

CARDIFF UNIVERSITY

Directorate of Information Services

**Review of the University Library Service
2004/05 – 2014/15**

**Report & Recommendations of
the Review Group**

June 2005

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“The health of our civilization, the depth of our awareness about the underpinnings of our culture, and our concern for the future can all be tested by how well we support our libraries.” Professor Carl Sagan, Astronomer & Astrophysicist, Cornell University.

“Few things are more important to a top rated teaching and research institution than the quality of its library.” Robert M Berdahl, Chancellor, University of California, Berkeley, (from the University Prospectus 2004/05).

Note: UC, Berkeley was ranked 2nd in the world league table of Universities by the Times Higher (5 November 2004) and 4th in the most recent league tables published by the University of Shanghai. Similar ranking, of over 100 libraries, by the US Association of Research Libraries shows:

1. Harvard, 2. Yale, 3. UC, Berkeley... 8. Cornell.

In 2003 the Joint Funding Council’s Research Library Support Group noted that, measured against world class standards, the best funded UK university library service ranked no higher than 60th.

Executive Summary

1. This report presents the outcome of the Review of the University Library Service which was established by the Vice-Chancellor to identify the University's requirements of the University Library Service (ULS) within the integrated Directorate of Information Services (INSRV) over the next decade. [Sections 1 & 2, p7]
2. Taking into account the University's mission and aspiration to acknowledged international excellence, the Review has sought to develop a vision of an innovative ULS delivering excellent services and collections targeted at the University's specific research, learning and teaching needs. The Review has examined the performance of the present ULS, identifying both examples of good, effective practice to be built on, and those factors that inhibit the achievement of the vision. [Sections 1 & 2, p7]
3. The Review has been undertaken at a time of extensive change in the University and in the wider environment for library and information services. The Report surveys this external context and the opportunities and challenges facing all institutions and library services. These issues include: the increasing availability of electronic collections and exploitation of advanced IT services; journal price inflation; the growth of open access publishing and e-print repositories; the importance of both traditional and electronic collections; resource-based learning; and the changing use of library space. [Section 3, p8]
4. Comparisons with other institutions' library services, and their responses to the common challenges, have informed the analysis of Cardiff's present position and contributed to the vision for the future ULS. The most recent comparative data available (2002/03) indicate an appropriate level of recurrent funding for the ULS at that time. The main common themes in the strategic plans of comparator institutions are investment in electronic resources and IT solutions, as well as rationalisation and consolidation of library space to meet evolving research, learning and teaching needs. Seven Consortium of Research Libraries (CURL) institutions have obtained SRIF funding for library building projects, in almost all cases, because of the limitations of the funding, directed at improved accommodation for special research collections and archives. [Section 4, p10]
5. Cardiff's present position and future potential are analysed. The main concerns are: inadequate collections and library space; the inefficiencies of the current 18-library structure in operating costs; dispersed collections; and under-investment of professional staff resources in the effective exploitation of information resources for research, learning and teaching support. [Section 5, p11]
6. The proposed vision for the ULS – developing excellent services – is described. To build up physical collections to rival those of our comparators is not a realistic option. An achievable strategy for Cardiff University is to adopt a “just-in-time” rather than “just-in-case” approach to information delivery, seeking excellence in services, achieved by exploiting the most up to date IT opportunities, enhancing the role of information specialists in support for research, learning and teaching, and by providing the physical environment that will promote these. The development of the Modern IT Working Environment (MWE) will also be a key factor in this. [Section 6, p13]
7. The outcomes from the environmental scan, the developments at comparator institutions and the survey undertaken of the views of Cardiff University staff and

students are summarised in the Key messages section of the Report. These messages are the principles that are carried forward into specific proposals in the Recommendations. [Section 7, p15]

8. The Recommendations of the Review Group are presented. [Section 8, p17]
These are responses to the changing environment and demands on library services described in the report and they reflect initiatives taking place in other institutions to meet the same challenges. In summary the recommendations are:

- an Immediate Action Plan to improve and extend library services 2005/06 – 2006/07, including proposals for enhanced access to both electronic and physical collections, and initiatives for working more effectively. [Section 8.1, p18]
- a Strategic Plan to 2014/15, in two phases, consolidating the library service via a programme of new build and refurbishment to create flexible, fit for purpose library space and an environment encouraging the further development and promotion of excellent services supporting Cardiff University's 21st century mission to earn international acknowledgement for its research and learning and teaching programmes. For the Cathays Park campus (Phase 1) three strategic options are evaluated. The recommendation is to consolidate the library service in seven locations (reduced from 18). [Section 8.2, p21]

It is anticipated that the majority of the costs of implementing the Immediate Action Plan can be met from existing resources, including the library component of the £K750 INSRV bid for SRIF 3 funding, should this receive HEFCW approval.

The Strategic Plan Phase 1, if approved, will require a major capital investment of the order of £M20+, based on the costs of comparable developments at other institutions. It is recognised that to obtain such a sum will necessitate an entirely new and creative approach to fund-raising, seeking to draw upon sources of funding not traditionally utilised by the University.

