Dear Dr Bellingham,

Re: University review of IT Infrastructure and Support

I have been asked by the Emmanuel College Information Systems Committee to respond to the report as follows:

The report’s recommendations are all very high level and we understand that all matters of substance are left to the new Information Strategy and Services Syndicate to consider and implement. At the level on which the report is pitched we are mainly concerned at the level of representation of the Colleges.

Emmanuel College depends quite heavily on teaching and utility software provided by the UCS especially the Managed Cluster Service. We pay for this service and for our networking connection which is vital for both teaching and administration. We also rely on administrative services like Student Records provided by MISD.

We are concerned that the proposal to put the merged UCS and MISD under the Registrary could weaken the central provision of teaching and research services. We also believe that the proposal that the ISSS should only have one representative from the Colleges provided by the Colleges Committee is inadequate. We recommend that the Review Committee think again about this and change the representation to one representative of the Bursars’ Committee and one of the Senior Tutors’ Committee. This will help to reinforce the point that both academic and financial matters will need to be addressed.

Your sincerely
Review of IT Infrastructure and Support

Response to the Consultation from the Department of Physics

The Department is generally supportive of the broad aims of the proposals, and in particular the emphasis on building strategy, policy and practice around user needs. However we do have concerns about whether the proposals as they stand contain the right mechanisms for ensuring user views are properly fed in, particularly those from senior administrative and academic staff in Departments, and whether the proposed committee structure will be able to achieve this.

Detailed comments are set out below.

Department of Physics
18 November 2012

1. **Proposals about the central organisation and committees**
   
a) It would appear that Oxford have already moved towards the consolidation of their IT services (see [http://www.oucs.ox.ac.uk/](http://www.oucs.ox.ac.uk/)). Most other universities appear never to have had this divide between administrative and academic computing. A number of operations are clearly in the wrong place at present (e.g. network management) and there are clear areas of duplication (e.g. content management systems). Therefore, it does make sense to amalgamate the UCS and MISD, although this might prove a significant challenge. The temptation would be to make the merger as superficial as possible: this might not be right for the long term. It is interesting to note that the review panel did not go further and consider the far more radical dimension of including the University library in its analysis and proposals. CARET is also a prime candidate for transfer to the new organisation.

b) The proposed management structure is confused and looks as if compromise is already on the agenda. Why is the new organisation outside the UAS while its Director reports to the Head of the UAS? In our view, the Director should report to the Chair of the ISSC, i.e. the Vice-Chancellor or his/her Deputy.

c) The proposed new oversight committee (ISSC) contains the usual overworked group of people (Pro-Vice-Chancellors, Heads of School) and appears rather divorced from the realities of both research and administration. It seems strange that (i) a Colleges’ representative is included, when the review says so little about the responsibilities of Colleges with respect to IT, and (ii) two student representatives are included, but no-one representing ‘front line’ users of IT from the academic or administrative communities in Departments or other Institutions. There are many senior academics around the University who have built up considerable knowledge and experience on how IT can best support and enhance the mission of the organisation, and who are ‘active’ users. It would be good to have, say, two such people on the committee. Overall, it seems unlikely to us that the committee as proposed could adequately fulfil its intended purpose, as outlined in para. 64.
The Operations Sub-committee is also constituted to be too far from the frontline operations. Given that the committee will have directly responsibility for ensuring delivery of services, taking the lead in co-ordinating between Schools and Institutions, and providing technical advice to the ISSC, it is particularly surprising that there is no representation from senior administrators (from Departments, Schools and even the UAS). This is in sharp contrast to membership of the Research Committee, which at least includes representatives from research groups.

