BUE IT Strategy 2012 to 2015

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December 2011
1 Introduction

This document sets out the Strategy for the development of IT at BUE over the next three years. The role of the IT Strategy is to play its part in meeting the challenges that BUE will face during this period in all its activities. These challenges are summed up as follows:

The University is going for growth and diversification and will have to face issues associated with its location avoiding problems created by its remoteness. This will lead to the need to improve its procedures and processes and the need to recognize the benefits of delegation.

The role of the IT Strategy is to support the University plan in meeting its overall objectives over the next three years. The University plan for teaching and learning, for research and for the development of its administration will ask questions of IT. The IT Strategy must support the aims of these plans and play its part in helping deliver them. Discussions with members of the President, the Vice President and other members of the Executive Group were therefore vital to the work in determining this IT Strategy.

This IT Strategy has been put together by a Group drawn from all the Faculties of the University and chaired by the UK eLearning Adviser. Appendix 1 sets out the membership of this Group.

The Group carried out a comprehensive information gathering exercise. This is described in Section 2 of this document. From this exercise it has been possible to set out a vision for BUE in 2015 and this is set out in Section 3.

In Section 4, the current IT position at BUE is described. In particular, the present deficiencies are identified. One of the first aims of this IT Strategy has to be to overcome these deficiencies.

The work of the University IT Department will be vital if the IT Strategy is to be implemented successfully. Section 4 also considers how the IT Department is carrying out its role at present.

Sections 5 and 6 look to the future. In Section 5 the challenges facing BUE over the next 5 years are set out. The role of IT will be to support the University in meeting these challenges. Time and again the importance of IT was emphasized to the members of the Group putting together this Strategy.

Section 6 sets out the detail of the proposed IT Strategy. It considers the needs of all parts of key activities of the University; teaching and learning, research and the University administration.

Section 7 addresses the important role that the University IT Department will have to play in delivering this IT Strategy. It makes recommendations on staffing levels, on training and on structure within the Department.

In Section 8 recommendations are made on the Governance of IT within the university Committee structure. Importantly it recommends a separation of committee responsibility for policy and strategy from responsibility for operational issues.
An IT Strategy can only be implemented if there is finance available to do so. This issue is addressed in Section 9. It recommends that an IT budget is created. This will ensure that IT developments take place in a timely fashion and that they are done in a planned and financially effective way. It is recommended that in normal financial circumstances this budget should be expected to be available for each year covered by this IT Strategy.

The lack of a planned development of IT at BUE has been the major factor driving the production of this IT Strategy. Looking forward there are two issues which need to be taken into account. The first issue is the need to oversee the implementation of this Strategy over the next three years. The University will have to put in place mechanisms to do this.

The second issue is to continue this IT planning process throughout the next three years. IT is a rapidly developing technology. New challenges and opportunities will arise. The University must have in place means to plan for these.

2 Information gathering exercise

The Group which has overseen the development of the BUE IT Strategy recognized the need for extensive consultation with all parts of the University if the outcome was to be truly representative of the needs of the community.

The various parts of the University were asked for a response to the following three questions:

- What changes do you see in your department/faculty over the next three years? This could be more students, more staff, new courses, new research areas and perhaps changes in accommodation
- What are your present IT problems and shortages? This should cover hardware, software and networking
- Are there any particular IT facilities which you think would help you overcome the present IT problems and would also be required to meet the future changes you have indentified?

The input was obtained by a series of methods, namely:

1. Face to face meetings with Senior staff of the University. – President and Vice Presidents, Registrar, Deans
2. Face to face meetings with representatives of each department nominated by the Head of Department.
3. The circulation widely in the University of an e mail asking for a response to the three questions

3 The University in 2015 – A Vision

This section sets out a vision for BUE in 2015. It is based on the discussions which the members of the Group had within their own Faculties and with members of the University Executive Group
Plans are in place for an additional five Faculties in the University and they should be in place by 2015. The new Faculties will be Dentistry, Pharmacy, Education, Arts and Humanities, and Mass Communications and New Media.

This should see the number of students increase from the current figure of about 3,000 to at least 4500. Such an increase will require additional buildings/space, new staff and an investment in equipment.

