating other SA and overseas consortia**

### **4. Site visits to SEALS libraries**

The project team also visited the 4 SEALS libraries, namely Nelson Mandela Metropolitan University, Rhodes University, University of Fort Hare and 3 of Walter Sisulu University's campuses (Mthatha, Ibika, Potsdam) as part of the investigation. The visit to Rhodes included a discussion with the University IT Director; Rhodes is also responsible for hosting and maintaining the SEALS central server.

The visit to the SEALS libraries served 2 purposes, namely

- to benchmark the GAELIC libraries against the SEALS libraries in terms of supporting and using the Millennium system;
- to gain more insight into a library consortium sharing a central server for their Millennium system.

The project team followed the same approach as with the GAELIC libraries: to discuss various aspects of the Millennium system with a management group from the Library, as well as with a group of staff members representing the users of the system.

Individual reports for each of the 6 sites visited were compiled.

The discussions with the SEALS libraries also addressed their experience of sharing a central server. The project team wanted to establish whether their use and support of the Millennium system differed from that of the GAELIC libraries that have a decentralised system model.

The project team concluded after analysing the findings from the SEALS visits, that all the problem areas identified at the GAELIC libraries are applicable to the SEALS libraries as well even though the system model is different. The sharing of a central server brings its own challenges and requires the same prerequisites for a system support structure, clarification of roles, training, ownership of processes, relationships with stakeholders, planning, budgeting and costs.

Although all the SEALS libraries are on the latest software release and all of them have access to the same functionality and additional products for example Electronic Course Reserves, Metafind (federated search engine) and Electronic Resource Management (ERM), some libraries still use the basic functionality only. There are therefore also varying levels in the use and support of the system. The libraries do not all operate on the same level. The scheduling of training in new products or functionality is also a challenge. The libraries are not all ready for the training at the same time, for example when they arranged the ERM WebEx training with Innovative and a follow-up training workshop for the implementation of ERM, two libraries were ready while the other two were not.

## **5. Discussions with CALICO**

The project team had also the opportunity to discuss the experience in a shared server environment with representatives from CALICO.

5.1 The following issues were highlighted by the representatives from CALICO regarding the sharing of a server:

5.1.1 Consortium intention – regional resource sharing, economies of scale, redress and the economic development of a region.

5.1.2 Level of discomfort – relinquishing control, handing over responsibility and a move from the specific to the general.

- 5.1.3 Practical implications – sharing operational and IT functions, shared server for the integrated library system, shared server for 2 applications, namely SFX and MetaLib.
  - 5.1.4 Concerns and requirements – specialised IT needs not supported and sometimes resisted, range of support, specialised knowledge of the library environment lacking.
  - 5.1.5 The findings were good in terms of cost-benefits – financial advantages, sharing of knowledge, sharing system expertise and reducing duplication.
  - 5.1.6 Business approaches towards service and support were suggested such as service level agreements, customer relationship management, regular service meetings and communication.
- 5.2 The following suggestions and recommendations were made by CALICO to GAELIC:
- 5.2.1 GAELIC should consider the benefits, costs and individual member requirements of sharing a central system, and should consider what was common before looking at what was different.
  - 5.2.2 Libraries have different strategic plans and priorities, and collaborations could be formed between individual institutions with similar visions. The integrated library system should be in the background and should not be the primary focus of libraries.
  - 5.2.3 The issue of a shared versus a decentralised server might not be the answer to the problem. GAELIC should also consider the user's perspective and look beyond traditional library software.

## **6. Site visits to overseas library consortia and individual libraries**

The project team visited overseas library consortia in Spain and Estonia during April 2008.

- 6.1 These library consortia were selected because they share some similarities with GAELIC:
  - 6.1.1 All the libraries are using the Millennium system.
  - 6.1.2 Impact of past political history on the libraries and their parent institutions.
  - 6.1.3 English is not their first language.
  - 6.1.4 Distance from Innovative's Head Office.
  - 6.1.5 Distance between sites.
  - 6.1.6 Libraries of different sizes.
- 6.2 The visit to the overseas library consortia served 2 purposes, namely:
  - 6.2.1 to benchmark the GAELIC libraries against the overseas libraries in terms of supporting and using the Millennium system;
  - 6.2.2 to gain more insight into an overseas library consortium sharing a Millennium server and an overseas library consortium based on a decentralised server model
- 6.3 The following consortia and libraries were visited:

- 6.3.1 Spanish consortium (Consortio Biblioteca Universitarias de Andalucia (CBUA)) has 10 member libraries and is based on a decentralised server model. The following libraries were visited and discussions were held with representatives from the University of Seville, Universidad Pablo de Olavide, as well as the Technical Director of CBUA, who is also the Library Director of the University of Cadiz.
- 6.3.2 Biblioteca de la Universidad Complutense de Madrid is the only member of a Madrid based library consortium using the Millennium system.
- 6.3.3 Estonian consortium (Estonian Libraries Network Consortium (ELNET)) has 13 member libraries and is based on a shared server model. The following libraries were visited and discussions were held with representatives from ELNET, National Library of Estonia, Tallinn University of Technology and Estonia Academy of Music and Theatre.

The project team could not follow the same approach they used with the GAELIC libraries, to discuss various aspects of the Millennium system with a management group from the Library as well as a group of staff members representing the users of the system, due to the inability of library staff to converse in English. The discussions at the Spanish sites were held with one or two representatives from the Library's management with the assistance of a translator/interpreter. The discussions at the Estonian libraries were held in English and with a broader group of representatives from the management and some expert users.