2. Proposals regarding Schools, Departments, minimum standards and central desktop service.
   a) Overall, the case for Schools acting as a focus for co-ordinating computing needs is not made. Even within Physical Sciences, the needs of different stakeholders are so diverse that it is unlikely that those needs can be adequately represented by others at a more remote level from the ‘front line’. The balance of skills needed in individual roles is varied: it is unlikely that one structure will serve all any more effectively than the current ones do. The suggestion (para. 115) that computer officers might be “part of a wider team at, say School level, rather than being rigidly employed by one Department” would be unacceptable to this Department. On the other hand, wider teams might be relevant to groupings of smaller Departments who choose to share resources.
   b) Likewise, when it comes to ‘minimum standards’, there is such a diverse set of requirements across different institutions and user groups that it seems hard to provide a comprehensive set of such ‘standards’. While a one-size-fits-all approach might well be appropriate for small Departments with rather basic IT requirements, large (particularly science) Departments will generally have developed in-house standards adapted to the way they organise their research, teaching and administration. In particular, having consulted our Departmental Computing for Teaching & Administration (CTA) support group, we see no advantage in buying into such a central desktop service. It would be unacceptable if IT staff outside of Departmental control were unable or unwilling to engage with ‘non-standard’ systems. It is also strange that Colleges appear to have no responsibility for providing students with adequate services!

3. Staff management
   It should be recognised that there is little movement through IT support posts, and also that a sizeable number of computer officers operate within assistant grades. In practice, this is little different from the position with administrators, and, in their case, there has been little positive impact of central management through the UAS, where posts have been moved into the UAS from departments. The new merged UCS/MISD service should prioritise the development of a training programme which will supply the Departments with appropriately trained staff: history would suggest an over-reliance on appointments from outside the University (at least from our Departmental perspective). Again, there is no evidence that ‘School teams’ would be effective. Line management by a unit which is far removed from the users will necessarily reduce customer service, since the COs will want to respond to their line manager’s priorities more than those of the users. Users will have no direct input into those priorities, and will be unable to reach the line manager to complain if they don’t get what they want.

4. Information systems
   a) The current central systems do not, in the main, fulfil the needs of Departments. Consultation in development is often far too perfunctory and the needs of central UAS staff
often dominate. The list of basic departmental managerial tasks which remain unsupported by central systems is too extensive (space management, staff lists, grant management, etc.). This Department has needed to increase paper storage and the number of local computer systems as a result of the introduction of CHRIS. The recommendations in the report are therefore to be welcomed, but the conflict with 2 (above) needs to be acknowledged. If departments are to build their own front ends to systems, these will need maintenance. Such maintenance requires continuity and local management of staff, not a School team, or a central resource.

b) The resource needed to support IT developments must not be under-estimated: it may be wiser to second administrators full-time to these projects rather than rely on ad hoc effort and external consultants.

5. Research computing
   a) The Statement of Principles (para. 48) makes no mention of research computing, instead focusing entirely on ‘IT Services’ and thereby giving the impression that academics are merely users of centrally provided services. In fact many researchers are IT experts in their own right, developing and deploying their own systems to facilitate their research
   b) The establishment of a Research Computing sub-committee makes sense, noting that this committee seems, as proposed, to include more users than the others and might therefore be more effective.
   c) The statement (para. 131) that “valuable space in highly serviced buildings which could be used for experimental work was instead taken up with computers, and the associated cooling equipment, when there was no real for the equipment to be so located” represents a flawed view of how much experimental research work is conducted. In reality, computers can be an integral part of a much larger research infrastructure set-up, and cannot be separated from the other parts. Computer CPUs do consume power, but so do chillers, amplifiers, lasers etc. We would strongly oppose any move to remove all research-related computing out of departments.
   d) We very much welcome the proposal to make the Research Computing sub-committee responsible for the development and implementation of a strategy for high performance research computing, and for the oversight of the management of the HPCS.

6. Overall
   There is much good sense within the report, but some elements need further development to ensure consistency. It is hard to have any confidence that central IT services will in fact significantly improve, from the perspective of Departments, under the proposed arrangements. It is interesting to note, for example, how little has changed in respect of IT management since the CAPSA Report of 2002.
CITMG’s Response to the University’s Review of IT Infrastructure and Support

The College IT Managers Group has read the review with great interest which has resulted in a significant amount of discussion and debate amongst its members. As the representatives of the Colleges, CITMG is concerned that consideration of the interests and concerns of the Colleges, who collectively comprise a significant proportion of usage of UCS, are not sufficiently addressed in the review.