Some buildings are already in the pipeline. The proposed Library will be open before 2015. A Student Residence and improved sports facilities are also planned. However, the necessary additional space for teaching and research will also need to be in place.

This will create for the first time a true campus university and with a resident student body this will see university facilities open for much longer hours than at present.

The University sees itself as a research led institution and priority will be given to achieving this. The number of Masters programmes will increase to about 10 by 2015. This will create a significant postgraduate student community which will have to be catered for. One outcome of these research initiatives should be an increase in research income and part of this will help to obtain IT equipment which is suited to research activity.

The way in which teaching is provided in the University will change. There will be a greater emphasis on learning rather than teaching, and in particular on independent learning through eLearning. In addition, parts of the examination process will change with the introduction of some on line examination.

New means of the delivery of teaching will be used. One example will be the use of videoconference technology to share lectures with other institutions including Loughborough University and the other validating UK institutions.

Importantly, the next four years will see BUE developing into an institution which is making a contribution to the wider Egyptian community. The research quality and output from the university will provide opportunities to make an economic contribution to the nation. The students and staff at BUE will increasingly be seen as helping to create a positive image for Egypt on a national and international stage.

The Administration of the University will undergo changes in two important areas. Firstly, there will be a gradual increase in the access to Management Information by all levels of staff at BUE. Read access to the financial system and the student record system will become normal for Deans, for Heads of Departments and for other academic staff. This will help them to carry out their respective duties more effectively. There will also be a degree of devolution of write access to appropriate staff. Adequate controls will be built in to ensure that the security of data is not compromised.

The second change within the University administration will see a reduced dependence on paper with an increase in an on line based approach. It is not suggested that the University will get rid of paper completely – that will never happen. However, a process will be in place which
will reduce the dependence on paper for many of the day to day activities associated with administration at central, faculty and departmental levels.

IT will make an important contribution in the delivery of this vision of the University in 2015. The purpose of this IT Strategy is to ensure this contribution can be made. It will require an appropriate level of well planned funding. It will require staff of the University to be equipped so that they can deliver their responsibilities to develop research and to carry out their teaching. It will need the University to have a network infrastructure which is reliable and resilient and which has sufficient capacity to support the demands placed on it. It will require an IT Department which has sufficient staff with the necessary skills to support and develop the quality of IT service the University needs and deserves.

4 The present situation and its deficiencies

4.1 The present situation

The present level of IT facilities and services at BUE has been investigated by the Group developing this Strategy and from this a number of conclusions can be drawn.

There are a considerable number of workstation labs located at various places across the campus. Four labs with a total of 142 workstations are provided in building B and are managed by the IT Department. These are largely free for general use though then can be booked for classes. In addition, there are a number of workstation labs located in individual Faculties which are controlled by the Faculties. The Faculty of Nursing has two labs with a total of 70 workstations, ICS has four labs with about 30 workstations in each and Engineering has 10 labs with a total of about 180 systems. There is a facility in the Library which has 16 workstations. The workstation labs in individual Faculties are sometimes equipped with special PCs and with software which is appropriate to the needs of departments within the Faculties.

Most of these systems have been purchased recently (within the last two years). However, there is no formal replacement policy in force. In all there are about 350 workstations on the campus for student use.

All academic staff have access to their own workstations.

Wireless internet access to the internet is available in the Campus open areas. In 2011 the University upgraded wider internet access by means of a fibre connection which can operate at up to 34Mbps. Previously this bandwidth had only been 4Mbps and, not surprisingly, this major upgrade has made a very positive impact. All staff and students have their own e mail accounts with this service being provided by Microsoft.

Within the University’s website there is access to an eLearning website. This uses Moodle software which is a powerful tool which provides students with access to relevant learning material. It also provides means of communication between teachers and learners.
All lecture halls are equipped with audio and video devices such as microphones, speakers and projectors. Most are also equipped with Symposium systems.

All staff in the University Administrative have their own workstations.

The University IT Department undertakes the purchase, installation, support and development of all the equipment referred to above. To undertake this activity the Head of IT has the following staff:

1 Systems Administrator

1 Assistant Systems Administrator (currently on unpaid vacation)

3 Help Desk staff (1 Senior IT Support and 2 IT Support)

1 Network Administrator

1 Network Support staff (working as Help Desk in Building D)

1 Network Technician

2 Computer Labs IT Support staff

5 Audio Visual Aid staff (one of whom also undertakes computer help desk work)

1 person responsible for systems associated with security gates etc

Two posts are currently vacant. One is the Deputy Head of Department post and the other is an Audio Visual post

There is no clerical post within the IT Department.

