Quality Review of the Computer Centre

March – April 2010

Peer Review Report

Peer Review Group:

External Reviewers: **Mr Brian Gilmore,**
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Internal Reviewers: **Ms Helen Fallon,**
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1. Introduction

The peer review visit to the Computer Centre took place over three days from 30th March to 1st April 2010. In advance of the visit, we were provided with a comprehensive self-assessment report which had been prepared by the Computer Centre.

We would like to acknowledge the help and co-operation we received from the Director and staff of the Computer Centre and the commitment and time they gave to the exercise. We would like to thank the users for making themselves available and the senior management of the University for facilitating us. Our thanks to Dr. Richard Watson for his help and support during our visit and, finally, we must express our appreciation of the excellent work of Ms. Marguerite Lohan whose efforts and attention to detail in the lead up to and during the visit ensured that all the arrangements could not have run more smoothly.

We had group meetings with practically all of the Computer Centre staff and we also met many of them individually.   We met users representing undergraduate and postgraduate students, academic staff, administrative staff and senior management, including St. Patrick's College, although we felt that the time allotted for the user meetings was extremely limited.

Time did not allow us to look at every aspect of the Computer Centre.   However, certain strategic issues became apparent early on and we focused most of our attention on these but while doing this, our attention was drawn to various other issues relating to individual projects and services - the report covers these as well as the strategic issues.

2. Overview

The role of the Computer Centre, as described in the Self-Assessment Report, is to provide a wide range of ICT systems, networks and services to NUI Maynooth and to St. Patrick's College Maynooth in four broad areas:

- Computing infrastructure including systems, networks and voice
- Information systems to support the administrative processes and management information needs of the University
- The University website
- User support delivering desktop services to students and staff and assisting them in using ICT services.

The Computer Centre has a staff complement of 26.8 FTEs. and has an annual non-pay budget of approx. €700,000.

The Director of the Computer Centre reports to the President.   The IT Management Steering Committee, which includes the senior management of the University in its membership, is responsible for IT strategic planning, the formulation of overall IT policy and for overseeing major projects as well as budgeting and resource issues.

3. Response to the Self-Assessment Report

All the areas of relevance to this review were considered in the Self-Assement Report (SAR) and our comments are as follows (under the relevant headings in the SAR):

3.1 Strategic Context of ICT and the activities of the CC to the University

The role of ICT as a key enabler of a range of strategic developments in the University is emphasised but it is also noted that "there is only brief mention of technology or ICT" in the NUIM Strategic Plan. This could be a reflection of the fact that the existing services are well run and are therefore taken for granted. Developing a strategic plan, as proposed elsewhere in the SAR, and actively 'selling' the plan to the University community would help greatly in raising awareness of the significant role of ICT in underpinning practically all of the University's activities - teaching, research and administration - and in ensuring that adequate resources are allocated to this role.

3.2 Achievements of the CC following recommendations in the previous Quality Review

The previous quality review was undertaken in 2002 and much has been achieved through implementing the recommendations of that review. However, a number of the issues raised have yet to be addressed. The most serious of these is the condition of the Computer Centre building (recommendation 32). Other significant issues include the preparation of 1-year and 3-year plans (recommendation 1); the need to have the data cabling in all building projects approved by the Computer Centre (recommendation 24); the need to standardise on a central email system (recommendation 22); the development of an overall security policy (recommendation 2). There is some confusion on the progress of the development of VPNs (recommendation 23). Recommendation 4 is that "the consolidation of staff personnel data into a single accurate database be a high priority for the administrative Systems team". It is noted that the Computer Centre has progressed this as far as it can in delivering the technical platform but the project cannot be taken any further until resources are fully committed at the user end - i.e. the HR Department. We would also suggest that the scale of this and some other administrative projects is being underestimated by the University and, as a result the requisite resources are not being provided.

All of these issues are covered in our recommendations later in this report.

It should be noted that a few of the recommendations in the 2002 report have been overtaken by events and are no longer relevant or as significant as they were at the time.

3.3 Review of services provided by the Computer Centre

The results of the student and staff user satisfaction surveys are reported in this section of the SAR. The results show a good level of satisfaction and, significantly, over 90% of responses were in the 'good, very good, excellent' category for many of the existing services. However, we also noted a sense of frustration in this part of the report at the inability of the Computer Centre, due to the shortage of staff, to make as much progress as it would like in areas such as emerging technologies, specialist services and developemntal projects generally. There is anxiety that the

risk profile of the support service for certain critical systems is too high, again due to the staffing situation.