The discussions with the ELNET libraries focused on their experiences of sharing a Millennium server, and how their use and support of the Millennium system differed from the GAELIC libraries with their decentralised system model. The discussions with the CBUA libraries served as an opportunity to compare their experience in a decentralised server environment and how they differ from GAELIC.

Individual reports for each of the sites visited were compiled.

- 6.4 There are differences but also similarities between GAELIC and the overseas consortia:
  - 6.4.1 The main differences are that the consortia do not employ full-time staff members; the libraries have dedicated system support staff and sufficient technical skilled staff is available either at the parent institution or at the Library; providing training at consortium level is not an issue because they believe an individual library should be responsible for its own training needs; no network and connectivity problems; regular formal planning and budgeting is done by the libraries; they negotiate the joint purchasing of Innovative products and services and additional funding for projects is requested from the State or Provincial government. In general the educational, cultural and socio-economic context of the overseas consortia is different to the South African consortia.
  - 6.4.2 The main similarities are that the libraries generally described their relationship with the universities' ICT Departments as challenging; none of the libraries have done cost benefit studies; they believe the system is expensive but that it fulfils their needs; the

libraries do not use the system at the same level, but this is not a problem for them because they believe each library has its own needs and context in which they operate.

### **Part 3: Benchmarking**

#### **7. Benchmarking GAELIC against SEALS and overseas consortia and libraries**

GAELIC was benchmarked against investigated consortia by analysing the findings based on the same criteria used for the site visits.

	<b><u>GAELIC</u></b>	<b><u>SEALS</u></b>	<b><u>CBUA</u></b>	<b><u>ELNET</u></b>
<b><u>General profile of the consortia</u></b>	Regional consortium; 11 Academic libraries with a number of Campus/Branch libraries; Participates in national ILL system; Participates in national cooperative cataloguing via WorldCat; Virtual joint catalogue on WorldCat; Participates in national licensing agreements for access to electronic databases	Regional consortium; 4 Academic libraries with a number of Campus/Branch libraries; Participates in national ILL system; Participates in national cooperative cataloguing via WorldCat; Virtual joint catalogue on WorldCat, as well as a physical joint catalogue; Participates in national licensing agreements for access to electronic databases	Regional consortium; 10 Academic libraries with a number of Campus/Branch libraries; No national ILL system, but busy implementing INNReach for document delivery purposes and for this purpose a joint catalogue will be established for CBUA; No national cooperative cataloguing; No national licensing agreements, but CBUA (regional) agreements for access to electronic databases	National consortium; 13 Libraries – national, academic, special and public libraries; No national ILL system; No national cooperative cataloguing; 2 Physical joint catalogues and uses Partner software to search across the 2 catalogues; No national licensing agreements, but ELNET agreements for access to electronic databases
<b><u>Criteria</u></b>				
<b><u>Consortium level</u></b>				
	<b><u>GAELIC</u></b>	<b><u>SEALS</u></b>	<b><u>CBUA</u></b>	<b><u>ELNET</u></b>
<b><u>Library system support structure and mechanisms</u></b>	No formal support structure. The focus group is an information sharing structure.	Formal support structures for the system do exist. Active listserv.	No formal support structure but projects are identified for new system initiatives. Well-developed intranet.	Formal support structures for the system exist. Specific workgroups are in place for specific system-related

	Inactive listserv.			activities. Active distribution list and SKYPE use for meetings.
<b>Conclusion / Best practice:</b>	A formal system support structure and communication mechanisms are required for a shared server environment; this is not a requirement for GAELIC in a decentralised environment, except when it is expected that GAELIC should provide formal system support and coordination.			
	<b><u>GAELIC</u></b>	<b><u>SEALS</u></b>	<b><u>CBUA</u></b>	<b><u>ELNET</u></b>
<b>Costs</b>	No direct costs for system support staff, new products, hardware or software maintenance.  No shared costs.	SEALS budget for all consortium-related expenses and the costs are calculated according to FTEs.  The budget includes items such as the hosting fee, annual maintenance fee, salary of the system manager and new products.	Model of cost-sharing for joint purchases and projects which are funded by the Andalucia Government.	Seek additional funding from state departments. Neither hosting fee nor salaries for development and database management are paid.
<b>Conclusion / Best practice:</b>	When costs are shared within a consortium, regardless of a shared or decentralized server environment, a formal cost model should be implemented for planning and budgeting purposes.  GAELIC does not have any direct system-related costs nor does the consortium explore joint opportunities for purchase of new products or of new developments. GAELIC does not receive any additional funding from the government.			
	<b><u>GAELIC</u></b>	<b><u>SEALS</u></b>	<b><u>CBUA</u></b>	<b><u>ELNET</u></b>
<b>Planning and budgeting</b>	No formal system-related planning and budgeting has been done.	Hosting service plans for upgrading hardware and software.	No formal planning or budgeting for the library system, but for joint project proposals when the need arises.	Development plan is the formal outcome of an annual planning and budgeting process.
<b>Conclusion / Best practice:</b>	Planning and budgeting are not as crucial in a decentralised server environment as in a shared environment.			