4.2 Current deficiencies in the IT facilities and Services

From the information gathering exercise the following comments and deficiencies of the current IT facilities and services have been identified. One of the first requirements of the IT Strategy is to consider these deficiencies and to try to address them.

First and foremost, there has been an absence of any mid or long terms planning of IT. This can lead to short term solutions being provided and to an inefficient use of the limited funding which is available. It can lead to significant expenditure being undertaken without consideration of overall priorities. It risks IT developments getting out of step with the University’s mid to long term development plans.

A particular consequence of this is a lack of any policy for the replacement of ageing workstations. Another is that a greater emphasis has been placed on hardware provision when today the availability of good applications software is equally important. A particular example of a lack of planning last year led to delays in providing the bandwidth upgrade. This caused severe problems for all research and teaching activities.
Following this increase in bandwidth last year, there are no immediate problems in this area. This will always need to be kept under review. However, there are two access issues which will need to be addressed. These are:

- Remote access from the homes of staff and students
- The ability to access information held in one part of the University network from other parts of it – a development known as cloud computing

Despite the best efforts of the staff, the IT Department is failing to provide the University with the service it needs to support and grow its research and teaching mission. The IT Department is clearly understaffed. There is no staff development programme which would improve the knowledge of the existing staff. There are insufficient staff to allow for an appropriate structure to be put in place.

The staff spend most of their time “firefighting”, that is solving immediate problems. They have little time to think about improving and developing the services they provide. They cannot operate an adequate help desk. There is no clerical support in the Department which means that part of the time of the staff is spent doing clerical work.

Teachers increasingly use IT equipment and other technology in their classroom teaching. They have expressed frustration that too often they find they have problems with this equipment and this disrupts the class. This is another area in which the IT Department needs to be able to increase its support.

There has been a strong call from academic staff to have greater access to management information systems and in particular to the student record system. These staff have expressed frustration that they are unable to get full access to information about their students.

There is universal dissatisfaction from academic staff with the consequences of the current firewall policy. This leads to legitimate searches of the internet being blocked. The need for an appropriate solution to this is essential.

There is pressure on the number of workstations available to students. 350 workstations for 3000 students would be adequate if the following situation existed:

1. The workstation labs were open for much longer hours
2. The students were on campus for longer hours
3. Some workstation labs were not locked from time to time
4. An improved timetabling for booked classes existed

These issues will need to be addressed as the number of students at BUE increases.

As the number of Masters programmes grows the University will have to consider equipping a number of workstation labs which would be dedicated to postgraduate use.

BUE is committed to the development of eLearning as making a major contribution to the learning experience of students. This approach is threatened by a number of issues:
• The present eLearning systems site is not user friendly
• The move from teaching to independent student based eLearning represents a culture change which some academics believe is a step too far
• The lack of integration of Facebook, Twitter and the BUE e-mail system threatens the viability of meaningful staff student online communication

These (and many other) issues are currently being addressed by the present eLearning Project. The completion of this Project will require a major effort over the next years.

5 Challenges for the IT Strategy

Looking forward, it has been possible to identify a set of challenges for IT as the vision for BUE as set out in Section 3 is realised. The IT Strategy will be required to meet the following challenges

• A University with 50% more students

• A University with new buildings, new Faculties, new staff and new programmes

• A University with a commitment to grow its research activity significantly

• A University looking to an increasing role for eLearning

• A University with an on campus student community

• Greater delegation and the clearer lines of responsibility which will be necessary in a larger and more diverse University

• Diversification of activity through the work of the Centre for Community Consultative Services

• The demand for greater access to Management Information

• An IT Department which is adequately resourced to support these challenges

• A remedy for the current deficiencies as soon as possible

• Financing the Strategy

In summary, the University will be going through a period of growth and diversification. It will have to deal with issues associated with its location avoiding problems created by remoteness. It will have to improve its procedures and processes and will have to realise the benefits of delegation.
6 Description of the IT Strategy

