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UNIVERSITY OF GLASGOW

Senior Management Group - Tuesday 26 June 2007

Review of Student Administrative Processes

Mr D Newall

September 2009

Business Case for the Review of Student Administrative Processes including the Procurement of a Commercial Student Information System to Support the New Processes.

EXECUTIVE SUMMARY

An analysis of the University's strategic objectives has been carried out with the assistance of two independent consultants. We have established the priorities of senior staff in terms of what their needs are to support delivery of strategic plans, particularly Recruitment, Retention, Student Centric Services and Management Information.

This paper outlines the business case for the investment required to transform the processes which support learning and teaching, the provision of management information about students and improving the delivery of services to students.

The paper sets out, at a high level, the new functionality and key improvements required in our student information system to meet the challenges of the University's strategic plans. It makes clear that to maintain the current system and develop it at the current rate, will not provide the extra features needed as the competition accelerate ahead by an ever increasing margin. The options for development are assessed and recommendations made as to the way forward.

Recommendations

1. A major programme of investment in process improvement and student information systems is required to deliver the University's strategic objectives and meet the needs of students, academic staff and support staff.

2. The analysis of the options leads to the conclusion that the way forward is to invest in a third party package solution to replace the core student records system in conjunction with a major process improvement programme.

3. Planning to move to one of the leading third party package offerings should commence. The first stage of this will be to carry out a top level process review, requirements gathering, creation of an invitation to tender for a new system and selection of a preferred supplier (Phase 1). Phase 2 would cover the time from contract signing through to full implementation.

4. The negotiated procurement process should be adopted. This caters for early identification of short listed suppliers, working with them to determine process design options and maximising the experience and knowledge of those leading quality suppliers rather than the traditional method of developing requirements in isolation before commencing procurement.

5. This will be a major programme which requires sponsorship by SMG and the appointment of a champion at that level.

The recommendations are fully supported by two independent consultants**.**

Why major investment now?

1. Major investment is required to provide the new functionality required to deliver the strategic plans relating to recruitment, retention, student centric services and to provide the management information to support these. (Refer to Section 2 for details)

2. Core facilities supporting the student lifecycle are in need of significant improvement (Refer to Appendix A for detail)

3. The present development strategy of continued enhancement and technology refreshes of the in house system, with a relatively small development resource (annual cost of approximately £700K) and tackling high priority areas only, is not a viable option given the pace at which business change is required.

Why Third Party Package?

A good commercial system will not only cover the needs of all its customers but present them with facilities and opportunities they may not yet have considered. Major suppliers spend millions of pounds in Research and Development (R & D) to maintain their position in the market. It is not viable for a single user organisation to compete with this for its in-house systems even with unbudgeted effort being expended by non-technical staff in attempting to keep abreast of ongoing developments in student records systems. Once implemented the responsibility to keep a package current lies with the supplier. A commercial system will provide regular new releases, including technical refreshes, and functional improvements throughout the life of the solution. Functional improvements include areas such as UCAS and HESA related changes which currently devour internal development resource.

Refer to 'Section 3 – The Way Forward' for more detail.

Action requested

1. Agreement that significant investment in process improvement and student information systems is required to deliver the University's strategic objectives and meet the needs of students, academic staff and support staff.

2. Agreement that the University should invest in a third party system to replace the current student records systems.

3. Appointment of Project Champion (s).

4. Provision of funding, approximately £650K, to enable the first stage of the process to be progressed. The first stage would include top level process review, requirements gathering, production of an invitation to tender and selection of a preferred supplier. This will take 9 to 12 months. Refer to Section 5 for more detail.

Prepared by: M McLaughlin

Last modified on: Wednesday 16 September 2009

UNIVERSITY *of* GLASGOW

Business Case for the Review of Student Administrative Processes including the Procurement of a Commercial Student Information System to Support the New Processes.

1. Introduction – Why change is needed

The University of Glasgow has developed a strategic plan for the period 2006 – 2010 targeting entry into the UK's top ten and world's top 50 research-intensive universities. This incorporates the detailed strategies covering Learning and Teaching, Research, Human Resources, Finance, Infrastructure and other key activities to create a far more detailed vision of where Glasgow wishes to be in five years time, and how it wishes to position itself in relation to new challenges and opportunities.