The Computer Centre staff are of the view that the specialist services provided for researchers are insufficient and it was clear both from the SAR and from our visit that they regard this as a high priority area. The significance of the developments to date should not, however, be underestimated as the achievements compare well with other universities.

The situation regarding the University website is outlined in the SAR. The need for a major upgrading of the site has been recognised for some time but has been deferred on two occasions for reasons outside the control of the Computer Centre. This should be given a high priority by the University.

A list is provided in the SAR of 14 departments and research centres that have an ICT support function of their own. There is likely to be some duplication of effort here particularly since a few of them run their own email services. It is noted however, that there is good co-operation between them and the Computer Centre.

3.4 Infrastructures/Architectures underpinning the services provided

The different layers of the ICT infrastructure are outlined including the environmental systems, hardware technologies, operating systems, databases etc. From the information given, these would appear to be in line with the architectures adopted in the university sector generally.

3.5 Compliance Issues

The situation in relation to each of the areas of compliance is outlined. It is noted that, besides the problems raised elsewhere about the accommodation, there are also serious Health & Safety risks arising from the presence of asbestos in the Computer Centre Building. There is also a problem with rodents in the building.

3.6 The Computer Centre Organisation & Resources

The structure of the Computer Centre is described and the level of resources within each of the sections is given. The structure is generally in line with that in most universities. One significant detail, however, is that the web editing function is outsourced to an independent on-campus company. Managing a university website is difficult because of the varying requirements of the stakeholders and the disparate skills needed and no 'standard' model has emerged. Having it outsourced appears in this case to be adding to the difficulty rather than minimising it.

The staffing levels of the Computer Centre are compared with the levels in some of the other universities. While it is accepted that the resources would reflect the relative size of the institution, there is a certain minimum level which is determined by the range of services offered regardless of the size of the university community. It is clear that the Computer Centre is somewhat below this level given that it offers a range of services comparable to the other universities.

In the section dealing with internal communications, the different types of meetings that take place are described. Also, it is mentioned that because the Computer Centre has a relatively small complement of staff, informal methods of communication work well. In summing up, it is stated that the Computer Centre "would consider itself strong in this [communications] area." On our visit we were made aware of

communications difficulties in some areas, particularly in communications between sections and this was also highlighted in the SWOT analysis. It is dealt with in more detail later in our report.

A summary of the SWOT analysis is provided. We note the recommendation to "be more formal on training – mandate staff to schedule and attend training."

Also in the SWOT analysis is the significant point that "the perception that the users have that their computer is their own property" should be challenged. This highlights the need for an overall security policy which is dealt with later.

3.7 Planning for the future

This section lists the areas to be addressed in the strategic plan which it is proposed to develop during 2010. This should be a priority as we stress later in this report. It is probably stating the obvious, however, to say that strategic planning should not be a once-off exercise every few years but should be a dynamic exercise with an input from users across the University and engagement from all the staff in the Computer Centre. If it is to be effective, it will be necessary to go out and actively sell it to the university community and, in particular, to university management.

4. Conclusions

4.1 Key Strategic Issues

We have identified a number of areas where services can be improved or enhanced but it must be said at the outset that the overall level of service provided by the Computer Centre is quite remarkable considering the very limited resources it has at its disposal. In our interactions with users - both students and staff across the University - it was clear that they were generally well satisfied with the services provided although in a few cases concerns were expressed by the users about the sustainability of the services in the long-term. We were particularly impressed with the praise from so many users for the Computer Centre staff, for their competence, efficiency and above all for their helpfulness. We noted also the very strong relationships the Director has forged with the departments, the research centres and with the management of the University and of St. Patrick's College.

While we have a number of recommendations to make relating to specific activities, time did not allow us to observe all areas. However, we consider it more important at this particular stage that the strategic areas of planning, resources and communications are addressed.

4.2 Planning

Because of the limited resources at its disposal, the Computer Centre has had to concentrate primarily on maintaining the existing services. There has been ongoing enhancement of these as well as upgrading of parts of the infrastructure to stay generally on a par with similar services in other universities but these developments have been mainly at the operational/tactical level. It is essential at this stage that a more strategic approach is adopted. Unless the opportunity is taken by the managers and staff of the Computer Centre to agree the type of IT environment they would like to create for the University as a whole in the long-term and develop the plans to achieve this, there is a danger that they will find it difficult to maintain the current

levels of service as they are forced more and more into fire-fighting roles. Again, we recognise that with the pressure on resources it is very difficult to make the time and space available to stand back and take the 'long view' but it is unlikely that the current approach can be scaled up to accommodate the ever-expanding user base and the rapidly changing technologies and in that event it will be exceedingly difficult to maintain the present levels of service.