6.1 Teaching and Learning

eLearning will play a vital part in meeting the challenges for the University over the next four years. This has been accepted by the University and a Project is currently in place to improve the quality of the current system. During the next four years the following must be the emphasis:

- Every module is represented on the system with an agreed level of quality of content
- The content is such that it offers an independent learning experience for the students at BUE
- The system must play a vital role in improving teacher/student communication given that electronic communication is the most efficient way of achieving this
- The eLearning system and all the facilities that Moodle offers are widely used
- eLearning is seen as offering a means of reducing significantly the impact of any potential closures of the campus

Recommendation 1

The University's commitment to eLearning is reconfirmed and this should be supported and promoted in order that the full benefits of its application can be realised.

The classroom experience will also change for students and teachers. At present all teachers use various forms of technology as part of their teaching. It is foreseen that this will expand with the use of some equipment as smart boards. Use of videoconferencing to import and export lectures is quite common now. It is felt that this would be best applied to post graduate teaching and to small undergraduate classes.

In the section 4.1 details were provided of the number of workstations available to students at present. It was noted that there are about 350 workstations available for student use. Most students own their own laptop computers and during the lifetime of this Strategy this is likely to become true for all students.

The question then arises about the extent to which the University should continue to equip the same level of workstations labs for students. With the opening of the new Library Building (which will occur in the period covered by this Strategy) there will be a large open area of workstations. It is anticipated this area will contain about 75 workstations. Against this background the following recommendation is made.

Recommendation 2

The number of workstations available for students should grow by 10% a year for the next three years. This would include the workstations which are planned for the new Library building.

The University does not have a policy for the replacement of ageing workstations. It needs to have one. Ideally workstations should be replaced every three years though this may place an excessive financial burden on the University. As a result this recommendation is made:
Recommendation 3

The University should adopt a policy to replace workstations every four years

As the number of students at BUE grows it is important that the University makes the fullest use of the workstations that are available. This means that workstation labs must be open for longer hours. In addition the times when workstation labs are locked should be reduced to a minimum. Making labs available outside normal teaching hours must also be considered.

Recommendation 4

It is recommended that the University ensures that the fullest use is made of workstation labs by addressing issues such as extended opening hours and means of reducing the times when these labs may be locked

6.2 Research

A key element of any research is the access to information sources and to applications software. These may be available publicly (that is free) or, more likely, through a licensing system. Information sources will often be accessed by simple internet searches in which case the problems faced by the firewall will have to be resolved.

Recommendation 5

It is recommended the changes are made to the rules governing access through the firewall to reduce significantly the difficulties faced in accessing information sources. The default should be changed to one where access is only denied if there is just reason

Where the databases and applications software are obtained through licences these are often expensive. This expenditure can often be reduced by means of collaboration with other Universities. The licences for these are often under terms which require a degree of negotiation.

Recommendation 6

To promote research it is recommended that an annual sum of money is made available to obtain access to appropriate datasets and applications software. It is further recommended that a process for evaluating request for these is in place and that the opportunities for collaborative purchases are explored.

The number of Masters programmes is expected to grow from the present two to about ten by 2014. This means that during the time covered by this IT Strategy the number of graduate students will grow significantly perhaps reaching as many as 300 by 2015. All of these will require access to workstations. These will be provided within the departments which are offering the Masters programmes.

Recommendation 7

The University will need to allocate funding to provide IT facilities which are reserved for use by graduate students on Masters programmes
Researchers are particularly heavy users of network bandwidth. The University must avoid the experience of the delays associated with the upgrade to 34Mbps which was eventually achieved in 2011. The need for any needed increase must be anticipated in advance of it being required. This will prevent a negative impact on research developments caused by any delays when the next upgrade is required.

BUE has also established a number of Research Centres including the Centre for Theoretical Physics and the Centre for Advanced Materials. These (and other Centres which may be established) will play an important role in raising the research profile of the University. To do this, these Centres will need access to appropriate IT equipment. It is likely that these Centres will place greater pressure on the available bandwidth.

To help in all this there will have to be effort put into monitoring the use of the current bandwidth. This will provide early warning of a network saturation.