	As soon as GAELIC wants to consider joint purchases of products, more coordinated planning and budgeting should take place at consortium level.			
	<b><u>GAELIC</u></b>	<b><u>SEALS</u></b>	<b><u>CBUA</u></b>	<b><u>ELNET</u></b>
<b>Training</b>	Joint training workshops are arranged and joint training sessions are negotiated with Innovative.	No formal coordinated training sessions are arranged.	Training is identified as one of CBUA's priority programmes.	Shared training is arranged as needed.
<b>Conclusion / Best practice:</b>	Joint training arranged with Innovative is cost efficient. Joint training workshops are one of the benefits of GAELIC membership for the ordinary staff member.			
	<b><u>GAELIC</u></b>	<b><u>SEALS</u></b>	<b><u>CBUA</u></b>	<b><u>ELNET</u></b>
<b>Relationships</b>	Informal relationships amongst member libraries but no formal relationship with Innovative for system support.	Agreement amongst member libraries and a formal relationship with the hosting service. The SEALS system manager has a direct relationship with Innovative.	No formal relationship amongst member libraries.  In the case of joint projects, the consortium will act on behalf of the member libraries and negotiate with Innovative.	Formal agreements in place amongst member libraries and the consortium's development manager and database manager are responsible for the relationship with Innovative.
<b>Conclusion / Best practice:</b>	The formalisation of relationships through agreements for system support is not a requirement within a decentralised environment.  A project-based approach for new system initiatives should be followed when needs are identified.			
<b><u>Individual libraries level</u></b>				
	<b><u>GAELIC</u></b>	<b><u>SEALS</u></b>	<b><u>CBUA</u></b>	<b><u>ELNET</u></b>
<b>Library system support structure and mechanisms</b>	Some libraries lack the crucial elements of a system support structure.	Some libraries lack the crucial elements of a system support structure.	Well defined system support structures in place.	Well defined system support structures in place.

<p><b>Conclusion / Best practice:</b></p>	<p>At least one dedicated and skilled system administrator is required to support the library system in both a shared and decentralised server environment.</p> <p>There are problem areas in the existing system support structure at some of the South African libraries, decentralised and shared environment, for example no formal support structure and no full time dedicated system administrator. Libraries struggle to develop and support the Millennium system if a formal support structure is not in place.</p> <p>The lack of sufficiently skilled technical staff at institutions in South Africa hampers the progress of new initiatives.</p>			
<p><b>Regular assessment of the library processes</b></p>	<p><b><u>Gaelic</u></b></p> <p>Releases differ.</p> <p>A general lack of understanding of the ownership of processes and this contributes to an irregular review workflow and optimal use of available functionality.</p> <p>Resources not fully used because they find them difficult to use.</p>	<p><b><u>SEALS</u></b></p> <p>Same release.</p> <p>A general lack of understanding of the ownership of processes and this contributes to an irregular review workflow and optimal use of available functionality.</p> <p>Resources not fully used because they find them difficult to use.</p>	<p><b><u>CBUA</u></b></p> <p>Releases differ.</p> <p>Some libraries do review their processes regularly.</p> <p>Use of available functionalities varies.</p> <p>They find it difficult to use the formal English Innovative resources therefore they compile Spanish manuals and documentation.</p>	<p><b><u>ELNET</u></b></p> <p>Same release.</p> <p>Initially new workflows were established and processes are regularly reviewed.</p> <p>Use of available functionalities varies.</p> <p>Various resources are used although these are not in Estonian.</p>
<p><b>Conclusion / Best practice:</b></p>	<p>Libraries should all be on the latest release and use the system optimally according to their needs.</p> <p>Libraries within a consortium can use the system on different levels due to different and unique needs, availability of expertise or lack of commitment.</p> <p>Library process ownership is acknowledged as an important facet of the optimal use of the system. System support staff cannot take ownership of library processes; the responsibility rather lies with the functional areas in the library.</p> <p>The development and use of the system is a shared responsibility between the system staff and the functional areas.</p>			

	<u>GAELIC</u>	<u>SEALS</u>	<u>CBUA</u>	<u>ELNET</u>
<b>Training in the use of the system</b>	<p>Varies at GAELIC libraries. In some libraries it is the responsibility of the system support staff and in others the functional experts.</p> <p>Individual libraries arrange their own training.</p> <p>More training should be provided by Innovative.</p>	<p>Individual libraries arrange their own training.</p> <p>More training should be provided by Innovative.</p>	<p>Varies at libraries. In some libraries it is the responsibility of the system support staff and in others the functional experts.</p> <p>Training is re-packaged by Innovative for the Spanish sites.</p>	<p>Responsibility of training lies with each library.</p> <p>Development of expertise and skills is encouraged.</p> <p>Specialists serve as backup for the System Manager</p> <p>Share information between library and consortium.</p> <p>Innovative training is too expensive, so they look at opportunities at IUGs – US, UK, etc.</p>
<b>Conclusion / Best practice:</b>	<p>Training is not an issue for the libraries of the overseas consortia. The individual libraries take responsibility for training their own staff in using the system.</p> <p>Define the type of training needed to use the system in order to identify the best training provider.</p> <p>In-service training of individual staff in the use of the system by functional experts is the responsibility of an individual library.</p>			
	<u>GAELIC</u>	<u>SEALS</u>	<u>CBUA</u>	<u>ELNET</u>
<b>Status of relationships amongst various stakeholders</b>	<p>Individual libraries have a direct relationship with Innovative. Some reported a poor relationship with their ICT department.</p>	<p>Individual libraries don't have a direct relationship with Innovative. They must have a direct relationship with their ICT, but some libraries reported it as poor.</p>	<p>Individual libraries direct relationship with Innovative. Direct relationship with ICT Department is challenging.</p>	<p>Individual libraries don't have a direct relationship with Innovative. They must have a direct relationship with their ICT Departments and reported it as generally good.</p>
<b>Conclusion /</b>	Relationships are more complex in a shared environment than in a			