The comments received by the review team would indicate that there are no effective channels through which the academic community can participate in the planning and review of service developments. There would appear to be effective routes for developments to be considered on the administrative computing area but for academic staff either the volume of calls to the help desk or very informal contacts at the director level would appear to be the only mechanisms available.

The review team recommend that consideration be given to establish a more formal mechanism, for example, such as meetings or a committee of representatives from academic departments, be established to aid forward planning for developments.

4.3 Resources

4.3.1 Staffing
It is clear that the Computer Centre is understaffed and because of this some services are seriously at risk. In particular, some MIS applications (e.g. ITS Student Records, JDE Accounts, CORE HR and Payroll) are very vulnerable since a number of these are dependent on a single individual member of staff with little or no backup cover. Many of the users expressed concern about this situation with some mentioning that it has persisted for a number of years.   It is likely also that the User Support and Systems Sections will come under severe pressure as the number of users inevitably increases and will be prevented from developing the services unless the staffing resource issue is addressed.

Notwithstanding the fact that there is a shortage of staff at present, any decisions in relation to additional resources must be guided by a clear plan which sets out for the University how the additional resources would be used and the kind of IT environment the Computer Centre wishes to create for all its users - in other words, the return the University gets for the additional resources.

To optimise the return, there are other issues that should be considered before introducing additional staff.   The present organisation and distribution of responsibilities is perfectly logical and the teams within each section appear to work reasonably well. However, a lot of difficulties are encountered in cross-functional projects - and most major projects tend to have a large element of cross-functional work. Many of the difficulties arise from communications issues which we deal with later but also a stronger culture of cross-functional teams should be developed, not just for large projects but also for the smaller, short-term projects and tasks. These would have, incidentally, the added benefits of providing   leadership training and opportunities for staff across the department.

Consideration should be given also to recruiting more junior staff particularly since they would have a lighter impact on the budget and they would bring a lot of enthusiasm while their lack of experience would not at present be an issue for the department.   Also, they would bring a better balance to the age profile of the

department - although this is not a problem now, it could be a problem in five years time.

Staff Development of the Computer Centre staff is essential to obtain the best performance. There are some indications that strong management backing for providing the necessary development is not always present. The mechanisms for developing staff should be reviewed.

4.3.2 Accommodation

The current accommodation to which the Computer Centre moved in 1998 has never been satisfactory and is wholly inadequate. Although a significant step forward was taken in respect to an essentially new machine room that was constructed within the existing space, the accommodation for staff is dreadful.

The position has been illustrated by the relocation of the IS section away from the Computer Centre which will not help in building an integrated Computer Centre team and will make communications within the Computer Centre all the more difficult.

In 2004 a new building was promised in the Kelly Report and an announcement to this effect was made subsequently by the Minister for Education. However, there followed a delay in the course of which the new building was placed in bundle 3 of the PPP scheme. Regrettably this situation has now persisted since 2004.   Since that date, the project has stalled. It has neither been commissioned nor has it been scrapped. Whilst the review team was conducting the interviews two distinctly different opinions were expressed about the state of the PPP project. One opinion from a very senior source was extremely pessimistic whilst the Director of Corporate Services was very much more optimistic and was hoping for a positive outcome by the end of this calendar year.

 There is clearly a risk that the current situation could continue and that the end of the year could be reached with a decision still 9 to 12 months away. There is another alternative and that is for the University to construct a new building using its own resources.

It is the strong recommendation of the review team that active planning steps are continued towards this second alternative and that a final date, perhaps at the end of end of this calendar year, is set to activate this proposal if definite significant progress has not been made in the meantime on the PPP project.

4.4 Communications

We were impressed with the friendly atmosphere and the generally good interpersonal relations within the Computer Centre.   Against this background, however, we were surprised to hear from so many of the staff about communications difficulties.   We saw many symptoms of this problem - there seemed to be an exceptional amount of paper and forms hindering, rather than enabling, various processes;   we noted that there are two systems for reporting calls/incidents - *Request Tracker* and *Remedy*; and in a few cases the responses we got from different members of staff regarding some roles and services were at variance with one another.   In addition there is the problem of communications between the different sections mentioned earlier. We heard from some people that the staff in other sections were very helpful but that the bureaucracy got in the way while we were told by others that there was very little bureaucracy. There are regular meetings at

management level although the comment was made that "we're very quick to cancel meetings."