We welcome the opportunity to offer feedback and our comments are laid out as follows:

**Principles**

The report makes several references to tailoring services to user’s needs which are to be supported. However, there is no actual principle embracing this as clearly as, for example, is done in point 82, which identifies the need for:

“a clearly user-focused strategy….to meet the needs of the University as a whole.”

It’s clear that the needs of the user are to play an important role in the future development of University wide IT provision. To this end it was felt that the commitment to the user displayed with in the report should be enshrined in a suitably focused principle

- (A4) This principle only really differs from (A3) in its subject, student as opposed to staff, and perhaps consideration should be made to amalgamating (A3) and (A4). For example:

  All those who require information technology for their studies or work should have access to the appropriate facilities that allow them to carry out their activities to a satisfactory level.

- (A3) It was felt that the use of the word desktop, despite attempts to generalise it, was too specific and that it might be served better to consider using a generic term such ‘an environment’ ,‘facilities’ or ‘remotely accessible services’.

There is no principle relating to business continuity in terms of risk avoidance, service resilience or keeping up with new technologies. As a service provider, particularly where a service is fundamental to the operations of the organisation or where it is being paid for, it is expected that there would be high level of safety and resilience built into the provision of that service.

**Recommendations**

(B1) There is concern that the College’s interests on the ISSC are underrepresented with only a single seat allocated compared to three seats on the ISSS. While it is understood that Colleges may not be the majority users of the systems, they none the less represent a significant customer base, and one that in some areas wholly rely on University provisioned IT. With such little representation of Colleges at this level, the ISSC is unlikely to produce a strategy that has much empathy with College needs.

(B2) The group is pleased to note that it is suggested that there is representation for the College’s IT community on the ISSC Operations Sub-committee. However, given the number of Colleges and the makeup of the sub-committee the 2 suggested seats isn’t representative. It is generally recognised
that colleges take about a third of the overall University computing resources so given the 6 schools will offer up 12 reps plus a number of non-school seats, 4 seats for the College IT Community would seem to a more equitable.

(C1) Point 83(a) suggests that the ISS Director should report to the Registrar. Concern was raised that this line management arrangement had a strong bias towards the administration side of the University’s current IT provision. It was felt that a reporting structure that was essentially neutral, in that it could support both strands of the University’s IT operation equally, would be more welcome. It was noted that point 86 acknowledged these concerns but that it made no argument as to how these concerns could be allayed.

(C3) Point 74 of the review recognises the College’s desire to continue to select from a ‘menu of centrally provisioned solutions’, so can it be assumed that the services mentioned here are just an example and not a definitive list of services or providers?

(D2) CITMG would like clarification on this point with respect to Colleges. It seems that (D2) should be part of (B2) as it appears to be specifying that the Schools and non-schools representatives will be part of the ISSC Operations Sub-committee.

(F2) This recommendation suggests strengthening the involvement of schools and departments in decisions about strategic investment in IT. Again, Colleges should be considered in this involvement as many rely wholly on centrally provisioned IT services while all are obliged to use a small but important subset of the services – CamSIS is such an example. It’s not clear how this recommendation differs from (B1) as there is no hint as to the mechanism by which the target audience will be involved.

(F4) The CITMG translate this recommendation as ‘integration’ but clarification on this point would be welcome.
Review of IT Infrastructure and Support

The report provides a helpful appraisal of the needs of the University for computing services and a sensible roadmap for the immediate future. The computing requirements of the University have changed substantially since they grew out of the service provided alongside the research of this department and a review of the current state is therefore timely.

**Research Computing.** The report adopts a narrow definition of “research computing” that incorporates only the highest-performance computing facilities. Given the substantial changes that have taken place over the past 50 years, the adopting of this narrow definition is too restrictive and will prevent the University from responding effectively to new opportunities and developments. It seems to us that the main rationale for the existence of the proposed committee is to capitalise on funding opportunities. We would welcome a committee to consider research computing but with a considerably wider remit and a strategic role in identifying the research areas within Cambridge and equipping them with the tools they need. For example, the single most important aspect of computing services provided to the Computer Laboratory’s researchers is a reliable and flexibly managed network. The UCS has an excellent record in anticipating and then providing the services we require. These services have a key role in facilitating future research not just for ourselves but across the whole of the University and need to be considered at the ‘Research Computing’ forum rather than being assumed to ‘just work’.