**Recommendation 8**

The use of the current network bandwidth should be reviewed at the start of each academic year from 2012/2013 onwards. This will provide information on network demand and allow plans to be set in place at that time to meet any upgrade which might be needed.

During 2011 wireless internet access to the internet was made available in the Campus open areas. This needs to be built on over the next years.

**Recommendation 9**

It is recommended that wireless internet access be extended to all the academic buildings in the first instance and then to all the other buildings on the campus.

**6.3 Administration**

There is a widespread demand for greater access to Management Information and, in particular, to the Student Record System. This has been recognised by BUE. As part of the discussions with Loughborough University, one of the Projects established by the University in 2011 has been tasked to address “Data Access”. Increasing access to management Information is not an IT issue – instead it is a policy matter for the University. Whatever policy the University decides on in this area can be delivered by a properly resourced IT Department.

The present Student Record System is being developed externally. In future years, the development and maintenance of this System could continue to be carried out externally. An alternative is for it to be carried by a team within BUE. Provided this internal team is adequately resourced, this approach is the better option.

The Project Group addressing Data Access is likely to recommend increased access to the SRS. It will probably recommend different levels of access for different members of academic staff depending on their status within the University. From the input received by the Group developing this IT Strategy, these developments will be welcomed by all academic staff.
On the assumption that a BUE team is used to provide the ongoing development and maintenance of the SRS, where should this team be placed? The solution adopted in universities in the UK (and elsewhere) is to establish a team within the IT Department.

**Recommendation 10**

A team dedicated to the development and maintenance of the Student Record System should be established. This should be placed within the IT Department of the University.

All universities are struggling with the proliferation of the use of paper for their many functions. BUE is no exception and as the University expands this will become a greater problem. No university has successfully become ‘paperless’ for its many administrative activities and it is certainly not recommended that BUE should try to become one. However, steps can be taken to replace many paper based activities by electronic ones.

**Recommendation 11**

The Registrar should establish a Project with the remit of identifying those paper based administrative activities which will subsequently be replaced by electronic ones.

BUE has many meetings with Loughborough University and the other validating institutions. These involve great expense when the participants are brought to BUE. As BUE grows it will be appointing more staff from overseas and this will lead to increased interviewing costs. These costs can be reduced by an aggressive use of videoconferencing.

**Recommendation 12**

A quality videoconference suite should be established to assist with distributed meetings and in holding remote interviews with potential staff.

The value of a good quality BUE website cannot be over emphasised. It plays a vital part in attracting students and staff. It also plays an important role in projecting BUE to the outside world from which BUE will hope to attract interest and potential funding.

A good website is attractive in appearance, informative, easy to navigate and up to date. A fulltime web site administrator is needed to ensure this. He/she must have access to a small team to work on maintaining and developing the web site. The basis of this team already exists within the Faculty of Informatics and Computing Science.

**Recommendation 13**

The importance of the BUE website should be recognised by the appointment of a full time web site administrator. He/she will be responsible for the maintenance and development of the web site. He/she will manage the existing staff working on the website within ICS.

**6.4 Miscellaneous Items**

The provision of short courses for the wider Egyptian population is seen as valuable in raising the public perception of BUE. It can also be a potential source of additional income. The
experience of the American University is that the additional income can be quite considerable. This work will be undertaken by the Centre for Community Consultative Services. Many (indeed probably almost all) of these courses will require access to workstations. This will have to be allowed for in the provision of public workstations.

7 The University IT Department

The importance of IT in supporting the challenges faced by BUE over the next years was emphasised by all who responded to the information gathering exercise. Time and again it was said that a well resourced IT Department was essential if the University was to realise its ambitions over the next three years.

The IT Department must have all the skills to maintain and develop a quality IT service. It must be seen as supporting all the Faculties of the university whilst being independent of them. In the early days of computing, IT departments usually grew out of the Computer Science departments in universities. However, they very soon became independent of this department and stood on their own providing equal support to all parts of the universities. It is important that as the IT Department at BUE grows and develops this independence from all Faculties is assured.