<b>Best practice:</b>	decentralised environment.  All environments need ongoing management of relationships with all the stakeholders and these responsibilities lie with the library management and the system support staff.			
	<b><u>GALIC</u></b>	<b><u>SEALS</u></b>	<b><u>CBUA</u></b>	<b><u>ELNET</u></b>
<b>Cost of running and maintaining the system</b>	Each library is responsible for all costs related to the support and development of their Millennium system.  Exchange rate implications due to US dollar price quotations and invoices.	Hosting fee and annual costs based on FTE's.	Each library is responsible for all costs related to the support and development of their Millennium system.  No exchange rate implications due to EURO price quotations and invoices.  Additional products are carefully considered in the light of increasing the annual maintenance fee.	Upgrading of hardware should be considered with each new software release.  Membership fees for administration and joint consortium projects.  Seek additional funding from state departments for projects.
<b>Conclusion / Best practice:</b>	Explore joint purchases and cost sharing possibilities to save on costs. Using the system optimally reduces hidden costs.  None of the libraries indicated that they have done a ROI study. Lessons to learn from overseas consortia: <ul style="list-style-type: none"> <li>• Use opportunities for joint negotiation for new products and developments</li> <li>• Proposals for funding from the government in addition to foreign and other donors</li> </ul>			
	<b><u>GALIC</u></b>	<b><u>SEALS</u></b>	<b><u>CBUA</u></b>	<b><u>ELNET</u></b>
<b>Annual budgeting and planning for the Millennium system</b>	Formal budgeting and planning are neglected in some of the libraries.	Formal budgeting and planning are neglected in some of the libraries.	Each individual library budgets and plans for its own needs.	Each individual library budgets and plans for its own needs.  ELNET needs to be informed of individual purchases.
<b>Conclusion /</b>	Proper budgeting and planning for the Millennium system leads to efficient			

<b>Best practice:</b>	support and development of the system.			
	<b><u>GALIC</u></b>	<b><u>SEALS</u></b>	<b><u>CBUA</u></b>	<b><u>ELNET</u></b>
<b>Active participation and involvement in User Groups</b>	Some libraries are involved in the IUG:SA  Some libraries are members of the IUG and are active users of the resources available.	Some libraries are involved in the IUG:SA  Some libraries are active users of the resources available.	Member libraries are members of the Spanish User Group, but this is not an active user group. No active involvement in IUG due to the language issue.	Attend Nordic (including Finland, Sweden, Estonia) and European IUG meetings.  IUG members. Regular IUG attendance by at least 4/5 members.
<b>Conclusion / Best practice:</b>	<p>A user group should communicate specific needs and user requirements from the member libraries to Innovative, because Innovative prefers structured and formal feedback from user groups.</p> <p>There is real value to a structured user group where members (library management and staff) are actively involved in sharing information and knowledge and in contact with Innovative and other libraries.</p>			

## 8. Comparison between the shared and decentralised server models

- 8.1 The project team identified specific issues for discussion with representatives from library consortia sharing a Millennium server or with decentralized servers, namely:
- 8.1.1 Management of shared or decentralised servers: roles and responsibilities at consortium and local level.
  - 8.1.2 How decisions should be made about any aspect of the system at consortium and local level.
  - 8.1.3 The relationship between the member institutions should be equal and collaborative.
  - 8.1.4 The responsibility of the relationship with the system vendor could be either with the consortium and/or the individual library.
  - 8.1.5 A formal agreement should be in place between member libraries to address the rights and obligations of the members in terms of the Millennium system.
  - 8.1.6 The sharing of costs between the member institutions in terms of the Millennium system.
  - 8.1.7 The level of skills required for the staff who supports the Millennium system at the consortium level and the individual library.
  - 8.1.8 The major differences between the member libraries in the use of the system and expectations of what the system can do for them.
  - 8.1.9 How the consortium and individual libraries approach training in new functionality and ongoing training needs.
  - 8.1.10 What the major benefits and challenges of the shared and decentralised server models are.

The project team discussed these issues with representatives from CALICO and during the site visits to GAELIC and SEALS libraries, as well as with the overseas consortia and libraries. Benefits and challenges were identified during these discussions.