**Research and teaching should not be subordinate to administration.** The ownership of the University’s computing should be equally shared between the research, teaching and administration roles within it. Whilst the committee structure set up to oversee the merged computing services reflects this, the line management does not. We would suggest that the new head of IT should be established at the same level as the Registrary rather than being a subsection of the administration. We note that the report concentrates on administrative and operational computing functions, but that the University’s teaching and research functions also critically depend on facilities currently offered by UCS. It would be a mistake to have a new structure that pushes research and teaching to the back of the queue, when they are our main business as a university.

**Managed Cluster Service.** The Computer Laboratory out-sources to UCS its provision of computers for teaching undergraduate and graduate students. One particular area of concern is the lack of any commitment to provide a teaching service in the style of the Managed Cluster Service (MCS). Item C4 focuses on the need to provide such services for academics and administrators but, despite the principle of such provision being identified in A4, there is not a commitment to providing any service for teaching. Without such centrally provided facilities we would need additional staff to provide it ourselves.
School of Technology:

Response to the Review of IT Infrastructure and Support

The Council of the School of Technology would like to submit this response to the Report of the Review Committee of IT Infrastructure and Support. This response is based on comments of the School’s IT Advisory Group and the discussions of the Council of the School of Technology at the meeting on 23 November 2013.

The School is broadly in agreement with the Report's analysis of the current problems with IT Infrastructure and Support in the University but has concerns about the detail of a number of the proposed solutions.

The MISD/UCS Merger

One of the main proposals, the merger of the UCS and MISD, is a case in point. The relatively low profile given to teaching and general research computing in the Report (see below) risks this merger looking more like a takeover by MISD, rather than a marriage of equal partners. It would be unfortunate if this were the reality, and particularly if, as a result, academic computing became a minor part of IT infrastructure and support, dominated by management information systems. The proposed line management of the Director of Information Services and Systems tends further to support this concern. The School views the provisions in paragraph 83 of the Report as essential in ensuring that a proper balance is maintained.

Governance

It is important to get the correct balance between strategic oversight and sufficient technical expertise on the membership of the newly proposed ISSC. There is some concern in parts of the School that the proposed committee structure will not deliver improvements in governance in this area. The proposed membership of the ISSC does not guarantee IT expertise and relying on the sub-committee for this merely worsens the current problem: that the committee with this expertise, currently the ISSS, lacks sufficient say in the provision of the central IT services. There is a further problem in that the sub-committee will be chaired by the officer responsible for delivering the central systems rather than an independent senior academic. This may make any criticism of these systems, however constructive, difficult. The School finds the comment attributed to MISD in paragraph 56 about the ISSS's too great involvement in operational matters worrying since various operational difficulties with the large central IT systems have caused our departments serious problems over the years. A better governance structure might be to have a closer and better defined relationship between the PRC and ISSS, to ensure that the ISSS is kept in the loop on all strategic decisions involving IT, and a less wholesale change to the membership of the ISSS to enhance its strategic focus whilst keeping its IT expertise.

A More School-Oriented Approach

Two years ago, the School established a School IT Advisory Group to advise the Council of the School on IT matters. The proposals for a more School-oriented approach to IT support clearly have some resonance for the Group. However the terms of reference for the Group are to advise the Council and to provide a School-level voice in communications with the University rather than having an operational role so we do not yet have the kind of IT support structures within the School which the Report seems to envisage and it is unlikely that these could be achieved without some resource implications. The nearest so far that the Group has come to an operational role is to look at ways in which our departments might cooperate more in the development of software systems, since we recognise, as does the Report, that there is much wasteful duplication in this area and problems for smaller departments in producing such systems. An obvious difficulty with School-level solutions is that they neither offer the simplicity and consequent speed of development of departmental solutions nor as great an economy of scale as a University-wide solution but
there do look to be cases where the balance between these largely conflicting factors may be best achieved at the School level. This would however imply the need in many cases to achieve a greater similarity between departments in business processes and other infrastructure, i.e. this is by no means simply a technology issue.