The role of the IT department should be:

- to be responsible for the development, operation and maintenance of all university wide IT services, hardware, software and infrastructure
- to provide a support service for all the IT facilities within the university
- to offer training on the use of the universities IT facilities
- to be the source of expertise for the University on all matters associated with IT services

Sections 4.1 and 4.2 described the current make up of the IT Department. It also identified the current deficiencies in the work it was doing. These can be summarised as follows:

- The number of staff in the IT Department is low and they are only able to carry out firefighting and problem solving, and doing so to a very limited degree
- The staff have no time to address future planning and development issues
- The staff undertake many activities not directly associated with IT with 5 staff providing audio visual aids support and another member of staff supporting security gate systems
- The quality of the current staff varies and there is no staff development programme to improve this quality and to provide staff with a career development path
• There is no appropriate structure within the Department and mechanisms for following through problems solving are inadequate

• In recent years, the management of the Department has not been as good as one might expect though there has been a recent improvement which needs to be built on

The IT Department is a vital element in the delivery of this IT Strategy. It will play a vital role in supporting the University as it meets the demands brought about by the planned growth and diversification. If the IT Department is to do so, then the highlighted deficiencies must be addressed. The recommendations of this section are aimed at doing this.

**Recommendation 14**

It is recommended that the staff complement of the IT Department grows by 5 each year for the next three years. This will create a staff establishment of 33 (which includes the two posts which are currently vacant). In the first year the 5 additional technical staff should be:

• A member of staff to provide senior IT support

• Two staff to provide IT support in class rooms and lecture halls

• An audio/video technician

• A member of staff to provide additional network support

The IT Department has no clerical or secretarial support. This means that staff who should be providing technical support to the University are spending part of their time carrying out basic clerical activities. This is not an efficient use of their time.

**Recommendation 15**

It is recommended that an additional post is created within the IT Department to provide clerical and secretarial support for the technical staff

**Recommendation 16**

As the IT Department grows a new structure within it will be required. It is recommended that this is proposed by the Head of the IT Department in consultation with the Library and IT Committee. A possible structure in set out in Appendix 2

**Recommendation 17**

A Staff Development Programme should be put in place to ensure that existing and newly recruited staff are trained to meet the challenges of the rapidly changing technology that is IT. This will require the creation of a training budget.
Recommendation 18

The Head of the IT Department is a key managerial position. He/she must have the skills to manage an expanding remit with a growing number of staff. Training and mentoring of the holder of this post is essential.

8 Governance of IT

The present committee structure for IT at BUE is confusing and disjointed. At present there are only two Committees to deal with all IT strategic and operational matters. These are the Library and IT Advisory Group (LITAG) and the eLearning Advisory Group (eLAG)

LITAG reports to the Teaching and Learning Committee. Since IT (and also the Library) is vital to research as well as to teaching and learning this reporting line is confusing.

The membership of LITAG is largely made up of Faculty representatives. It deals with both Library and IT issues. It can discuss anything from major policy and strategic issues to low level operational matters.

eLAG is largely made up of the eLearning coordinators from Faculties and Departments. It discusses all aspects of eLearning, both strategic and operational.

LITAG and eLAG are both chaired by the Academic Director.

There is no specific user subcommittee for IT at which users can raise issues abou all aspects of the IT facilities and services.

In the present structure, both LITAG and eLAG try to deal with both strategic and operational matters. This means that often neither of these areas is given sufficient attention. This leads to frustration and a failure to follow through issues at both the strategic and operational levels.

A better solution is to have a senior Committee to consider and make recommendations for the IT (and the Library) on policy and strategic issues associated with all aspects of IT (and the Library). There should also be a sub committee of this which deals with all operational aspects of IT (including eLearning). This subcommittee could also be seen as a fulfilling the role of a user subcommittee. In this scenario it is likely there would be an equivalent Library subcommittee to address operational issues in that area.

Only the senior Committee in this new structure should be chaired by the Academic Director. The membership of this Committee should be senior enough to reflect its role in advising the University on policy and strategic matters for both IT and the Library.

Recommendation 19

A single Committee should be established with responsibility for advising the University on policy and strategic issues for IT and the Library. This should be chaired by the Academic Director.
A sub committee of this Committee should address all operational issues associated with IT including eLearning. Its membership should be drawn from all Faculties and it should be chaired by a senior academic.