The Strategy acknowledges an increasingly competitive environment which could perhaps be summarised as new players entering, new delivery channels being established, institutions forming partnerships, international demand increasing, new forms of distance learning being viewed as complimentary or as an alternative to the traditional teaching model, and finally the HE sector on a global basis being forced by the market to become more student centric and adapt to their changing requirements including the desire for flexibility, choice and ability to personalise their learning experience.

The overall picture is of course a great deal more complex and wide ranging, however, the above examples attempt to illustrate that over the next few years the market will undoubtedly change and Glasgow, if it is to achieve its strategic aims, must correctly position itself.

One particular challenge is the management of the future Student Lifecycle. Major improvements are needed to the processes which support learning and teaching, the provision of Management Information (MI) about students and delivery of services to students. The current software application underpinning and supporting these activities, Student Records System (SRS), of which WebSURF is one component, is not able to meet this challenge. In order to do this and to deliver a service that is responsive, efficient and progressive we must invest in both process improvements and Student Information System (SIS) development. If development continues 'as is', this would result in an accelerated decline in service levels in comparison with our competitors.

An analysis of the University's strategic objectives has been carried out and with the assistance of two independent consultants we have established the priorities of senior staff in terms of what their needs are to support delivery of strategic plans.

2. New functionality and key improvements required

The key requirements detailed below demonstrate the scale of the challenge to improve student information systems and lifecycle management in order to meet the strategic aims of the University.

2.1. Recruitment and Admissions

Recruitment: We must be able to provide facilities to track enquiries, keep in touch with enquirers through to recruitment and provide MI to aid recruitment. Recruiters need to be able to do much more post enquiry and post application follow up, staying in contact and converting more students. A single source of information on enquiries, a method of analysing data, and an automated method of generating follow up action, is needed across the University. This will help to target groups for recruitment activity, for instance allowing us to concentrate activity on increasing student numbers in areas where there is greater capacity for growth and also enquiries and applications from specific markets to achieve diversity. It would also enable recruitment and admissions staff to maintain contact with enquirers and applicants. This is seen as key to:

- Meeting the challenging international targets.
- Improving conversion from enquiry to registration.
- Increasing the tariff on entry of our home students.

Admissions: The core systems for processing applications and admissions also need to be significantly upgraded to meet the challenge of increasing recruitment. The development of the first stage of an online application system for postgraduates is a step in the right direction but the core admissions systems need improvement to meet the business needs of IPS and RAPS. Staff need a core system which streamlines processes so that they can respond more quickly to applications which has a direct impact on the take up of offers. There is also a desire to be able to automate far more of the admissions process, for instance at confirmation of offer stage for undergraduates.

Whilst it is difficult to estimate the effects on projected growth if we do not have the systems in place to properly underpin recruitment, Sharne Procter estimates projected growth will be down between £0.5M and £1M per annum in lost fee income. It should also be borne in mind that our competitors are not standing still in terms of systems development and those that we aspire to emulate are moving ahead all the time, widening the gap between us.

2.2. Retention

Part of the retention issue requires more attention to recording attendance at lectures, tutorials etc. An equally significant thread is the need to be able to collect appropriate data, extract and analyse it quickly and enable behavioural modelling to be undertaken. This would allow us to be able to predict those at risk and provide early warnings of problems. To do this requires a comprehensive underlying student information system which enables us to record attendance data, relevant data about students, share information between all those who have a legitimate need to see it and provide easy to use flexible management information structures and tools.

In addition, provision of easy access to information and support, through technology, could benefit those students most at risk of failure by helping to increase their sense of community.

2.3. Management Information

There is a need to radically improve management information for:

- Institutional and Faculty strategic planning and production of Key Performance Indicators (KPIs).
- Operational management, planning and budget monitoring at Faculty level. Faculties require access to information on the entire student lifecycle from

cradle to grave, on student recruitment and retention, financial information at Faculty, departmental, programme and individual student level.
- Day to day management of staff/student interaction within departments.

MI needs to be accurate, consistent, complete, quick and easy to extract and able to be presented in a variety of ways according to the audience. To achieve this requires:

- **The data to be structured in such a way that lends itself to the analysis required.** (The current data set is historically based on the data required for Higher Education Statistics Agency (HESA) and Scottish Funding Council (SFC) returns rather than internal management needs. This leads to Planning Services having to spend excessive time preparing MI for senior management, for example over three months of work to produce retention statistics and often have to use approximations of the data sought because data is not structured to meet our internal needs.)