## 8.2 Main benefits of the shared and decentralised server model

<b><u>Shared server model</u></b>	<b><u>Decentralised server model</u></b>
<p><b>General benefits for an individual library in a consortium</b></p> <ul style="list-style-type: none"> <li>Consortium jointly investigate standards and best practices</li> <li>Share state and donor funding</li> <li>Share expertise and resources</li> <li>Shared vendor training</li> <li>Benefits are not just financial</li> <li>Benefits for the smaller libraries are greater</li> <li>Workflow improved and closer integration between processes in general independent of model</li> </ul> <p><b>Shared server benefits</b></p> <ul style="list-style-type: none"> <li>Sharing of costs</li> <li>Sharing of technical expertise, and IT support</li> <li>Support from the server hosting service. One person looking after the server at one location</li> <li>Shared bibliographic data and joint catalogue</li> <li>Simultaneous access to new modules and products</li> <li>Reduce duplication in terms of installing a software release only once, maintaining only one server, etc.</li> <li>Bandwidth was increased between institutions and the central server</li> <li>Merging of institutions – reduced financial impact because only some data files need to be merged, not the whole system</li> </ul>	<p><b>General benefits for an individual library in a consortium</b></p> <ul style="list-style-type: none"> <li>Joint consortium purchases</li> <li>Jointly consider enhancement requests</li> <li>Joint training workshops</li> <li>Share expertise and knowledge</li> <li>Share funding from state/government and donors</li> <li>Environment creates opportunities to share</li> <li>Joint negotiations with Innovative for new purchases and services</li> </ul> <p><b>Decentralised server benefits</b></p> <ul style="list-style-type: none"> <li>Member libraries able to focus on the libraries and end-users unique needs</li> <li>Each library has control over every aspect of the system</li> <li>Member libraries have a direct relationship with Innovative</li> <li>Member libraries only have to maintain a relationship with University ICT Department</li> <li>Planning and budgeting is less complex</li> <li>Communication and decision making is less complex</li> </ul>

### 8.3 Main challenges of the shared and decentralised server model

<b><u>Shared server model</u></b>	<b><u>Decentralised server model</u></b>
<p><b>General challenges for an individual library in a consortium</b></p> <p>Larger libraries contribute more Distance between member libraries</p> <p><b>Shared server challenges</b></p> <p>Managing of shared files and records Adherence to cataloguing rules and common practices Relinquish control – handing over responsibility to an external service provider Move from specific/unique needs to general/common needs Decision making is complex Various levels of communication Building of relationships with different stakeholders is complex Libraries are not always ready at the same time to implement a new product System configuration and customisation to suit a library's needs New product suitability and readiness for a shared server environment A system administrator is required per institution</p>	<p><b>General challenges for an individual library in a consortium</b></p> <p>Involvement and participation in consortium activities are based on voluntarism – staff time and work load Libraries are not always ready at the same time to negotiate for new products and training or to implement a new product Smaller member libraries more dependant on support from the consortium and larger libraries Distance between member libraries</p> <p><b>Decentralised server challenges</b></p> <p>Coordination of the planning and budgeting for the system Relationships with stakeholders is just as important in the shared server environment as in a decentralised server environment Maintain a common focus in consortium</p>

The project team came to the conclusion that both shared and decentralised server models have benefits as well as challenges to consider. The one model is not necessarily better than the other. The choice of the most appropriate model for a library consortium depends on the context when the decision is made and the library consortium's intention, namely sharing purchase costs, creating a collaborative environment, sharing expertise, economies of scale, redress and the economic development of the region. The project team identified the same problem areas at the GAELIC and SEALS libraries although the one is using the Millennium system in a shared server environment and the other in a decentralised server environment. The problems are related more to organisational issues than the technology used.

## **Part 4: Recommendations and the way forward**

### **9 Recommendations**

The investigation confirmed that the GAELIC libraries do not use the Millennium system at the same level, all the libraries are not all on the same software release at the same time, the libraries do not all have the same products installed on their servers and there are differences in the existing system support structures and mechanisms. Regardless of these difficulties some of the libraries are able to support and develop their systems and to cope with problems such as lack of sufficient technical staff, workload and lack of funds. The Millennium system itself is not the problem because all the libraries confirmed that the Millennium system had a positive impact on their library processes and services.

No specific recommendation will be made to change from the decentralised server model to a shared server model for GAELIC, because the project team could not find any proof that to change from a decentralised server model to a shared server model would resolve the problems identified during the investigation.

The recommendations are based on the findings of the system survey, site visits and literature survey. The project team recommends that each GAELIC library consider the following 6 elements as a minimum requirement in order to ensure that the Millennium system is supported and developed according to the library's needs and to ensure optimal use and return on investment.

#### **9.1 Library system support structure**

A formal Library system support structure should consist of the following elements:

- 9.1.1 Dedicated library system support posts for the roles of site coordinator and system administrator performed by library staff members.
- 9.1.2 Desktop support provided by the Library itself or by the University ICT Department.
- 9.1.3 Server support provided by Library itself or the University ICT Department.
- 9.1.4 Network and connectivity support provided by the University ICT Department.
- 9.1.5 Support mechanisms for communication/consultation, advice and sharing information purposes such as:
  - 9.1.5.1 Formal problem reporting and management system.
  - 9.1.5.2 Formal internal library system user group.
  - 9.1.5.3 Participation in external user groups: consortium, national, international.
  - 9.1.5.4 Subscription to and participate in listserv discussions: consortium, national, international.
  - 9.1.5.5 Use of web-based documentation/resources/manuals.

## 9.2 Site coordinators and system administrator roles

It is highly recommended that a library should have at least one dedicated and skilled site coordinator and/or system administrator to support the Millennium system.

Consideration should be given to the difference between the site coordinator role as a relationship role and the system administrator role as a delivery and technical role.

These roles require different skills and focus and should be well understood. One job description may describe both roles. But the tasks for each of the roles should be clearly defined. Therefore the roles could be separate KPAs in the job description. The job incumbent would then be performance appraised on both roles.