The problem would appear to be a lack of formal processes and less than full engagement with the processes that do exist. Most people are satisfied that they are transmitting the information required of them but they also complain of not receiving information from others - the information is being sent but not picked up; there is little engagement or interaction and as a result the development of proposals, solutions etc. can be stymied. It is possible, also, that in some cases people are afraid to pursue difficult or sensitive issues in case they damage the good relations that exist. This difficulty doesn't arise where there are good processes/procedures in place to allow matters to be dealt with in a businesslike manner.

We recommend that a programme is undertaken to address all aspects of communications for the Computer Centre which would take account of communications within sections, between sections, and between the Computer Centre and its users and stakeholders. This is about how individuals, sections and the Computer Centre as a whole get their messages across, how they engage with others and how they get others to engage with them. It is about developing the culture to allow this engagement to happen and developing the formal and semi-formal processes to support this culture. Among the initial processes to be developed could be formal change management procedures and systems handover procedures, the lack of which was brought to our attention.

4.5 Issues Relating to Individual Projects and Services

4.5.1 ITS Upgrade to Integrator Version
This is a critical project which is to be undertaken by an already under-resourced IS Section. In addition, there is a strong possibility that the JDE Accounts system will have to be replaced within the next few years due to the change in the support service for the system. This will stretch the IS resources even further.

4.5.2 Distributed Support
A number of departments/centres have their own IT support teams. In many cases this is the most practical way of providing support and it is common to most institutions. Nevertheless, the University should be cognisant of this when taking account of the IT support infrastructure and should keep it under review to ensure that the distribution is the optimum and most cost-effective for the University overall.

Some centres provide their own separate email service. While this again is fairly common, it creates difficulties as we move towards more integrated communications systems. Therefore, we would recommend at least that all staff in the University are on the one email system.

4.5.3 Central File Storage
No significant amounts of central file storage is provided for staff. Neither is a central backup service provided for the data on end-user PCs. Without such a service, the information assets of the University are seriously at risk. There are a number of examples from the UK where an event such as the burning down of a building has lead to significant loss of data for staff and research Post Graduates. We recommend that the provision of a central file storage service for staff is given priority.

4.5.4 VPN Service

In the course of the review, we noted some confusion among both users and Computer Centre staff regarding the availability of a VPN service. It was subsequently established that a VPN service had been developed as an emergency response to the risk posed by the swine flu. However the service was never launched as the swine flu risk abated and other work took priority but it is planned to launch it in due course.

Although this service is not critical for undergraduate students as Moodle is fully accessible, a VPN service is seen as essential particularly for staff but also for research based postgraduates in other institutions as it enables access to information from off-campus.   It is important that the availability of the service is clarified, particularly for the research community.

4.5.5 Security Policy

A reasonably comprehensive set of policies is in place governing the management and use of the information systems of the University.   However, there is no overall security policy and this should be addressed as soon as possible.   Such a policy would clarify the roles and responsibilities of the Computer Centre and of all users - students, staff and others - in relation to their use of the University's information systems resources and would address such issues as mentioned earlier where users perceive their computer to be their own property.   It would be supported at a detailed level by the existing policies.

4.5.6 Statistical Support

Some researchers mentioned the need for statistical support and training on the standard statistical packages.   Such a service would be of significant benefit to research staff and the feasibility of providing it would be worth investigating.   It need not necessarily be delivered from the Computer Centre.

4.5.7 Problems Between ITS and Fees

It was mentioned to us that there are problems in the Fees area in relation to ITS and that 11,000 adjustments had to be made last year alone.   This would need to be investigated since, if the figure is correct, it would indicate a major problem somewhere in the system.

4.5.8 Call Logging

Mention was made already of the fact that two call/incident logging systems are being used in the Computer Centre. This is wasteful of resources and is adding to the communications difficulties.   We recommend that a decision on a single system be made as a matter of urgency.