9 Financing the Strategy

According to the Head of IT Services, the expenditure on IT in the current year is just over 800,000 LE. The main items in this expenditure were:

- Internet subscription 266,000 LE/year
- Microsoft campus licence 180,000 LE/year
- Purchase of PCs for Labs 200,000 LE
- Network hardware 80,000 LE
- Software licences 60,000 LE/year
- Telephone licences 10,000 LE/year
- Miscellaneous items 15,000 LE

The Library is allocated an annual budget for the purchase of books and to pay for the licences of databases and information services. There is at present no commitment by the University to provide a budget for IT. This makes planning for the future provision for IT very difficult.

The primary purpose of this IT Strategy is to ensure that as the University develops and grows over the next three to four years its IT needs can be met in a planned and financially effective manner. This will only be possible if the University provides an annually reviewable budget to support this IT Strategy. It is recognised that such a budget will always be subject to the overall financial position of the University. However, it should be accepted that the continuation of the budget from year to year would be a reasonable expectation.

Recommendation 20

It is recommended that the University establish an annual budget for IT to enable the implementation of this IT Strategy. The budget should be reviewed annually in order to take account of the University’s overall financial position. The budget should be used to meet capital and recurrent costs of hardware, software, infrastructure and staff training.

Consideration of the recommendations of this Strategy allows an estimate to be made of the level at which this budget might be set. The main annual cost areas and their amounts are as follows:

- Replacement of existing workstations 300,000 LE
- Provision of additional public workstations 150,000 LE
Provision of graduate workstation facilities 50,000 LE
Network licences (including Internet licences) 300,000 LE
Microsoft campus licence 180,000 LE
Software licences 100,000 LE
Database licences 50,000 LE
eLearning costs 100,000 LE
Miscellaneous hardware purchases (e.g. back up servers) 70,000 LE
IT Staff Training budget 50,000 LE
Total 1,350,000 LE

Notes of explanation of the above figures:

1. The figure listed for the replacement of existing workstations is based on the recommendations that workstations are replaced every four years.

2. Within 2012/2013 or 2013/2014 it is expected that the new Library will be being built. It is anticipated that this will contain about 75 workstations. The funding listed above for the provision of workstations includes funding for these workstations.

3. eLearning costs covers training and the need for some contract development work.

The above represents annual capital and recurrent expenditures. However, over the three year period of this Strategy there will be a number of one off capital costs. There are these particular items in this category:

Videoconferencing suite 50,000 LE (in year 1)
Network upgrade costs 250,000 LE (in year 2 or 3)
Extension of wireless network capability 100,000 LE (in year 2)

10 Summary of the Recommendations

Recommendation 1

The University’s commitment to eLearning is reconfirmed and this should be supported and promoted in order that the full benefits of its application can be realized.
Recommendation 2

The number of workstations available for students should grow by 10% a year for the next three years. This would include the workstations which are planned for the new Library building.

Recommendation 3

The University should adopt a policy to replace workstations every four years.

Recommendation 4

It is recommended that the University ensures that the fullest use is made of workstation labs by addressing issues such as extended opening hours and means of reducing the times when these labs may be locked.

Recommendation 5

It is recommended the changes are made to the rules governing access through the firewall to reduce significantly the difficulties faced in accessing information sources. The default should be changed to one where access is only denied if there is just reason.

Recommendation 6

To promote research it is recommended that an annual sum of money is made available to obtain access to appropriate datasets and applications software. It is further recommended that a process for evaluating request for these is in place and that the opportunities for collaborative purchases are explored.

Recommendation 7

The University will need to allocate funding to provide IT facilities which are reserved for use by graduate students on Masters programmes.

Recommendation 8

The use of the current network bandwidth should be reviewed at the start of each academic year from 2012/2013 onwards. This will provide information on network demand and allow plans to be set in place at that time to meet any upgrade which might be needed.

Recommendation 9

It is recommended that wireless internet access is extended to all the academic buildings in the first instance and then to all the other buildings on the campus.