- **The data to be complete and accurate.** (The lack of accurate MI required for planning and budgeting within Faculties, highlighted in budget meetings, and the problems with the dataset used as the basis for the National Student Survey (NSS) illustrates the fact that this is not always the case with the current system.)

- **A tool that enables users to run pre-prepared queries and formulate their own queries.** (Stakeholders' views demonstrate that BI/Query has failed to keep up with our needs, as well as lacking flexibility, in common with most such tools it requires the creation of 'business views' to sit between the database and the user, simplifying access, but the views we can use now are limited to single system views at any one time. Implementation of a more sophisticated and comprehensive tool, together with the improvements to data structure and data quality could enable the creation of such views coupling information from other systems, such as Finance, to create a cross system analysis capability.)

2.4. Student centric services

As part of the plans to transform student service delivery and provide efficient and effective student services, we need to extend on-line services for students to include:

- Making payments.
- Booking appointments with support services such as Effective Learning Advisers and Careers Advisers.
- Provision of bank letters/other certifying letters and transcripts.
- Graduation enrolment.
- Absence reporting.
- Individual electronic timetables for classes and exams.

2.5. Developing more flexible programmes of study

The Learning and Teaching Strategy includes the objective "to increase the University's reach and standing in learning and teaching internationally and develop the University as a culturally diverse learning community". To enable this we need to have processes and systems to be able to address the requirements of the

international market, respond rapidly to new opportunities, support e-learning and other flexible forms of programme delivery. Examples of flexible delivery which cannot be supported by current processes and systems without individually developed workarounds, which are inefficient and unsustainable, include:

- Off-shore on joint programmes such as those being developed by the Business School in India and China. We need flexible systems that enable us to provide the full range of student lifecycle support for such programmes, possibly offering multi lingual capabilities, certainly allowing for flexibility in terms of registration, admissions, assessment and student support.
- Models for Continuing Professional Development (CPD) such as the Credit Accumulation and Open Registration programmes being considered by the Faculty of Education.
- Partnership arrangements both in the UK and internationally.

Our current systems demand modification to meet any new need. What we require is inherent flexibility to accommodate unpredictable needs that may arise in the future.

2.6. Programme approval system

Work is currently under way to implement a new Programme Information (PIP) System, based on an Electronic Document and Records Management (EDRM) package. If the full benefit of this system is to be achieved it must be tightly integrated with the underlying SIS so that programme and course information flows seamlessly from design, through approval and into marketing, recruiting and teaching. Both the approval system and the record system must display an equal degree of flexibility in allowing present and future course structures to be catered for with the minimum of effort. This need is not met by our current SIS.

2.7 Improved financial processes

Improved processes for fee setting, collection and management are needed to meet the requirements for discounts/bursaries/scholarships, e-payments and monitoring of income at Faculty level. With increases in the proportion of international and postgraduate students we need systems which allow flexibility in fee setting and collection through facilities such as e-payments and provide the MI required.

2.8 Enabling staff to work in/be supported by an efficient and responsive administration which prizes customer service

We need to radically improve end-to-end process design using tools such as automated workflow to provide more responsive administrative support, aid decision making and reduce the administrative burden on academic staff. Workflow can act as an agent to prompt action and to move information through the process stages required. For example, presenting an application for a research student to the correct responsible academic for decision and then automatically sending the decision to administrators for action on references and fees etc., thus automating a major part of the burden of keeping track of an application.

3. The Way Forward

Since 1994, the University's Student Records activities have been supported by an in-house system which has been subject to continual enhancement and technology refreshes. Through WebSURF we now have some very good and popular client interfaces based on modern technology through which, for example, students and advisers of study can manage registration and course changes on-line. In addition, other users have the ability to view individual student records. However, WebSURF is only a relatively small constituent part of the overall Student Records System and

the suitability of the whole to provide a foundation for future development needs to be considered. To continue development as at present, with a relatively small development resource tackling 'high priority' areas only is not a viable option. While this method has delivered for example the successful WebSURF, the time taken to deliver that facility, and the deficiencies in other areas, demonstrate that continuing with this method will prove too little, too late and will result in the gradual deterioration of services which need to be, not just maintained, but significantly improved. It should also be noted that this is not a zero cost option. The current annual costs for MIS Student Records resource, Student Records Improvement Programme (SRIP) Project Managers and input from functional experts across the University is approximately £700K. Over the next ten years it will cost the University approximately seven million pounds to maintain the current system and develop it at the current rate, but this will not provide the extra features needed as the competition accelerate ahead by an ever increasing margin.