Summary of Recommendations

Immediate Action Plan

- **Budget and finance:**
 - increase in the Information Services allocation to a level that enables restoration of the information resources budget in line with its former (2001/02) level;
 - retention of the allocation model applied pre-merger in Cardiff University;
 - development of initiatives for collaboration and income generation.
- **Development of solutions for enhanced access to electronic information resources, including:**
 - integration with the Portal / MWE to enable remote access and single sign-on to electronic information resources and federated searching;
 - electronic request forms for book orders, store and interlibrary loan requests;
 - electronic delivery of interlibrary loan requests direct to the user;
 - a Web-based “ask a librarian” service;
 - electronic books services;
 - institutional repository;
 - increased availability of computers in the libraries;
 - extension of wireless technology throughout the library service.
- **Provision of enhanced access to physical collections by:**
 - a strategic investment in Special Collections and Archives;
 - scanning and electronic delivery of requests from remote stores;
 - extending library opening hours, particularly for exam periods;
 - providing a book-return box outside every library;
 - providing module resource packs for students;
 - improvements in the courier service;
 - a review of the Library Regulations .
- **Working more effectively by:**
 - integration of information specialists into Schools’ committees;
 - improved communication between libraries and users;
 - organisational restructuring and up-skilling of the library staff;
 - expanding the range of self-service functions;
 - an evidence-based approach to investment in information resources;
 - creation of a strategy and forward planning function within the ULS.

Strategic Plan Phase 1

- Consolidate the library service in seven libraries (Strategic Plan Option 3).
- New build and refurbishment to provide flexible purpose-designed space for the development of excellent services and facilities, improved efficiency and economies of scale, redeployment and restructuring of staff, and co-location of, and adequate space for, collections.
- Undertake a full feasibility study for Option 3 to consider in detail the projected efficiency gains, economies of scale and savings on staff costs.

1. Introduction

The report and recommendations, summarising the work of the Library Review Group appointed to analyse the University's requirements of its library service 2004/05 – 2014/15, are offered for consideration by the University.

At a time of extensive change the Group has evaluated the evolving needs of the academic and NHS community against:

- the background of developments and opportunities in the wider library and information environment;
- the situation of comparator UK HE libraries in the global context;
- the University's Strategic Plan and Estates Strategy;
- the need to position the Cardiff University Library Service such that it is enabled to provide the maximum effective support to the University's aspirations to earn and sustain international recognition for the quality of its research, learning and teaching, community and collaboration programmes;
- the requirement to achieve this in the context of available funds, optimising the cost-efficient use of resources to obtain maximum benefit from them, and guided by knowledge of user needs.

2. Background

2.1 During summer 2004 the Director of Information Services and the University Librarian met with the Vice-Chancellor to discuss the post-merger development of the University Library Service (ULS). At this meeting the Vice-Chancellor agreed to sponsor a prospective 10 year review of the University's requirements of its library service within the context of the University's declared ambition to earn recognition as a world class institution.

2.2 Professor Hadyn Ellis chaired the Review Group which consisted of the Pro Vice-Chancellors for Research and for Learning & Teaching, three senior academics from each of the two Colleges, the two Student Presidents, senior representatives from the Directorates of Physical & Financial Resources, and Strategic Development, and the British Library's Head of Higher Education (Ms Jan Wilkinson). The work of the Group was assisted by senior members of the Directorate of Information Services and informed by the work of Thematic Panels, each convened by an INSRV member and consisting of academic, administrative and ULS staff. (The membership of the Review Group and the list of Thematic Panels appear as appendices A & B to Supporting Paper 5.)

2.3 Meeting monthly between October 2004 and May 2005 the work of the Review Group was informed by a questionnaire survey of staff and students in each of the 28 Academic Schools and consultations with both Heads of Schools and relevant Schools' committees. The Review process also benefited from two workshops exploring opportunities in the developing information, library and technological landscapes. These were facilitated by Ms Jan Wilkinson and by Professor Keith Jeffery from the Council for the Central Laboratory of the Research Councils (CCLRC).

2.4 A report on the progress of the Review to December 31st 2004, and outlining the planned future programme of work, was received by the Vice-Chancellor in January 2005.

3. Library and information services: the external environment

3.1 The following are trends and issues affecting the development of library services for all institutions in the UK, and in most cases worldwide:

- the increasing availability of electronic collections – allowing electronic access to remote collections rather than ownership of them;
- IT developments enabling enhanced access to, and more effective use of, electronic information resources, for example mobile technology, portal developments and federated searching¹;
- restrictive practices by some key publishers, including journal price inflation for more than two decades, averaging in the region of 7.5% - 10% per year; (Figure 1 on page 9 shows price inflation for journals and books, together with expenditure in the pre 1992 UK universities, for the decade 1992/93 to 2002/03, supplied by the Library Information and Statistics Unit, Loughborough University)
- the “Open Access” movement to make published research freely available, and the development of e-print repositories whereby universities make publications by their staff available in digital repositories, in part as a response to the spiralling cost of journals, but also reflecting a belief that access to publicly-funded research should be free;
- emerging standards in the archiving of e-publications, which could enable a strategic switch to an electronic-only policy for journals in some disciplines;
- digitisation initiatives at national and institutional level to allow enhanced access to, and preservation of, unique and rare materials;
- growth of 24 hour and off-campus demand for electronic information resources;
- the continuing importance of traditional collections, including the further development of Special Collections and Archives, in the Hybrid Library²;
- a requirement for integrated workspace (virtual and physical) for use of print and electronic materials;
- resource-based learning, e-learning and group study which, together with the greater emphasis on electronic information resources, are resulting in significant changes in what library space is needed as well as how it is flexibly deployed, and in increasing pressure on space for quiet study;
- the need for a new profile of library staff and skills (IT skills, but also skills in customer service, presentation and training, collaboration and team working, project management and change management);
- the pressure on recurrent funding streams (driven by a number of the above) leading to a greater role for capital funding and income generation, and requiring creative thinking to develop initiatives such as re-chargeable services to alumni, or rental of library space;