On the particular issue of an IT coordinator at the School level, the Council of the School agrees that there is value in having a spokesperson with the technical expertise who can speak on behalf of the School on IT issues. The precise role of such a coordinator and the level of time commitment will be a subject for discussion internally, so that it is best suited to the requirements of the School. The remit of this role may well differ from School to School.

Information Systems

In the context of School/departmental solutions, the comments in Section F of the Report about the need for public, clearly documented, interfaces and more modular systems are very welcome but we suggest that there should also be an emphasis on adherence to open, as opposed to proprietary, standards so that software developed elsewhere can be imported more easily.

The other three recommendations in this section (F1-3) on the need for Schools and Departments to be more involved in the specification and development of University systems are of great importance. There is still a clear perception in the departments that the centre is out of touch with their needs but it is also fair to note, as in paragraph 121, that it can be difficult for people in departments to find the time needed to participate in these processes. More value therefore needs to be placed by the university as a whole on time spent on systems’ specification and development, and this time needs to be planned for.

Other Centrally Provided IT Services

As well as these information services, C3 recommends the continuation of the email service, backbone network and JANET connection. This seems uncontroversial. Less straightforward is the recommendation in C4 for the provision of a university-wide desktop service, not least because there is no mention of the growing importance of mobile devices and the consequent trend away from the traditional desktop to the delivery of services on a wide range of devices via the common interface provided by a web browser. The provision of such services either on commercially-provided cloud servers or, if problems with data security are thought to be too severe, on University-run servers, is likely to be the more significant requirement within the lifetime of the implementation of the recommendations of this Report. The Managed Cluster Service provided by the UCS and used extensively by one of our departments for teaching is not listed in these recommendations. It may be that it is intended that the desktop service should subsume this (and similar comments about browser-based delivery potentially apply) but this need should not be forgotten.

Another IT-related service not listed is software sales. There may be alternative models to the current one, for example site licences for some of the more widely-used software. Whichever model we go for, it is important that the concept of value for money is adhered to, and the cost of the licences are paid for by the users. It is important for the right incentives to be put in place to reduce the cost of site licences in the negotiation with the suppliers.

IT Staff

The IT Advisory Group, half of whose members are academic and half senior IT staff, have spent some time discussing the kind of issues raised in Section E in response to the Senior Pro-Vice-Chancellor's letter during the summer outlining the main recommendations of the Review Panel. The analysis in the Report of the problems is good and sympathetic but the difficulties finding viable solutions are significant. Whilst greater mobility of IT Staff is good in principle, in practice both the staff themselves and those they serve are often very happy with the existing arrangements: many COs derive significant job satisfaction from running their own show and being part of an academic team and are resistant to fitting into larger structures; many
departments and groups with their own CO value the personal contact and the highly customised and responsive service that they receive. There is however also acknowledgement of the problems that this approach brings, particularly when a CO is on leave or leaves. Adopting an evolutionary approach is much more likely to be successful than a revolutionary one but one area where more rapid progress might be made is in seconding people from the central IT services to Schools or departments to work on shared projects, and vice versa. As well as introducing the concept of extra mobility into the system as a whole, it might also help the centre and the departments to become more familiar with the needs of each other.

**Research and Teaching**

Section G of the Report, Research Computing, places a very heavy emphasis on High Performance Computing to the extent that this would be a better title for the section. It certainly does not reflect the nature of the majority of the computing provision for research in this School and it is important that this activity and its needs are not forgotten. The proposed Research Computing Sub-committee is really a management committee for high performance computing and similarly should be named such if this is its role.