Whilst the close allegiance to the in-house solution, particularly WebSURF, is understandable, we believe it is timely to take a solid business decision based on the demands facing the University, and the capacity of in-house systems to deliver to the requirements of 21st Century systems. The degree of change / improvement now envisaged drives a key strategic decision point to be addressed.

The fundamental structure of the database has provided a working solution for many years; however difficulties in extracting management information from the current system point to an underlying need to review the structures to bring them up to a level to meet current expectations. At the same time a data cleansing exercise should be undertaken. Other core facilities are in need of extensive review - as can be seen from the table below which highlights the major lifecycle components and where significant improvement, further development or analysis is required. Refer to Appendix A for additional detail.

Processes	**Significant improvement required**	**Further development required**	**Further analysis required**
Marketing and Recruitment Management	**YES**		
Applications and Admissions	**YES**	Development work for changes imposed by UCAS often extensive.	
Enquiry Management – Recording and Tracking	**YES**		
Registration	**YES**		
Student Finances	**YES**		
Progression, Assessment and Examinations	**YES**		
Curriculum Management	**YES**		
Graduations and Awards	**YES**		
Alumni			**YES**
Employability and Careers	**YES**		**YES**
E-Learning			**YES**
Statutory External Reporting – SFC, HESA, DLHE, NSS		Development work for changes imposed by HESA & SFC often extensive.	
MI Reporting	**YES**		

Processes	Significant improvement required	Further development required	Further analysis required
Research Management		**YES**	

Note: Programme & Course Management is under development separately through the PIP & EDRMS projects. Exports of data provided to various services, such as Library & Accommodation.

To provide the new functionality and key improvements identified in 'Section 2' a major investment programme is required.

The options to be considered are:

1. Commence planning an in-house (self build) development programme with significantly increased investment to speed delivery.

OR

2. Commence planning to move to one of the leading third party package offerings.

3.1 Option 1: In-house Development

Extensive investment in an in-house development programme would enable us to build on the current platform, extending the WebSURF facility to ultimately provide a system that is specifically tailored to the needs of the University of Glasgow. Although there is a core technical team already in place this would need to be increased considerably to deliver a complete product in a shorter, more intensive delivery period. Functional staff are already familiar with the WebSURF platform potentially making the introduction of any new modules easier to implement.

However, an in-house development programme carries several risks which must be considered:

- It is likely that the existing core system would need to be brought up to a standard where it forms a sound, long term basis for moving forward, in particular the data structure and data quality for Management Information purposes.
- Buying into a product not yet fully designed or developed would mean that we could not be certain of what the end product would look like. As development progresses the system could become too customised as functional areas demand tailored requirements. Development cost is likely to be viewed as internal resource and time and therefore this customisation is less likely to be discouraged.
- Basing major expenditure on a core bespoke system would lock us in for the future as reworking costs would be greater than replacing it now.
- The scale of development would always be proportional to the size of the development team, and we would be totally dependent on this resource. Difficulties may be encountered when recruiting and retaining staff with necessary technical expertise; this has been a problem in the past.
- Progress would always be limited as functional staff would need to make a significant contribution to the design. In order to maintain even a core system the amount of unbudgeted effort from non-technical staff which will be consumed is potentially immense just to stay abreast of developments in the area let alone ahead of them.
- Future plans will depend on the vision of University staff and their research into the market; this task would need to be undertaken in addition to their normal duties. These plans may be limited by Glasgow's forward vision.
- Constant development burden to be budgeted for to support continuous development and maintenance of externally driven facilities, such as HESA

and UCAS (which are notorious for change). Resource allocated to statutory updates might detract from new development activity, as the level of resource required can be unpredictable.

- o Earmarked resource might be diverted to other tasks; for example setting up with a new partner.