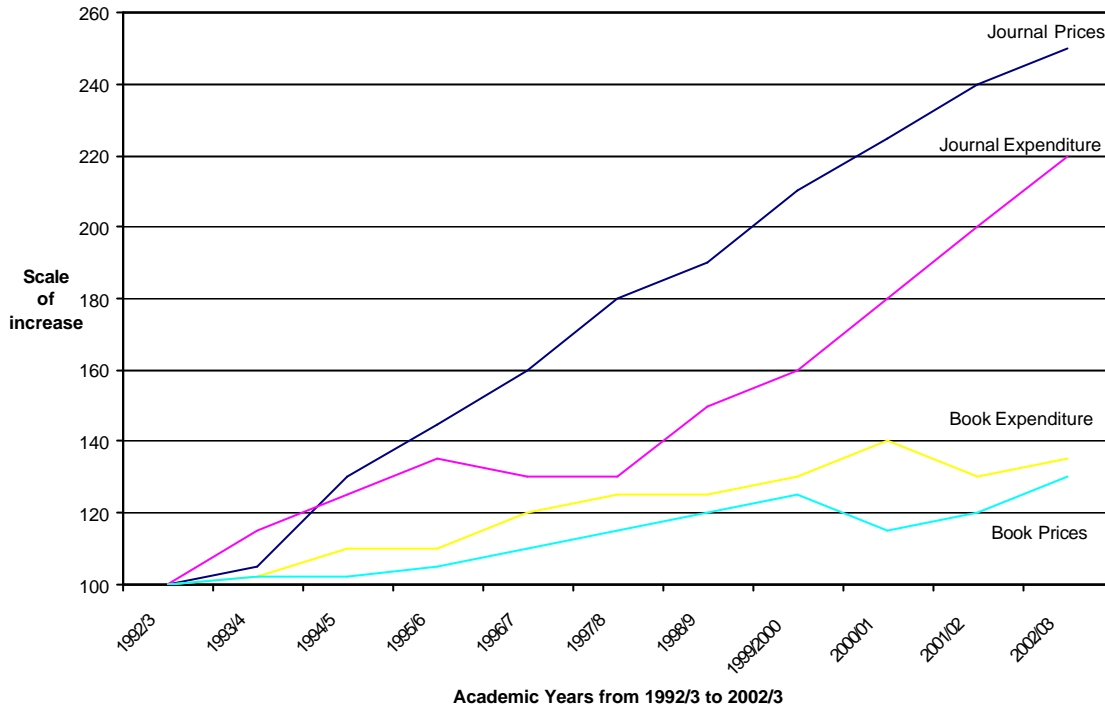
¹ Portal development in this context refers to an advanced IT environment with integrated systems, collaborative tools, and customised and targeted information; federated search systems enable users to search a range of resources simultaneously.

² The Hybrid Library has been defined as “a managed combination of physical and virtual collections and information services.”

- return on investment – a requirement to demonstrate that the investment in the University Library Service brings a genuine return directed at the University’s priorities.

Figure 1: Index of book and journal prices and expenditure in pre 1992 Universities

Source: LISU Annual Library Statistics 2004, based on SCONUL data



3.2 These themes are reflected in the Society of College, National and University Libraries (SCONUL) vision 2010³, which identified the key issues facing UK university libraries up to 2010 and predicted the following trends:

- exploitation of IT developments to provide better access to electronic content. “For example, portal technology will be used to alert users to new materials or services which fit in with their existing profile. Users will have access to intelligent agents that filter information. Improvements to authentication and access will be made possible using systems such as Shibboleth”⁴;
- library buildings designed to meet new and different user needs, providing discrete areas for social learning, research-based learning, group activity, etc, as well as more traditional forms of individual study, and also incorporating non-traditional elements such as student support services. Physical and virtual space will be equally important, the main challenge being provision of a blended service where the virtual and the actual space are complementary;
- “self-service systems will be offered 24 x 7 in order to enable users to personalise and control their own service use”;
- greater collaboration across sectors – “Examples include shared library facilities, joint high capacity storage, joint conservation and digitisation.” Increased rationalisation of collection building will take place, facilitated by the newly-

³ SCONUL Vision 2010 http://www.sconul.ac.uk/pubs_stats/pubs/pubs/vision%202010

⁴ Shibboleth is the successor to ATHENS authentication for access to electronic journals and library databases

constituted Research Libraries Network. More off-site storage will be developed for less used material or 'copy of last resort', using collaborative ventures;

- services to researchers will be repositioned by initiatives such as digital curation of large and dynamic datasets, links to teaching and publication, and the development of institutional repositories, providing access to original data as well as to published articles;
- full economic costing of activities, with a requirement for evidence of return on investment. "Impact measures will be developed for the sector and e-measures will be embedded";
- "fund raising will become more central to our activities";
- "developments in technology and the shift from the provision of physical items will result in the redirection of staff time and the development or importing of alternative skills";

4. University library services: the national and international context

4.1 Supporting Paper 1 with accompanying tables presents comparative facts and figures for Cardiff University and other CURL institutions.

4.2 The most recent data available (for academic year 2002/03) suggest that the ULS was appropriately resourced in comparison with other institutions at that time, in terms of the overall recurrent allocation. The other main features of the comparison with CURL institutions are that Cardiff has:

- smaller book collections: Table 1 comparing Cardiff with its CURL peers indicates that Cardiff's collections are only about two-thirds the size of the average; the comparison is worse when adjusted for student FTEs, where Cardiff's relatively large population gives a ratio per FTE student of 53 books against a group mean of 116 (Table 2);
- more intensive use of the library, reflected in more internal borrowing transactions (Table 11), external inter-library loan requests (Table 4), and visits to libraries (Table 10), all of which scored the highest annual totals in the CURL group;
- more site libraries and less total library space: Cardiff has 26 buildings which house a library function, whereas only one other CURL group member, Oxford, claimed more than 20 locations, and the group average was 11 (Table 6); in addition to this dispersal of space, Cardiff's total provision of 0.9 square metres per student FTE is appreciably below three-quarters of the comparator group (Table 7);
- a smaller percentage of expenditure on library staff: Cardiff's staffing budget, at 46% of total library expenditure, and, despite having the highest number of separate library locations, places Cardiff two-thirds of the way down a CURL group range from 54% to 41% (Table 8);
- more extensive electronic collections: Table 9 indicates Cardiff to be one of the heaviest investors in electronic information (defined in the UK tables as resources other than journals) amongst the CURL group.