### 9.2.1 Site coordinator (important role):

9.2.1.1 The site coordinator builds relationships with Innovative, Millennium system users, GAELIC and University ICT Department and the recommended skills required include:

- 9.2.1.1.1 Communication skills.
- 9.2.1.1.2 Ability to work with people at different levels (managerial and operational).
- 9.2.1.1.3 High level understanding of the library system, library processes and services, among others.

9.2.1.2 Responsibilities of the site coordinator may include the following

- 9.2.1.2.1 Manage calls logged with Innovative's helpdesk.
- 9.2.1.2.2 Manage access to CSDirect and other Innovative resources.
- 9.2.1.2.3 Disseminate all communication received from Innovative via the Innovative Mailing List and Innovative's Private Subscription List to the relevant staff in the library.
- 9.2.1.2.4 Maintain the Innovative Contact List.
- 9.2.1.2.5 Attend to users' needs and requirements regarding the library system for example system support, enhancement requests.
- 9.2.1.2.6 Coordinate all activities including training, implementation of products/ new functionality, new releases and updates and support of the library system.
- 9.2.1.2.7 Ensure timely communication regarding system changes, system availability, etc. to stakeholders.
- 9.2.1.2.8 Ensure that all system administration tasks are performed by the responsible staff members including system administrators, circulation and acquisitions staff, University ICT Department, etc.
- 9.2.1.2.9 Provide advice and guidance on the support of the library system.
- 9.2.1.2.10 Address the development of interfaces with other University systems for example HR, Finance and Student systems.
- 9.2.1.2.11 Liaise closely with the University ICT Department and/or Library IT who is responsible for hardware support, desktop support, network infrastructure and connectivity.
- 9.2.1.2.12 Represent the library and its interests on GAELIC structures and other structures regarding the Millennium system.

## **9.2.2 System administrator (urgent role):**

- 9.2.2.1 The system administrator delivers technical tasks – trouble shooting, first level technical/system support and development, and the recommended skills required are for example:
  - 9.2.2.1.1 Advanced System Access and Administration and basic library system training
  - 9.2.2.1.2 Web design skills.
  - 9.2.2.1.3 Basic understanding of network infrastructure.
  - 9.2.2.1.4 Knowledge and understanding of library processes and services, among others.

The fact that the system administrator performs support and development tasks should be acknowledged. If no time is available for development tasks, no new initiatives will be explored and implemented.

The core responsibilities of the system administrators should be library system or IT-related tasks. If this is not the case the support and development of the library system will be neglected.

A second staff member should be designated and trained to act as a back-up especially for the system administrator.

9.2.2.2 Responsibilities of the system administrator may include the following:

- 9.2.2.2.1 Provide technical support by trouble shooting system problems reported by the users
- 9.2.2.2.2 Provide general advice and guidance on the use of the library system.
- 9.2.2.2.3 Log calls with Innovative or University ICT Department if the problems have to be escalated for resolution.
- 9.2.2.2.4 Implement/activate new system functionality/products.
- 9.2.2.2.5 Implement changes to and customise the WebPAC.
- 9.2.2.2.6 Perform system administration tasks for example maintain system parameters, access to the system and monitor the performance of the system.
- 9.2.2.2.7 Install new releases and system updates.
- 9.2.2.2.8 Communicate new developments and changes, system availability, etc. to the library system users.
- 9.2.2.2.9 Work closely with the site coordinator, if the role is performed by another staff member. Two-way communication is vital between the site coordinator and system administrator.

## **9.3 Review and ownership of processes**

Library staff should be empowered and encouraged to take responsibility for the different library system modules and functionalities used within the relevant library processes. The review and ownership of processes should be defined in specific job descriptions. This means that the particular library staff should be actively involved in the implementation of changes and new functionality, explore new functionality, drive the process of implementation of new products or

functionality and other system related changes rather than the system support staff performing these roles. The library system support staff play only a technical support role.

Ownership of processes means responsibility and providing leadership for specific library processes.

9.3.1 The process owner is responsible for the ongoing review of library processes and identifies process problems in order to:

9.3.1.1 Improve workflow.

9.3.1.2 Ensure the ongoing development of expertise (not only one person but more than one) within each module or functional area of the system.

9.3.1.3 Identify incorrect use of the system and training needs.

9.3.1.4 Report occasions when the system does not function as expected.

9.3.1.5 Consider how new features in new releases or products can be applied and the impact they will have on the processes and services.

9.3.1.6 Consider opportunities to enhance library services through process improvement.

9.3.1.7 Be aware and stay aware of system possibilities and consider opportunities the system may present by studying available documentation, monitoring the IUG listserv and other listservs (create an awareness of how other users are using the system and the problems they experience); participation in listserv discussions is encouraged.

9.3.1.8 Staff core competencies (skills, knowledge and behaviours) should be reviewed and updated continuously with the system changes and new developments. A reassessment of current competencies is required as soon as the competencies are updated. Core competencies related to the use of the library system, as well as other general and related library technologies, should be defined in each job description.

9.3.2 The optimal use and development of the library system will be ensured by:

9.3.2.1 The acknowledgement of the process owner role that includes the development of expertise in the use of the system and ensuring that the Millennium system is used optimally in the relevant library processes.