3.2 Option 2: Third Party Package

The IT industry has moved away from in-house development towards commercial solutions wherever respected, reliable and robust package solutions support required functionality. This is based on the adage of 'why reinvent the wheel', with many major commercial companies declaring in favour of adopting standard solutions provided by those whose business it is to develop software. This enables the users to benefit not only from the R & D effort of the supplier but also from the expressed needs of their peers – which any good supplier will take account of in the continued development of their solution.

The argument may be further strengthened by identifying the value of:

- The R & D effort undertaken by package suppliers. Major suppliers spend millions of pounds in Research and Development (R & D) to maintain their position in the market and this is not the core business of the University.
- Regular new releases, including technical refreshes, and functional improvements throughout the life of the solution. Functional improvements include areas such as UCAS and HESA related changes which currently devour internal development resource at times.
- Testing carried out by the supplier and other user institutions, reducing risk.
- Glasgow resources able to be focused on process improvement rather than software development.
- Support in the form of general care and maintenance, patches etc, undertaken by supplier.
- Membership of a wider user community sharing ideas, concerns and where appropriate recommendations on how to resolve problems and challenges.
- Leading package suppliers have strong relationships with platform providers (Oracle, Microsoft etc) and other complimentary companies such as those supplying Finance, Business Intelligence and VLE solutions. Solutions will keep pace with technology and integration issues will be reduced.
- While in the short term procurement of an external Student Information System will be costly, in the medium and long terms (five to ten years) we will progress faster and spend less by moving from in-house development of core systems in favour of an off the shelf package
- The industry is now moving in the direction of Service Oriented Architecture (SOA), which will bring a new complexion to the integration of solutions and the user interface to them. Most major suppliers are already incorporating this architecture in their development plans. Glasgow cannot hope to move in this direction solely on in-house effort and will be left trailing behind.

Of critical importance to maximising the value of any third party package solution is the avoidance of bespoke development. Process re-engineering is the key element and every effort would be made to avoid any development work associated with providing Faculty, or course specific, unique features.

The purchase and implementation of a commercial system is by no means straightforward. While there are market leaders there is no single system which is an obvious choice for us, as other universities have found. However, the combined wisdom of the sector is undoubtedly to move in this direction - seventeen out of the twenty Russell Group Universities have moved or are in the process of moving to a

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commercial system. Refer to Appendix B for comparative information in relation to the Russell Group Universities.

3.3 Independent Views

Two consultants were invited to visit the University, to talk to key staff and give their opinion on our options.

[redacted] established specialists in the Education Sector commented:

> "We have already stated our view that given the available evidence the present development strategy for student MIS cannot keep pace with the business need and is no longer fit for purpose.
>
> The University must invest in a step change in its student system capabilities.
>
> To meet the functional requirements sought by users, and which we are clear represent the application of sector-wide best practice, the university must seriously consider investing in a modern off the shelf Student Management Information System (SMIS). Internal resources are insufficient for this purpose and we believe that over time superior Value for Money can be achieved through an off the shelf procurement."

[redacted] and now an independent consultant with experience of leading the implementation of both bespoke and package solutions for student systems commented:

> "The choice is between investing more in continued in-house development of the core system, while building further facilities, possibly provided by packages, on this foundation and implementing an off the shelf commercial solution to replace the core system.
>
> It is accepted wisdom that business systems such as Finance and HR/Payroll should be commercial packages. While in the past some have argued that Student Information Systems are different, being more idiosyncratic, a brief survey of the actions of the majority of Universities shows that this opinion is losing ground (with seventeen out of the twenty Russell Group Universities already having implemented, or being in the process of implementing, a package solution).
>
> Is the state of development of the Glasgow system such that it is in a relatively unique position where continued in-house development will be more beneficial than purchase of a package solution? In my opinion, it is not. The work required to bring the database up to the standard needed for good management information, and to cleanse the data, together with the re-development already identified, outweigh the effort to implement a commercial system. Implementation of a commercial package, even with an extended timescale to allow for process change, will deliver more widespread results faster than in-house redevelopment and allow the University to move forward faster on its strategic aims. What is more over a period of ten years in-house redevelopment is likely to be more costly than a commercial system, and support effort and cost thereafter will certainly be higher."