- 4.3 The main common themes in comparator institutions' strategic plans are investment in electronic resources and IT solutions, and rationalisation and consolidation of library space to meet evolving research, learning and teaching needs. A CURL survey carried out in August 2004 concerning SRIF funding for library building projects found that seven institutions reported success in obtaining funding for library building projects (some refurbishment and some new build). The funding ranged in value from £K300 to £M3 and in almost all cases the library building projects related to improved or new accommodation for archives and special collections.
- 4.4 More ambitious proposals for new library buildings are known to be in preparation at Bristol and Edinburgh, and the University of Southampton has a newly-built library which was visited by members of the Review's Accommodation and Space Thematic Panel.
- 4.5 Oxford University carried out a review of its library services starting in 1997, the outcome of which was the establishment in 2000 of Oxford University Library Services (OULS) and its Vision for 2006. The Vision includes an e-strategy and a long term accommodation strategy, the latter comprising a major programme of re-development and new building spanning at least 5 to 6 years, with the largest element in the funding provided by the OULS Capital Campaign to raise £M40. The strategy for the OULS is therefore based on the working concept of the 'Hybrid Library', defined as "a managed combination of physical and virtual collections and information services." Currently Oxford is considering proposals to consolidate the OULS in three major libraries.

5. An analysis of Cardiff's present position and potential

- 5.1 Section 3.1 shows that since 2001/02 there has been serious and increasing pressure on the affordability of books and journals. Typically in the last few years, journal price inflation has been of the order of 7.5% to 10% per year, considerably in excess of the rise in the University's income. For this reason, Cardiff, like all other Universities, has found it impossible to keep pace. Our situation, however, is particularly acute because the pre-merger Cardiff University Schools' allocations for information resources have remained static at the level set for the 2001/02 Session, while the healthcare libraries were restricted to only a 1% uplift year on year. This has led to an estimated 40% reduction in purchasing power for information resources over the subsequent four years, with potentially serious impacts in areas such as the RAE and course accreditations if the decline is not arrested.
- 5.2 As is indicated in the previous section, the comparative data highlight some built-in cost and operating inefficiencies. The 18-site structure, with 26 separate locations housing a library function, spread over two main campuses and with four outlying locations, is inefficient to operate, with staff spread thinly, and a high cost in the duplicated tasks of both support and managerial staff. The high level local supervision required in each library is a drain on the time of the professional information specialists, whose expertise could be directed at enhanced support for research, teaching and learning, including more effective exploitation of our extensive electronic collections. The existence of the 18

libraries, each with a manager, imposes a management structure which does not meet high level vision and leadership requirements and encourages a strong site, rather than overall service, focus.

- 5.3 The present number of libraries also results in dispersal of collections. Such fragmentation is not conducive to effective research and research-led teaching, and introduces further inefficiencies for users. In particular it inhibits the provision of support for interdisciplinary research. For practical purposes all existing shelving in the libraries is fully occupied. Inadequate space on library shelves inevitably has resulted in an increased reliance on remote stores, known to be unpopular with users from discussions in the Review Group and responses to the Library Surveys.
- 5.4 The remote stores are to all intents and purposes full. The only expansion space is 960 metres in the Ian Hall store, which corresponds approximately to the space required for one year's book acquisitions at the current rate of expenditure.
- 5.5 These inefficiencies and inadequacies have been reflected in responses to the Library Surveys (see Supporting Paper 2) and in concerns expressed in the current Session via University committees. The Annual Programme Review and Evaluation Sub Committee expressed disquiet about current library provision on behalf of a number of academic Schools. Such concerns were detailed in the School of History and Archaeology's submission to the Annual Review and Evaluation of PGR Activity for academic year 2003/04:
- inadequate research holdings creating difficulties in attracting high quality PGRs and impeding the development of a successful research culture;
 - concern that the level of the library allocation is leading to serious threats to journal holdings and the opportunity to build up research collections;
 - anecdotal evidence that shortage of space in the library is having a deleterious effect on recruitment and student satisfaction (whereas a highly regarded library service could be a "jewel in the crown" for recruitment).
- 5.6 The present structure has many positive features which have also been reflected in Survey responses:
- the close integration between some libraries and Schools, based on their present physical proximity is seen as a strength. In considering solutions to the inefficiencies it is important to build on this feature of the present structure and not lose it entirely. However, the existing physical proximity introduces a further inefficiency, in that in many cases libraries are occupying prime space in academic buildings that were not designed as libraries, have no potential for expansion, and which could be redeployed to ease the Schools' urgent space needs;
 - the contribution of information specialists in research support and information literacy training is revealed in Survey responses as a further strength of the present ULS. The findings from the questionnaire surveys of Research and Learning & Teaching Committees include recommendations that such specialist librarian support be extended and enhanced;
 - the University has some unique and important special collections, with potential for development that would bring benefits in terms of support for research, as well as improved status for the University and additional funding

- this process has already begun with the dedicated accommodation in the Arts & Social Studies Library and McKenzie House, HEFCW funding for similar facilities at Heath Park, and the creation of two new posts (funded initially for 22 months) to develop special collections and archives.