The existence of a section on research computing but no corresponding one on teaching risks this being given too little consideration elsewhere and ignores the links between the computing infrastructure used for teaching and research. It is unclear how or where teaching fits in the new committee structure or the extent to which this review takes into account the Review of Teaching and Learning Support Services of July 2008. One particular area which it is surprising is not discussed is the potential overlap between the IT services now increasingly being provided by the University Library and other libraries and those provided by UCS and MISD. There is a risk that we move from having had two competing central IT services in the form of UCS and MISD to having two in the form of UCS/MISD and the Library.

School of Technology
27 November 2012
Dr Bellingham:

I write on the instructions of the Colleges’ Standing Committee to comment on the Review proposals as follows:

1. The Colleges wish to seek the preservation of three members appointed by the Colleges’ Committee on the proposed Information Services and Systems Committee.

2. They further believe that the first of the proposed terms of reference of the new Committee should be amended to read: “to develop and implement a strategy for information services and systems in support of the aims and objectives of the University and the Colleges”.

16 – Colleges’ Standing Committee
Dr Jim Bellingham
Secretary of the School of the Physical Sciences
and Secretary to the Review Panel for the Review of IT Infrastructure and Support

28 November 2012

Dear Dr Bellingham

Response by the Library Syndicate to the report to the Council and the General Board of the Review of IT Infrastructure and Support.

1. The Library Syndicate recognises and endorses the broad picture set out in the Overview of the report: "...we spend a great deal of money, more than most UK Universities, but the quality of our services is patchy and does not necessarily compare well with that of other institutions. [...] Overall, the panel was not convinced that we get the best service we could for our investment."

2. The Syndicate agrees with the view of the panel that "...many of these deficiencies are primarily structural. They stem from the divided provision of central services, from weaknesses in current governance arrangements, and from obstacles to staff mobility and training", and the Syndicate also agrees with the goals of the recommendations: "...to provide stronger leadership that is directed to more user-oriented and strategic provision of services, and to make the most of the considerable strengths of the different central organisations, so that the University gets the best service possible from its IT spend."

3. The Syndicate supports the principles set out in paragraph 47; A1-A9 Statement of Principles:
   A1. The aim of this Review has been to make proposals to help the University obtain the best value from its considerable investment in IT, not to cut costs. There is absolutely no intention that this review will lead to redundancies.
   A2. As a leading University, in the UK and the world, we should expect the quality of our information services and systems to be commensurate with our standing.
   A3. Every member of staff whose role requires access to information technology should have, at minimum, access to a desktop providing an appropriate level of service.
   A4. Every student should have access to the computing facilities and network services necessary for their course.
   A5. The University needs information systems that promote efficient and effective administration and support its statutory reporting requirements.
   A6. The governance and organisation of information services and systems should be driven by a strategy that is based on a clear understanding of user needs. The strategy needs to respond to and exploit the opportunities provided by technological developments.
   A7. In order to provide world-class information services and systems, high priority should be given to the support, development, and retention of talented and committed computing support staff. The University should provide these staff with high-quality career opportunities, and make the best use of their skills.
   A8. In Cambridge’s devolved structure, there should be space for innovation in service provision, and different Institutional needs should drive the design and delivery of the services that are provided. Schools and Institutions must accept joint responsibility with the University for delivering the minimum levels of service referred to in A3 and A4.
   A9. The governance structure should ensure that the University’s needs for information systems and services are met in a way that reduces carbon dioxide emissions as much as is practicable.
4. There are a number of recommendations in the report of the review panel. The Syndicate takes the view that the most important concern governance, school-level accountability for service provision, and usability.

5. The key recommendations for a new organisation and governance structure are B1, B2, C1 and C2.
   5.1. Recommendation B1. The Information Strategy and Services Syndicate should be replaced by a strengthened Information Services and Systems Committee (ISSC) which is better equipped to shape and drive the provision of high-quality information services and systems across the University.
   5.2. Recommendation B2. There should be an ISSC Operations Sub-committee that takes responsibility for the delivery and day-to-day operation of the University’s information services and systems.
   5.3. Recommendation C1. The University should appoint an Information Services and Systems Director.
   5.4. Recommendation C2. The UCS and MISD should be merged into a single organisation under the leadership of the new Director as soon as possible. The ISSC should examine whether other central service providers should also migrate to the new organisation.