Recommendation 10

A team dedicated to the development and maintenance of the Student Record System should be established. This should be placed within the IT Department of the University.
Recommendation 11

The Registrar should establish a Project with the remit of identifying those paper based
administrative activities which will subsequently be replaced by electronic ones

Recommendation 12

A quality videoconference suite should be established to assist with distributed meetings and in
holding remote interviews with potential staff

Recommendation 13

The importance of the BUE website should be recognised by the appointment of a full time web
site administrator. He/she will be responsible for the maintenance and development of the web
site. He/she will manage the existing staff working on the website within ICS

Recommendation 14

It is recommended that the staff complement of the IT Department grows by 5 each year for the
next three years. This will create a staff establishment of 33 (which includes the two posts
which are currently vacant). In the first year the 5 additional technical staff should be:

- A member of staff to provide senior IT support
- Two staff to provide IT support in class rooms and lecture halls
- An audio/video technician
- A member of staff to provide additional network support

Recommendation 15

It is recommended that an additional post is created within the IT Department to provide
clerical and secretarial support for the technical staff

Recommendation 16

As the IT Department grows a new structure within it will be required. It is recommended that
this is proposed by the Head of the IT Department in consultation with the Library and IT
Committee. A possible structure in set out in Appendix 2

Recommendation 17

A Staff Development Programme should be put in place to ensure that existing and newly
recruited staff are trained to meet the challenges of the rapidly changing technology that is IT.
This will require the creation of a training budget.
Recommendation 18

The Head of the IT Department is a key managerial position. He/she must have the skills to manage an expanding remit with a growing number of staff. Training and mentoring of the holder of this post is essential.

Recommendation 19

A single Committee should be established with responsibility for advising the University on policy and strategic issues for IT and the Library. This should be chaired by the Academic Director.

A sub committee of this Committee should address all operational issues associated with IT including eLearning. Its membership should be drawn from all Faculties and it should be chaired by a senior academic.

Recommendation 20

It is recommended that the University establish an annual budget for IT to enable the implementation of this IT Strategy. The budget should be reviewed annually in order to take account of the University’s overall financial position. The budget should be used to meet capital and recurrent costs of hardware, software, infrastructure and staff training.

11 Implementation

This IT Strategy will be implemented over three years starting in 2012/2013. Before implementation can start there are three matters which must be agreed before the end of the academic year 2011/2012. These are:

- This IT Strategy must be formally adopted by the University
- The recommendation to establish an agreed annual IT budget will need to be accepted by the University
- Mechanisms for overseeing the implementation will have to be agreed and put in place.

If these are agreed, implementation can be considered as three annual phases.

The following items will appear in each annual phase:

- Replacement of 3/4 existing workstation labs
- Establishment of 1 new workstation facility (probably in the new Library in year 2)
- Establishment of 1 graduate workstation lab
- Review of use of network usage
- IT Staff Training (based on an agreed staff development programme)
Microsoft campus Licence
Software licences
Database licences
eLearning costs
Increase in the staffing level of the IT Department

There are a number of recommendations which will lead to implementation activities in particular years. These are:

Year 1 (2012/2013)

Creation of a Videoconference suit
Establishment of an internal team to develop and maintain the SRS
Resolution of problems caused by firewall restrictions
Appointment of a fulltime web administrator for the BUE web site
Creation of the new structure within the IT Department
Reorganization of the IT Committee Structure#
Establishing a Project Team to look at reducing paper based administrative activities

Year 2 (2013/2014)

Upgrade of the network bandwidth
Extension of the wireless network capability
Establishment of large workstation area in new Library Building
Implementation of recommendations of Project team reducing paper based activities

Year 3 (2014/2015)

Review of the implementation of the IT Strategy
Development of new IT Strategy for the subsequent three years
### Appendix 1  Membership of the IT Strategy Group

<table>
<thead>
<tr>
<th>Name</th>
<th>Position/Department</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professor Robin McDonough</td>
<td>UK eLearning Adviser at BUE</td>
</tr>
<tr>
<td>Dr Ayman Abbas</td>
<td>Faculty of Engineering</td>
</tr>
<tr>
<td>Professor Ayman El Naggar</td>
<td>Faculty of ICS</td>
</tr>
<tr>
<td>Professor Tarek El Domiaty</td>
<td>Faculty of BAEPS</td>
</tr>
<tr>
<td>Miss Mona Myhob</td>
<td>Faculty of Nursing</td>
</tr>
<tr>
<td>Mr Ahmed Abbas</td>
<td>Head of IT Department</td>
</tr>
</tbody>
</table>