- 5.7 Cardiff's print-based collections are generally inadequate to support research and are well below the level of CURL comparators. We hold fewer books per FTE student and we add fewer new books per year per FTE student. This is reflected in the shortage of course-related books identified in the Surveys as a concern for students, and it is deleterious to recruitment of both home and overseas students. The disparity in the quality of collections between Cardiff and its comparators is partly historical. It is not a realistic option, in terms of the investment in resources required, to build up our print collections to a level to rival the scope and depth of collections built up over centuries and by legal deposit.
- 5.8 Cardiff University has more extensive electronic collections than most comparators, although some other institutions do more to exploit the resources they have. For example, the University of Loughborough library has implemented a federated search tool called Metalib; and, as a result, has reported substantial increases in the use of its electronic information products. Federated search systems enable users to search a range of resources simultaneously, allowing more efficient use of resources in overlapping subject areas. Their potential for academic library services is to provide a "better than Google / Google Scholar" search and discovery capability, an objective which is part of the Cardiff University Information Services vision for the Modern IT Working Environment (MWE). By creating an advanced IT environment with collaborative tools, targeted information and enhanced access to all University systems, the MWE has the potential to deliver increased effectiveness for electronic information resources. The MWE forms an essential part of the strategic planning for Information Services.
- 5.9 The library service in Cardiff has a disappointing record in bidding for external project funding from sources such as JISC (the Joint Information Systems Committee of the Higher Education Funding Councils). Until recently, Cardiff has also been excluded from developments undertaken in peer (CURL) libraries, such that it is necessary to catch up with progress in initiatives such as e-print repositories, before being able to participate in collaborative projects.

6. Developing excellent services

- 6.1 The fundamental role of the University Library Service is the provision of information resources to support research, learning and teaching, and the delivery of services to enable effective exploitation of the information resources, not only saving time for staff and students, for their core purposes, but also enhancing the efficacy of these activities.
- 6.2 As has been previously acknowledged, it is not a realistic option to build up physical collections to rival our comparators. Instead, it is proposed that a realistic strategy for Cardiff University should include:

- improved integration with academic Schools, thereby enhancing two-way communication and understanding of research, learning and teaching needs and available resources;
- access rather than ownership for delivering information;
- collections developing alongside the University's evolving research, learning and teaching priorities;
- excellence in services, research and study environment and in efficiency of access to resources;
- exploiting the most up to date IT opportunities;
- organisational restructuring and up-skilling of the library staff.

6.3 A strategic emphasis on excellent services is consistent with the SCONUL vision 2010 and provides an opportunity for Cardiff's library service to re-position itself as an innovator and first-choice partner for potential collaborators.

6.4 Specific proposals for improving services are in the Immediate Action Plan. Some of these cannot be achieved within the present inefficient 18-library structure. Many of them will be more complex and expensive to develop, and less consistent in quality when implemented, within the present model. Therefore in Cathays Park the Strategic Plan Phase 1 proposes a consolidation of the library estate involving both new build and refurbishment of existing libraries.

6.5 The issue of the Heath Park requirements (Strategic Plan Phase 2) awaits further discussion between the University and the Cardiff & Vale NHS Trusts. The significance of the University's unique relationship with the NHS is fully recognised, as the principal provider of medical and dental undergraduate and postgraduate education in Wales. Recent approaches have identified the need for a high-level discussion involving the Vice-Chancellor, the Provosts and the Chief Executive of the Cardiff & Vale NHS Trusts.

6.6 A crucial element in the Immediate Action Plan is the deployment of advanced IT solutions. These include new systems for:

- enhanced discovery, access to, and targeting, use, and management of, electronic information resources;
- new collaboration tools and methods;
- supporting remote access and accessibility requirements;
- reducing manual library tasks such as those involved in book circulation;
- storing and accessing Cardiff's research publications in an institutional repository.

The vision for the Modern IT Working Environment is to deliver such solutions, thus enabling more effective use of the University's electronic collections, and leading to improved research support and information literacy programmes. Better access to electronic information resources can be achieved by complete and seamless integration with other University and INSRV systems, allowing access anywhere, anytime and by any appropriate method. The realisation of this vision potentially can give Cardiff University a real competitive edge and establish the University both as a service innovator and as a key player in the deployment of advanced IT solutions.

6.7 Once established, the future library service will require a management structure providing strategic leadership to sustain the new vision, monitor its efficacy and

respond to further changing needs and stimuli. It is anticipated that the creation of such a management structure, in the context of INSRV's development of its staff resource, which aligns with the University's aspiration to Investors in People status, will be a priority for the incoming University Librarian.

7. Key messages

From the outcomes of the environmental scan, comparator analysis and surveys of the views of Cardiff University staff and students, the Review Group has identified the following key messages which are carried forward into specific proposals in the Recommendations.

7.1 An evolving hybrid model:

- the importance of both print and electronic resources in the library service of the future, recognising Cardiff's existing strength in electronic collections, as well as the continuing need for the foreseeable future in some disciplines for research, learning and teaching based on browsable printed and archive collections (where the University also has existing strengths in certain special resources such as the Salisbury Collection);
- in relation to space a continuing need for areas for traditional scholarship and study, as well as facilities for library-based teaching and training, and for IT-based and collaborative group work – so an emphasis on a varied and flexible use of space, and the zoning of space to match a range of needs;
- retaining the best of the traditional approach, as well as exploiting new ways of delivering information based on the latest IT developments coupled with changing user needs and expectations;
- benefiting from INSRV's technological developments, including "virtual space" enabling academic activities to be carried out almost anywhere and at any time.