3.4 Process review and re-engineering

Successful implementation will demand University wide process review and redesign which will offer a major opportunity for improving performance, the student experience and freeing up academic time. The aim will be to ensure that processes are streamlined to meet the needs of the University as a whole and designed to be student centric. The fact that current processes and systems need to reviewed and redesigned has been recognised by the Academic Structures Working Group which has reviewed the University's academic systems: its academic year, programme and course structures, examination scheduling, programme/course information system, and student record system. The summary of the Working Group's report states that "It has found major problems in all these academic systems, both individually and in the way they interact. These problems cause real difficulties for both students and staff in many parts of the University. Students who are taking two or more subjects encounter clashes between examinations in one subject and lectures in another subject. Academic staff, particularly those who design or coordinate joint programmes, are forced to divert significant time to working around system problems. Administrators, particularly those who work in the student support services, are hampered by the complexities and inconsistencies of our systems. All these difficulties translate into real costs to the University."

4. Recommendations

4.1 A major programme of investment in process improvement and student information systems is required to deliver the University's strategic objectives and meet the needs of students, academic staff and support staff.

4.2 The analysis of the options leads to the conclusion that the way forward is to invest in a third party package solution to replace the core student records system in conjunction with a major process improvement programme.

4.3 Planning to move to one of the leading third party package offerings should commence. The first stage of this will be to carry out a top level process review, requirements gathering, creation of an invitation to tender for a new system and selection of a preferred supplier (Phase 1). Phase 2 would cover the time from contract signing through to full implementation.

4.4 The negotiated procurement process should be adopted. This caters for early identification of short listed suppliers, working with them to determine process design options and maximising the experience and knowledge of those leading quality suppliers rather than the traditional method of developing requirements in isolation before commencing procurement.

4.5 This will be a major programme which requires sponsorship by SMG and the appointment of a champion at that level.

The recommendations are fully supported by two independent consultants**.**

5. First phase of programme

5.1 Phase 1: Principal activities

- Consolidate the strategy for Student Information and Management Systems.
- Understand how existing processes or systems actually operate.
- Expose and address such process and system deficiencies to improve performance by means of process change, organisational change, staff development and the enabling use of technology.
- Baseline existing processes, a necessary precursor to any subsequent change programme.

- Clearly specify detailed requirements to facilitate production of an Invitation to Tender (ITT).
- Review and measure third party solutions to enable options to be provided and an informed decision to be taken as to whether the features required can be delivered by one or more third party packages
- Estimate the cost of the best possible solution established.
- Plan future course of action.

It should be noted that the work involved in Phase 1 would be invaluable in planning continued in-house development should it be concluded that no third party package was suitable. IPSC discussions and both independent consultants consider this to be a highly unlikely outcome.

5.2 Outline Roadmap: Milestones

Phase 1:	
Gain budget approval for Phase 1	Late June 07
Issue tender for third party consultancy	Issue early July 07, select early Sept 07
Set up project and establish project team	Complete by end Sept 07
Business process analysis of existing processes, systems, architecture and interaction, requirements gathering, benchmarking activity at UK & International universities, review of third party offerings and production of an ITT	Oct 2007 to end March 2008
Detailed Business Case	Feb – March 08
Negotiated Procurement process.	March – end May 08
Selection of one or more solutions, negotiation and finalisation of contracts.	June – Aug 08
Detailed planning for Phase 2 (implementation) and final budget approval for Phase 2.	Aug – Sept 08
Phase 2:	
Implementation	A great deal will depend on supplier selection. Comparing similar institutions 12 months was required for partial implementation with the remainder implemented over a further 6 – 12 months. Implication of earliest possible live date for selected modules of Oct 09.

5.3 Phase 1: Cost Breakdown

1. Staffing costs (additional project resource and backfilling existing resource) - £373.5K
2. Specialist consultancy resource - £233K
3. Software to support BPR - £40K
4. Other costs including workshops - £7K
5. Total £654k

Appendix C provides a more detailed breakdown of the costs of Phase 1.

One SRIP Project Manager can be allocated immediately without the need for backfill.

The costs are based on being able to maximise the use of the Fixed Term Contract Market for most of the positions rather than “daily rate” type contracts which are more

commonly seen for more senior IT positions. If the ongoing SRIP development can be reduced at an earlier stage this could release MIS staff to the roles of Analyst/Programmer.