9.3.2.2 A formal internal library system user group to improve the integration of processes and collaboration between functional areas, promoting the use of the system as an enabler for smooth workflow, communication, the sharing of knowledge and expertise, etc.

9.3.2.3 The acknowledgement of a shared responsibility for the library system between the library staff and the library system support staff. The library staff are the functional experts and the library system support staff are the technical experts.

## **9.4 Training**

9.4.1 A more sustainable approach to system training is suggested to ensure capacity building and ongoing optimal use of the Millennium system by:

9.4.1.1 Sharing the system training responsibility between the expert library staff users and the system support staff for training of new staff members or ongoing training of staff in the use of new system functionality. The experts are better equipped to present

training on how the system can be used within their processes. System training is not the sole responsibility of the system support staff.

9.4.1.2 Defining the type of system training needed in order to identify the most suitable training provider, for example:

9.4.1.2.1 In-service training provided by internal experts.

9.4.1.2.2 New product training provided by Innovative.

9.4.1.2.3 Personal development training provided by external experts from GAELIC, User Group, etc.

9.4.1.3 A prerequisite to attending system training sessions is that there should be a formal reassessment of library staff skills in order to determine progress made by staff members after attending training sessions. The method of assessment may include either self-assessment or peer observation, after the staff have had the opportunity to practice and to implement what they have learned. Regular feedback should be given to the staff on whether they are improving or not. The library management should support the reassessment of staff by incorporating the reassessment in the performance management exercise.

9.4.2 Various approaches to learning or to building capacity within a library should be considered:

9.4.2.1 Internal user group meets to share knowledge and experiences regularly.

9.4.2.2 Attachments – forming partnerships and working together with colleagues in the library or from another library.

9.4.2.3 Coaching and mentoring.

9.4.2.4 Group training – lectures, demonstration, hands-on, etc.

9.4.2.5 One-to-one training – especially for basic topics and skills.

9.4.2.6 Training the trainer (peer training).

9.4.2.7 Networks for example GAELIC to share in training opportunities.

9.4.2.8 Buddy system – one staff member trains and supports another.

9.4.2.9 Experts within GAELIC available for advice and formal training.

9.4.2.10 Webcasts and webinars.

9.4.2.11 Teleconferences.

9.4.3 Other learning opportunities should be considered such as:

9.4.3.1 Consulting and studying resources such as the User manual, library's own procedural manuals, CSDirect and Innovative Users Group documentation.

9.4.3.2 Reading electronic discussion lists (listservs), blogs, articles, books.

9.4.3.3 Attending conferences to take advantage of specific sessions, exhibits, and to network.

9.4.3.4 Visiting other libraries virtually and physically sites to see what they are doing.

9.4.3.5 Completing tutorials available on the web.

9.4.3.6 Preparing a talk or training material for others.

9.4.3.7 Taking self-study courses.

9.4.3.8 Listening to podcasts.

9.4.3.9 Viewing recorded and archived webcasts, etc.

## **9.5 Relationships with various stakeholders in support of the library system**

The ongoing building of relationships with all the stakeholders lies with the library management and the library system support staff.

Certain library positions have specific relationship responsibilities:

- 9.5.1 Library Director should influence the University Management, University ICT Department and Innovative and should create an awareness of the library's needs and plans at a strategic level.
- 9.5.2 Site Coordinator/System administrator is responsible for the relationship with University ICT Department and Innovative on operational issues for example follow-up on outstanding calls and other service issues, user needs and requirements and possible enhancements.
- 9.5.3 Site Coordinator/System administrator is responsible for the relationship with the users of the library system – support in the form of advice, problem solving or the escalation of problems to Innovative or University ICT Department, awareness of the users needs and requirements, sharing of information about the system, etc.
- 9.5.4 Both University ICT Department and Innovative should be informed about unacceptable service levels – regular communication about operational needs, service requirements, changes in the library , etc. are recommended

Various mechanisms should be considered to facilitate the communication between the Library and the stakeholders: regular formal meetings, e-mail discussions, teleconferences, etc.

## **9.6 Costs**

The following should be considered in making an informed judgment on costs related to running the Millennium system:

- 9.6.1 Conduct a Return on Investment (ROI) study in order to understand the costs and benefits of the library system by considering resources, capability (quality), utilisation and beneficial effects. An ROI study is complex and merits a separate study on its own by an expert.
- 9.6.2 Consider the total cost of ownership (TCO) which is about the management, use of staff time, best workflow practices and system reliability and quality.
- 9.6.3 Calculate hidden costs for example payment of annual maintenance fees but not ensuring that the latest release is installed and the relevant new features are considered, activated and used. Using the system optimally reduces hidden costs.
- 9.6.4 Identify and share standardised criteria of costing the library system within GAELIC.
- 9.6.5 Explore joint purchases and cost sharing possibilities to save on expenses.
- 9.6.6 Discuss an alternative cost model for additional products with Innovative.
- 9.6.7 Consider proposals for additional funding for specific joint projects from the government in addition to foreign and other donors.

## **9.7 Budgeting and planning**

Proper budgeting and planning for the Millennium system leads to sufficient skilled support and development of the system.