7.2. Access rather than ownership as a strategy for the delivery of information resources:

- one advantage of such a strategy is the potential flexibility and therefore greater efficiency in the use of resources, i.e. it is not necessary to acquire expensive journal runs and other resources which could become obsolete if the group using them moves elsewhere; access can be changed to suit new research areas;
- access issues include greater ease and efficiency of access to materials, print and electronic, held by the University, as well as access through collaboration or subscription.

7.3. Collaboration and cooperation:

- opportunities for collaboration with the British Library and the Council for the Central Laboratory of the Research Councils (CCLRC) have been created by the Review process;
- there is further potential for partnerships in piloting new services, establishing Cardiff University as an innovating institution. Such potential partners include JISC, CURL, the Research Libraries Network, public libraries, and commercial suppliers (including Google), possibly as a beta test site in the first instance.

7.4. Information Commons:

- a concept originating in North America and increasingly influential in the design of new academic library space in the UK; the essential principle of Information Commons is the seamless integration of all formats of information resources, courseware and IT use, together with the provision of assistance to users in all these areas;
- the main characteristics of an information commons are:
 - different types of study space such that students and researchers can work individually or in groups, formally or informally, with or without computers, and supported by a continuum of printed and online resources;
 - the flexible use of space, allowing room for expanding collections, training facilities, multi-media (video, audio) resources, computers, laptop connectivity via wireless, social and community space, and potentially other student support services;
 - staff help is available for the full range of user needs – library resources, software applications or courseware.

7.5 The art of the possible:

- a rationalising of the ULS estate (the Strategic Plan) to provide flexible and purpose built accommodation that will facilitate delivery of the service enhancement vision;
- a future focus on excellent services and collections which are adequate and appropriate to the University's research, teaching and learning mission;
- the delivery of the improved service action plan in the absence of new recurrent funding;
- a need in the future for reduced dependence on recurrent funding streams and greater use of capital funding and income generation.

7.6 Addressing inefficiencies and cost ineffectiveness:

- the inefficiencies of our existing estate and 18 library structure are no longer sustainable if Cardiff University is to approach world-class status;
- the following initiatives will contribute to greater return on investment:
 - self-service and automation of routine functions to release staff resources to improve services through up-skilled and enhanced support;
 - development of an evidence-based approach to guide decision making and investment in information resources;
 - involvement in collaborations as a means of reducing costs and adding expertise and experience;
 - training and development to up-skill and redeploy library staff.

7.7 Responding to the main themes from the Library Surveys (see Supporting Paper 2):

- the electronic library, including off campus access, is highly regarded; one major advantage of bundled electronic access is that it allows and even stimulates interdisciplinary research and teaching;

- books and other media, including paper journals, are extremely important for the foreseeable future;
- the shortage of course-related books is a major concern for students, undergraduate and postgraduate; such concern extends to the provision of the more advanced books that underpin research areas and are needed by PhD students;
- more (information) specialists are welcomed by staff, particularly for research support and training;
- fines are unpopular with some staff and students;
- a courier service between libraries is requested by staff and students;
- a 'better than Google' search engine will be welcome⁵;
- extended opening hours (evenings and weekends) are requested for study, reference and self service purposes;
- more information literacy training is broadly welcomed;
- paper based inter-library loan forms, store and book requests are considered antiquated and time consuming;
- the Library as a, largely, quiet space to study remains important;
- storing material remotely is unpopular, costly and slow to access;
- proximity: the convenience of libraries in relation to Schools is highly valued;
- in general the views of the staff and students surveyed were concordant; additional views were helpfully provided by Heads of Schools and Schools' committees.

8. Recommendations

The Recommendations of the Review Group are in two parts: (i) an Immediate Action Plan of relatively short term initiatives to improve services as requested in Survey responses, achievable over 1-2 years, and (ii) a long term Strategic Recommendation to consolidate the library service via a programme of new build and refurbishment (Strategic Plan).

It is anticipated that the majority of the costs of implementing the Immediate Action Plan can be met from existing resources, including the library component of the £K750 INSRV bid for SRIF 3 funding, should this receive HEFCW approval.

The Strategic Plan Phase 1, if approved by Council, will require a major capital investment of the order of £M20+ for a new build humanities and social science library, based on an estimated floor space in the region of 12,000m² to 15,000m² and the costs of comparable developments at other institutions. Similar data from other university libraries indicate that additional capital investment will also be required for a proposed refurbishment of the existing Arts & Social Studies Library as a new science library. The detailed costs of this will be identified by a full feasibility study, should the Strategic Plan Phase 1 be approved in principle.

⁵ In this respect, the results of Library Survey are consistent with the findings of the JISC-funded CREE (Contextual Resource Evaluation Environment) Project, which has carried out user surveys in UK and other institutions, investigating the use of Internet search tools within portal and non-portal environments. These surveys also revealed high demand for the searching of multiple information resources made possible by federated search systems.

It is recognised that to obtain sums of the order required, will necessitate an entirely new and creative approach to fund-raising, seeking to draw upon sources of funding not traditionally utilised by the University.

8.1 Immediate Action Plan for improving services 2005/06 – 2006/07

The Immediate Action Plan comprises service initiatives to be addressed over the next 1 to 2 years, responding to user priorities and concerns expressed in the Surveys (see Supporting Paper 2). These initiatives can be pursued independently of the Strategic Plan, though it will be shown that in some cases, e.g. self-service, provision of more computers in libraries, extended opening hours and organisational restructuring, implementation would be most effective in a re-structured and consolidated library service.