4.5.9 North Campus Infrastructure

It appears that there were several power outages in the North Campus in the past year and these affected the delivery of some services, particularly Moodle. Damage to certain fibres linking the South and North campus would necessitate either a severe curtailment of connectivity between the campuses or the routing of traffic between

the South and North campuses across HEAnet. Voice services would be particularly badly affected by this. We recommend that these issues be addressed as a matter of priority since they have the potential to impact severely on the delivery of services on both campuses.

4.5.10 Building Projects
Because of the dependence today on IT infrastructure, it is essential that the Computer Centre is involved from the start in the planning of new buildings or renovations.   We got conflicting views on whether or not this was happening to the necessary extent.   It is important that the situation is clarified and any problems addressed.

4.5.11 University Website
The University website looks somewhat 'tired' and in some areas is substantially out of date. The reviewers recognise that the University is aware of the issue and would recommend that at the opportunity of a significant change to the site, the decision to outsource its maintence be reviewed to ensure that the University is following the best course given the significance of a website to the overall marketing of the institution.

5. Summary of Recommendations

Our recommendations are summarised below.   Implementing recommendations 1 to 4 will require significant extra funding from the University while the remaining recommendations should be managed within the Computer Centre budget although each recommendation is going to be a further draw on the current scarce staff resources.

1. The Computer Centre to set out in the strategic plan the additional staff resources required and how they would be deployed and the University to give serious and urgent consideration to the proposals.

2. Finalise the planning steps for the construction of a new building for the Computer Centre to be funded from the University's own resources and activitate this proposal at the end of 2010 if definite significant progress has not been made in the meantime on the PPP project.

3. Ensure that a backup fibre link is provided between the North and South Campus.

4. Provide a substantial central file storage service for all staff and research postgraduates as a matter of priority.

5. Managers and staff of the Computer Centre to agree the type of IT environment they would like to create for the University as a whole in the long-term and develop the plans to achieve this.

6. Consider establishing a more formal mechanism through which academic staff can provide an input and feedback on service developments.

7. Avail of the opportunities to introduce more cross-functional teams within the Computer Centre for both large and small projects.

8. Review the mechanisms for staff development.

9. Develop and implement a programme to address all aspects of communications for the Computer Centre which would take account of communications within sections, between sections, and between the Computer Centre and its users and stakeholders.

10. Provide one central email system for all staff in the University and discontinue the local systems that currently exist in some departments.

11. Clarify the situation regarding the availability of the VPN service for staff and postgraduates.

12. Develop an overall security policy which would clarify the roles and responsibilities of the Computer Centre and of all users - students, staff and others - in relation to their use of the University's information systems resources.

13. Investigate the feasibility of providing support and training on statistical packages.

14. Investigate the reported problems relating to ITS in the Fees Office.

15. Decide on a single call logging system rather than continuing with two systems - *Remedy* and *Request Tracker* - as at present.

16. Put a process in place which ensures that the Computer Centre is involved from the start to oversee the IT infrastructure in the planning of all new buildings and renovations.

17. Review the arrangements for the management and maintenance of the university website, particularly the outsourcing arrangement.

6. Comments on the Methodology of the Review Process

We were helped greatly in the review by the outstanding help and cooperation we received from management and users across the University and by the manner in which the Computer Centre staff actively engaged in the process (although we were disappointed that it was not possible to have a meeting with the User Support Manager but he did meet us in some of the group sessions).   There were, however, some points we would make in relation to the timetable which might be considered in future reviews:

- It would have been useful if we could have had more time to meet with users and with the University management. While there were approximately 15 hours of meetings, more than two thirds of this time was allocated to meetings with Computer Centre staff leaving relatively little time for meeting users and we feel there should have been a better balance here.

- Some of the meetings with senior management were very short - 10 to 15 minutes and did not allow enough time to get to the heart of some issues. We should also say that we appreciated the generous amount of his time given to us by the President which we found very useful.

- The schedule for Day 1 was not the most satisfactory. We spent a lot of time trying to clarify some fairly basic issues such as the management structure of the University and where the Computer Centre fitted in to this because we were getting what appeared to be conflicting views on these. An additional meeting with the internal reviewers at the end of the day (or scheduling the earlier meeting for this time) would have been very useful and would have helped to sort out a lot of items on the agenda early on. Also, it should have been possible to slot in some meetings with users on that day since we felt the schedule was quite relaxed compared to the pace of the subsequent days.

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Brian Gilmore   **Martin Hayes**
External Reviewer   **External Reviewer**

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Helen Fallon   **Bernard Mahon**
Internal Reviewer   **Internal Reviewer**