The budget required for Phase 1 is £654,000.

Planning with a specialist consultant will identify the potential for reducing these costs and time through adoption of the negotiated procurement process. This process caters for early identification of short listed suppliers, working with them to determine process design options and maximising the experience and knowledge of those leading quality suppliers rather than the traditional method of developing requirements in isolation before commencing procurement.

5.4 Phase 2: Costs

Including University staff costs the overall cost of Phase 2 should be between £5M and £10M. Examples can be found of institutions spending less and on some occasions more. Detailed planning work towards the end of Phase 1 would determine a far more accurate and complete picture.

6. What happens to the current Student Records Improvement Programme?

As can be seen from the outline roadmap, in 'Section 7 – Principal Activities and Estimated Costs', it would take at least two years from the decision to commence Phase 1 to implement even the first phase of a packaged solution. During that time the SRIP would require to run in parallel, although each development would be questioned and a judgement made by the Programme Board on the return on investment given the limited remaining lifespan of the current in-house solution. Realistically, development work would reduce over the two year period with the first noticeable reduction in new developments occurring towards the end of Phase 1. It is at this time however that data migration from the old system to the new would become a key topic of discussion and SRIP development resource would be required to assist in this area.

The costing schedule, Appendix C, includes backfill to cover certain key individuals moving from SRIP to Phase 1 of the new project at an early date.

Longer term, following implementation, the role of IT staff would change giving us the opportunity to focus on business advantage rather than maintaining the same core systems that everyone else uses. Process design and software configuration of business rules would then become the focus.

7. Action requested

1. Agreement that significant investment in process improvement and student information systems is required to deliver the University's strategic objectives and meet the needs of students, academic staff and support staff.

2. Agreement that the University should invest in a third party system to replace the current student records systems.

3. Appointment of Project Champion (s).

4. Provision of funding, approximately £650K, to enable the first stage of the process to be progressed. The first stage would include top level process review, requirements gathering, production of an invitation to tender and

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selection of a preferred supplier. This will take 9 to 12 months. Refer to Section 5 for more detail.

Report compiled by: **Sandy Macdonald, Director of IT Services**
Christine Lowther, Director of Registry

Supported by: [redacted]

14th June 2007

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Appendix A

Processes	Comments	Significant improvement required	Further development required	Further analysis required
Marketing and Recruitment Management	• Not supported centrally. • Statistical analysis and tracking information not available.	**YES**		
Applications and Admissions	• Web enabled application available for Postgraduate Students. • Substantial developments required in other areas of admissions, such as online applications for visiting students, payment of deposits, processing visa applications and automatic confirmation for Undergraduates.	**YES**	Development work for changes imposed by UCAS often extensive.	
Enquiry Management – Recording and Tracking	• Not supported centrally. • Statistical analysis and tracking information not available. For example monitoring turnaround times and conversion rates.	**YES**		
Registration	• Supported by WebSURF: Registration and course selection for Undergraduate and Postgraduate students. Individual photographs viewable through WebSURF. • Supported by DACE Enrolment system (web based): Enrolment for DACE students. • Improvement required supporting management of students from Associated Institutions. • Not supported: Open Registration across sessions.	**YES**		
Student Finances	• Some aspects supported by WebSURF. • No online payment facilities for direct debit or credit card payments. This is required to support Application Deposits, Tuition Fee Payment, Graduation Enrolment and other ad hoc payments. • Significant development required to support fee processing such as fee setting, fee prediction and fee calculation for individual students, invoicing, credit control/ debt pursuance, bank reconciliations, links to the General Sales Ledger, student financial aid and the provision of management information.	**YES**		
Progression, Assessment and Examinations	• Supported by WebSURF: UG Faculty transfers, Withdrawals, Disability Special Arrangements & Adjustments, Viewing Examination results (also through ExamSURF), • Under development in WebSURF: Assessment Marking & Recording – final results is currently • Not supported centrally: Attendance Monitoring, Sickness Recording, Annual Progression, Appeals, Examination Timetables, Assessment Marking & Recording – course components, Examiners (Internal & External), Exam Boards.	**YES**		
Curriculum Management	• Not supported by WebSURF: Class/Lab/Tutorial enrolment feeding to Class timetables, Capping of full courses, Honours options, Placements, Online printing of transcripts. • Supported by WebSURF: Advising and some curriculum validation.	**YES**		
Graduations and Awards	• Not supported by WebSURF.	**YES**		
Alumni	• Data export to Raiser's Edge.			**YES**
Employability and Careers	• Not supported centrally: Personal Development Plans. • Supported by JEM (Jobs & Events	**YES**		**YES**