8.1.1 Budget and Finance

As indicated in Section 5.1, for information resources in Cardiff there has been an effective loss of buying power estimated at 40% since 2001/02. Other institutions also have struggled to maintain adequate levels of support in the face of book and journal price inflation, but in Cardiff the impact has been particularly hard because the information resources allocations have remained static at the level set in 2001/02. The position would be eased if the University could increase the Information Services budget significantly. This would enable the Director of Information Services to allocate funds for information resources at a level closer to that of the 2001/02 allocations. Broadly, an increase in the information resources budget of £K250 would bring this into line with the overall rise in the University's income since 2001/02. In addition, the Immediate Action Plan and Strategic Plan set out a range of measures that, together with any increase in the information resources budget that is possible, will also help to offset the impact of inflation, enabling the ULS to deliver improved services more effectively.

It is recommended that the University restores the Information Services allocation to its former level.

There is intense pressure on recurrent funding. It is therefore essential to be able to demonstrate that recurrent funding is used most effectively, as well as to establish creative ways of exploiting additional funding streams.

It is recommended that:

- the allocation model applied pre-merger in Cardiff University be retained and specific arrangements be agreed with each School;
- budgetary responsibility for information resources allocations remains with Schools, with formal collection development agreements and partnership with the ULS, including where individual Schools prefer, the delegation of responsibility to Site Librarians / Information Specialists;
- opportunities for collaboration and income generation be actively pursued and the exploitation of capital funding opportunities for ULS/INSRV be further embedded in University processes.

8.1.2 Solutions for enhanced access to electronic information resources

- Integration with the Portal / MWE
The following specific enhancements are currently being addressed via integration with the MWE development and the Shibboleth project (the successor to ATHENS authentication for access to electronic journals and library databases):
 - remote (i.e. off campus) access;
 - single sign-on to electronic information resources (allowing users to access several resources sequentially without being prompted to log in to each);
 - a federated search tool (“better than Google / Google Scholar”, enabling the simultaneous searching of multiple full text and bibliographic databases).
- Electronic forms for book orders, store and interlibrary loan requests – these are also under investigation in the context of the MWE development, the objective being to move to electronic delivery directly to requestors, wherever they happen to be. This will facilitate monitoring and auditing of these processes and so contribute to greater effectiveness.
- Document supply direct to the user via the British Library’s Secure Electronic Delivery (SED) service. Already in use in some of our libraries, the implementation of SED is currently being extended.
- Pilot online information specialist – providing out-of-hours access to specialised support via a Web-based “Ask a Librarian” service.
- Electronic books services – subject to the evaluation of our existing pilot service, a further investment in e-book services can extend access to teaching collections and particularly provide access to multiple copies where suppliers’ licences permit.
- Development of an institutional repository – a system to store and retrieve research work including published journal papers which can be made freely available via the Internet.
- Increase the availability of computers in the libraries, without loss of desk study space.
- Extend wireless technology throughout the library service.

8.1.3 Enhanced access to physical collections

- Special Collections and Archives – a relatively modest investment in this area has the potential to position Cardiff University as a leading UK institution for Special Collections and Archives, with significant returns in research impact, public profile and income generation. Digitisation projects in particular can potentially attract external funding and raise research status.
- Services from remote stores can be improved by the scanning and electronic delivery of journal requests. With the stores essentially full, a review of their future role is urgent, including investigation into the relative costs and benefits of

maintaining store collections vs. access to material via document supply services. Our options for action and collaborations in this area will be informed by a national study recently commissioned by The British Library and CURL, to report at the end of July 2005.

- Longer opening hours – one of the Survey outcomes is a request for extended opening hours – evenings and weekends – for reference use, particularly at key times such as exam periods. The staff costs to implement this in the present 18-library structure will place further pressure on existing budget difficulties. In addition, there are quality and consistency issues in implementation across a distributed service, and potentially concerns about increased lone working in some of the smaller remote libraries. Nonetheless, efforts will be made to introduce improvements in opening hours in key places and at key times until such time as a sustainable solution is provided by a consolidated library system. The online “Ask a Librarian” service included in Section 8.1.2 will also help to address this need.
- Provide a return box for every library to allow users to return their loans when the libraries are closed.
- Courier service: improving and expanding the Library Courier Service, to ensure the rapid retrieval and delivery of materials from stores, and the faster transfer of materials between libraries.
- Library Regulations: a review of the impact of the regulations, including the extension of fines for overdue loans to academic staff in the first year post merger, is in hand.
- Provide for loan and/or sale module packs, containing essential journal articles and other relevant reading materials, for students.

8.1.4 Working more effectively

- Greater integration of information specialists into appropriate Schools Committees such as Research Committees and Teaching and Learning Committees, directed towards a full understanding of Schools’ library needs, as well as embedded information literacy and research support. This two-way communication process is seen as increasingly important in a rapidly changing academic and information environment.
- Improved communication between libraries and users, with an INSRV welcome letter to all new academic staff; also ensuring that all students and new staff receive Athens (or Shibboleth) passwords at library induction, and have access to further periodic IT and Information Literacy training.
- Organisational restructuring and up-skilling of the library staff, incrementally, beginning in year 1, to facilitate the greater involvement of information specialists in academic liaison with Schools, information literacy and research support, thereby saving the time of researchers and others and further improving two-way communication.

- Self-service – an expansion of the range of self-service functions, including a pilot implementation of RFID tags, to enable the redeployment of staff resources to increase the number of information specialists providing support to Schools. UK university libraries report up to 80% of all circulation transactions via self-service units. At present in Cardiff there is a limited self-issue facility in the Arts & Social Studies Library, using existing barcode technology. The present 18-library structure in Cardiff inhibits the implementation of self-service operations. For example the capital cost of implementing self-service circulation in all libraries is estimated to be in the region of £M1. There would be economies of scale in any consolidated structure and it is estimated that Strategic Plan Option 3 would be likely to result in a 50% reduction in the capital investment and running costs.
- Development, during 2005/06, of an evidence / usage based approach to guide future decisions on investment in information resources, including a consideration of the most effective and efficient ways of providing access to research outputs worldwide. A pilot study would consider where improved and customised electronic contents page and document delivery services might be an acceptable alternative. This proposal could arrest the trend for journals to consume an ever increasing proportion of information resources allocations and release more funds for student texts while not compromising support for research. (In the Survey, students in all Schools stated that provision of course-related books is inadequate, and this is supported by the SCONUL statistics indicating that Cardiff buys fewer books per FTE student than comparator institutions.)
- The establishment of a specific library strategy and forward planning function within INSRV, to:
 - undertake environmental scanning and evaluation;
 - create outline plans for both information resources and service development initiatives, to exploit capital funding opportunities;
 - seek additional external funding opportunities, including cross sectoral and commercial.