Annual planning with regard to the library system should be done jointly in consultation with the University ICT Dept. and should address the following:

- 9.7.1 Software release planning.
- 9.7.2 Hardware upgrade, including server and operating system.
- 9.7.3 Purchase of new software products.
- 9.7.4 Maintenance fee for hardware and software.
- 9.7.5 Upgrading network capacity (bandwidth).
- 9.7.6 Workstation capacity.
- 9.7.7 Human resources (capacity building in order to ensure sufficiently trained technically skilled staff is available)

Procedures should be in place to determine library needs regarding the purchase of new products which will enhance the service strategies and improve the processes of the library. Proper planning will ensure that funds are available, as well as the required capacity in terms of physical and human resources, to facilitate the support and development of the system.

Joint negotiation for the purchase of new products is recommended at consortium level because purchase costs can be reduced in terms of a negotiated discount on the purchase price and the issuing of a single invoice by Innovative. If joint purchasing of products is considered by GAELIC, coordinated planning and budgeting should take place at consortium level and individual member library level.

## **9.8 Role of user groups**

There is real value to a structured user group where members are actively involved in sharing information, knowledge and expertise at a regional, national and international level.

The project team recommends the formation of a user group structure within GAELIC to:

- 9.8.1 Facilitate and promote the optimal use of the Millennium system.
- 9.8.2 Create the awareness of new developments.
- 9.8.3 Communicate specific/unique needs and user requirements from the GAELIC member libraries to Innovative; Innovative prefers structured and formal feedback from user groups.
- 9.8.4 Coordinate joint projects and communication with Innovative at consortium level.

The GAELIC User Group should actively support and participate in the national IUG:SA activities. GAELIC should use opportunities to gain support from the IUG:SA member libraries to jointly negotiate and discuss Millennium issues with Innovative.

GAELIC libraries should be encouraged to send staff to User Group Conferences in the USA, Europe, and elsewhere in order to create awareness of how other libraries are using the Millennium system, to serve as motivation for new ideas and enthusiasm, and to meet other

Millennium users and key Innovative staff. The GAELIC User Group should create an opportunity to report back on these IUG Conferences to library staff from the GAELIC libraries.

The GAELIC Heads of Libraries should take responsibility within the national user group (IUG:SA) environment for the relationship with Innovative by creating an awareness and understanding of specific strategic issues related to the South African environment.

## **9.9 GAELIC membership**

In general make use of the opportunities that consortium membership presents, such as:

- 9.9.1 Joint negotiations for new products and services.
- 9.9.2 Sharing expertise and information.
- 9.9.3 Sharing training opportunities.
- 9.9.4 Proposals for the funding of joint projects.
- 9.9.5 Project management.

All these opportunities can facilitate the improvement in the support and use of the Millennium system. Active participation and taking leadership in the consortium activities can serve as a development opportunity by broadening the expertise of staff of GAELIC member institutions.

## **9.10 Assessment of the GAELIC libraries in terms of management and support of the Millennium system**

A final recommendation is that the assessment of the GAELIC libraries in terms of managing and supporting the Millennium system should be repeated in a year or two. GAELIC cannot enforce the recommendations but can facilitate a repeat of the assessment in order to see how many libraries have made progress in addressing their problem areas and how many maintain their good level of management and support of the Millennium system.

## **9 The way forward**

The report on the investigation will be presented and discussed at a meeting of the GAELIC Governing Board on 29 July 2008 at the Unisa Library. The outcome of the discussions should be action plans/interventions based on the findings and recommendations of the investigation.

## **10 Conclusion**

FOTIM tasked the project team to find ways of bridging the digital divide that exists between its member institutions. Firstly, the project team assessed the Millennium system functionality being used at the institutions, identified problem areas, and confirmed that there are differing levels of support and use of the Millennium system. These existed due to the specific problems experienced by a library or in some cases by choice; a library uses system functionalities according to their needs. All the GAELIC libraries indicated that processes and services have improved since the implementation of the Millennium system, regardless of problems experienced in supporting the system. A few of the GAELIC libraries can serve as examples to follow because they are able to support and develop their systems regardless of problems such

as lack of sufficiently technical staff, workload and limited funds available for the library system. The Millennium system is not the problem and has all the capabilities to be used as a platform to bridge the digital divide.

The benchmark exercise enabled the project team to identify the areas where GAELIC and its member libraries differ from their overseas counterparts, such as: formal and structured planning and budgeting for the Millennium system; availability of technically skilled staff; differences between libraries is not a concern, they accept libraries have different needs, etc. Certain circumstances such as the educational, socio-economic and cultural environment are also different and problems therefore have to be addressed in a different way from the overseas consortia.

The assessment of the current cost and return on investment of running and supporting the Millennium system at each institution indicated that opportunities should be created for joint negotiations for the purchase of Innovative products. The GAELIC libraries should consider hidden costs, total cost of ownership and a cost benefit study in order to make an informed judgment on costs related to running the Millennium system.

During the investigation the benefits and challenges of a shared server model and decentralised server model were considered. The project team could not find any proof that to change from a decentralised server model to a shared server model would resolve the problems identified during the investigation.

The recommendations made to the GAELIC member libraries will address the organisational issues and resolve problems related to the support and use of the Millennium system.

No technological interventions are proposed for GAELIC before progress is made in addressing the problem areas in the short term. Only after these problem areas have been eliminated, will a library be able to take the development of digital library services to a higher and more effective level through maximum use of the excellent functionality already available in the Millennium system. The challenge for bridging the digital divide within GAELIC lies in the ability of the GAELIC libraries to address the organisational issues as identified during the investigation.

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