Processes	Comments	Significant improvement required	Further development required	Further analysis required
	Management System – Prospects): Careers Advising.			
E-Learning	• Supported by Moodle – not linked to WebSURF although access controlled through SRS.			**YES**
Statutory External Reporting – SFC, HESA, DLHE, NSS	• Batch procedures for return production. • DLHE supported by web enabled application.		Development work for changes imposed by HESA & SFC often extensive.	
MI Reporting	• Some use of BI-Query for Market Intelligence, Budgeting & Planning, Key Performance Indicators. • Not supported: 'Cradle to grave' reporting fully integrating information from all corporate systems.	**YES**		
Research Management	• Supported by WebSURF: PGR Data. • RAE information provided by BI-Query, flexible MI could be required in future.		**YES**	

Note: Programme & Course Management is under development separately through the PIP & EDRMS projects. Exports of data provided to various services, such as Library & Accommodation.

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Appendix B

The following table provides comparative information in relation to the Russell Group Universities.

Student Information System	Russell Group University
Oracle/Peoplesoft	University of Oxford Imperial College London University of Cambridge University of Manchester Queen's University Belfast
SunGard/SCT Banner	University of Birmingham University of Leeds University of Liverpool University of Southampton
Tribal/SITS	University of Bristol Cardiff University King's College London London School of Economics & Political Science University of Warwick University College London (also have some elements of Banner) University of Edinburgh
SAP	Newcastle University
In House development	University of Nottingham (use SunGard Luminis portal) University of Sheffield (use SunGard Luminis portal) University of Glasgow

Russell Group Information provided by [redacted], April 2007

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Appendix C

Phase 1 - Estimated Costs				
Description	**Backfill/New resource**	**Time period**	**Total Estimated Cost £K**	**Comments**
Staff				
Project Director (Functional)	Backfill	12 months	30.0	Backfill in Registry to free C. Lowther
Project Assistant	New resource	12 months	31.5	This is a new resource that would assist with the day to day running of the project such as the interview/workshop schedule and logistics, project communications and documentation. Cost is based on Spine Point 29, February 2007 figures, inclusive of employer costs.
Senior Analyst/Programmer x 2	To backfill existing MIS resource	12 months	112.0	Preferred option: 2 senior programmer/analysts for 12 months on a fixed term contract @ £40,000 per annum x 1.25 = £50,000 + agency fee of £6000 per person. This resource is required to backfill MIS resource to be released full time to carry out the business analysis and tendering work.
Functional Experts	To backfill existing resource	6 months	200.0	Assume 8 FTE for 6 months to support Business Process Review and Requirement Gathering. Cost based on £50K per FTE.
Experienced specialists – External resource	New resource	12 months	220.0	1 x Technical Programme Manager for 12 months at a cost of £100K per annum. This cost is based on the assumption that we will be able to secure a Programme Manager on a fixed term contract. Ideally HE experience. 1x Higher Education Expert based on consultancy fees of £1000 per day incl. VAT. Assume 10 days per month over 12 months. Total cost £120K. This resource would support the formulation of toolkit and techniques, plan & scope, facilitation of workshops; write ups, consolidation of findings, requirements analysis, and preparation of ITT and assessment of tenders.
Specialist Consultants - Expenses		12 months	13.0	Assume £250 per week over 52 weeks = £13K based on one external consultant.
Software				
Process Mapping Tool			25.0	License fee including implementation
Annual maintenance			4.0	
Server that will host product			3.0	
Training			6.0	Assume 6 FTE require training
Consultancy support			2.0	Assume 2 consultancy days required
Other costs				
Workshops - Catering			3.5	Workshops will be full day events with lunches and coffee provided.
Visits to UK & International universities			3.6	Assume 2 people per visit
Overall total estimated cost			**653.6**	