8.2 Accommodation and space strategy 2004/05 – 2014/15 – the Strategic Plan

The Strategic Plan presents a framework in two phases for the development of the library service and estate over the next decade.

The consequence of retaining the status quo – as outlined in earlier sections of the report – would be to perpetuate the present inefficiencies which result in a poor return on investment and inhibit the development of innovative services. Phase 1 of the Strategic Plan proposes a programme of new build and refurbishment for the Cathays Park campus to create flexible, fit-for-purpose library space and reduce the number of locations and service points, while at the same time releasing almost 6,500m² of prime space for academic development.

The requirement for a radical restructuring of the library service and estate arises from the changing role of the library identified in earlier sections of the report. Changes in the patterns of library provision and use are of recent origin but are evolving very rapidly, with clear impacts on the ways that researchers and learners use libraries, and on the skills required to derive greatest benefit from library resources. For Cardiff University to be competitive in research, teaching and

external engagement, it is essential that the ULS responds to these changes and initiates the necessary developments in the services and facilities provided within library buildings. These developments should be directed towards creating flexible library spaces that can be modified to meet future demands for research, and learning and teaching, including adequate disability provision (both support services and physical access), as well as to allow the most effective use of library staff resources.

Consolidation of the service in fewer locations will facilitate the re-positioning of the library service to meet these challenges. The benefits of consolidation are:

- improved efficiency and economies of scale, including self-service and automation of routine functions, allowing longer opening hours and deeper information specialist support;
- co-location of collections and services, encouraging interdisciplinary activities;
- redeployment of library staff to enable:
 - organisational restructuring (entirely via natural wastage) and up-skilling of clerically graded staff, principally to provide enhanced support to learning & teaching, thereby freeing 30% - 40% of the current employment costs and permitting
 - reinvestment in additional Information Specialist posts to consolidate, broaden and deepen support to research in particular;
- the development and provision of new facilities and services, such as state of the art individual and group study areas, Information Commons space, archive space that meets BS standards, exhibition and retail space, teaching space for use by Schools, and integrated student support services, as well as INSRV itself;
- opportunities for widening access with assistive technology and services to remove physical barriers;
- provision of “one-stop-shop” INSRV multi-service access points;
- a possible co-siting of certain student services.

For the Cathays Park campus, such consolidation will also release space in academic buildings currently occupied by libraries:

Aberconway	1,070.5 m ²
Bute (incl. Architecture)	2,094.8 m ²
Biomedical	604.0 m ²
Music	188.1 m ²
Main Building	1,730.4 m ²
Senghennydd	755.4 m ²
	<u>6,443.2 m²</u>

It is recognised that the present multi-site system, with libraries placed in some instances close to the Schools they serve, has the disadvantage of limited and cramped space, but is popular because of the convenience of proximity. An appraisal of the strategic options is given in Supporting Paper 4. This presents the advantages and disadvantages of three options: the status quo (Option 1), a major consolidation to five libraries (Option 2), and a less radical consolidation to seven libraries (Option 3).

Option 3 is recommended as the best trade-off in enabling necessary improvements and enhancements by reducing the number of libraries while retaining some proximity of Schools and libraries.

It is further recommended that there be a full feasibility study for Option 3 to consider in detail the costs of new build and refurbishment of existing space, as well as the projected efficiency gains, economies of scale and savings on staff costs.

8.2.1 Outline of Strategic Plan Option 3

1. Trevithick: serving COMSC, ENGIN, MATHS, PHYSX
2. Existing Arts and Social Studies Library (ASSL) refurbished to serve the following science Schools: BIOSI, CHEMY, EARTH, MEDIC (part), OPTOM, PHRMY, PSYCH⁶
3. New build for a Humanities and Social Sciences Library (HUSSL), located ideally on the existing Colum Drive Car Park, or the Maindy Road site, serving: ARCHI, CARBS, CLAWS, CPLAN, ENCAP, EUROS, HISAR, JOMEK, LEARN, MUSIC, RELIG, SOCSI, WELSH
4. Healthcare, incorporating DENTAL, MEDIC (part) and SOHCS. (Strategic Plan Phase 2, to be addressed following discussion with the Cardiff and Vale NHS Trusts.)
5. Caerleon, serving SONMS
6. Llandough, serving the multi-professional academic and NHS community
7. Whitchurch (Psychiatry) and Velindre (Cancer / Oncology), combined in a single library

9. Conclusion

Following the University's first ever comprehensive review of library services, a number of radical but achievable recommendations have been made. These are contained in the proposed Immediate Action Plan and Strategic Plan, which the Review Group believes together constitute challenging but effective responses to the changing academic, technological and social environment. The vision is to create flexible, fit for purpose library space and services recognised for innovation and excellence, jointly delivering a competitive edge in the ULS' support for Cardiff University's 21st century mission to earn international acknowledgement for its research and learning and teaching programmes.

⁶ Calculations indicate that the space available in ASSL is sufficient to house the resources and services required for the new Science Library.