The Syndicate considers it vital to establish the connection between strategy development and the funding decisions that permit the implementation of a strategy. The Syndicate also accepts the proposal of a single individual with executive responsibility over a merged MISD and UCS, but the Syndicate is also concerned that the remit of committees as expressed in the report may be interpreted as overlapping with the executive responsibilities of the new Director, rather than as supervising and setting goals and priorities. Important practical considerations for the effective operation of oversight might include a consideration of the background information needs of ISSC members, and the frequency, style and length of meetings in order properly to formulate and supervise the execution of strategy. The Syndicate accepts the recommendations of the report, but suggests a review with the new Director following appointment and again after 5 years.

The Syndicate notes the suggestion of line reporting of the new Director to the Registry. Other than the Vice-Chancellor, or existing or newly created PVC, there is not an obvious alternative to this arrangement. There are examples of successful dual reporting that suggest strategic direction from the chair of ISSC and line-management by the Registry could work, but success will be heavily dependent on the alignment of priorities within the trio of chair, Registry and Director.

The Syndicate notes the comments in the report about other central service providers migrating to the new organisation. However, it notes that there is a shortage of successful models in higher education that address the overlap in information management roles of a Library and an IT service.

6. The key recommendations on school-level accountability are D1, D2 and E1. In some ways E1 is the most important.
   6.1. Recommendation D1. Schools and non-School Institutions should have responsibility for ensuring that their staff and students have access to the levels of service set by the ISSC and referred to in A3 and A4. Schools, Departments and other Institutions should consider whether this can most effectively be done by local provision, at School level, or by use of a centrally provided service.
   6.2. Recommendation D2. Each School and non-School Institution should identify or appoint one or more IT Co-ordinators.
   6.3. Recommendation E1. The University, Schools and Institutions should review the career structures and employment arrangements of its computing support staff with urgency, with the aim of improving the mobility of individuals and the flexibility of teams.

The Syndicate considers improved career structures and mobility of staff an essential aspect of developing an improved service. The Syndicate considers the recommendations strike a reasonable balance between larger staff pools and local accountability.

7. Usability is addressed by recommendation F1.
   7.1. Recommendation F1. An intuitive user interface is a critical component of modern systems, and Project Boards for the development and purchase of particular systems must ensure that this is considered at every stage of development.

The Syndicate recognises that the recommendation is a necessary condition for improved systems, and would hope to see this area of concern addressed further as the new service develops.
8. Overall the Syndicate welcomes the recommendations of the review as an important step forward and supports this initiative to improve the IT services of the University.

Yours sincerely
Comments on the Review of IT Infrastructure and Support
Materials Science and Metallurgy Computing Committee (MSM-CC)

Section E IT Staff

There was some concern from the MSM-CC that employing CO’s at School level may lead to:
- Loss of local knowledge
- Loss of ability to get a rapid response due to management systems “getting in the way”
- Loss in flexibility of operations
- Loss of cooperative team working with other technical and academic staff within the department.
- Loss of identity for CO’s. Who do they work for? Who sets their responsibilities and priorities?

Why are CO’s different to other technical staff and even administrative staff? Finance staff do the same jobs across departments, using the same tools.

It may also lead to departments who currently have a large number of IT support staff “taking over” or imposing their way of operating on other departments.

The ability to “buy-in” managed services would alleviate CO’s from more mundane tasks and allow them to develop further skills. This assumes that the services meet the requirements of the department and that the department is willing to fund the buying of these services.

The majority of the managed services should be provided by a central (UCS-level) provider. This would avoid duplication of resources across the University and provide a sufficient customer base to provide cost effective high quality services. This would also allow CO’s to support the systems on a University wide basis. The idea of Schools/Departments spending time and money developing similar systems and “competing” for business seems very odd.

Mobility of CO’s

Career Development/Progression

The ability of CO’s to move more easily between groups/departments/institutes within the University, i.e. internal recruitment may well be a good thing for CO’s, but departments may have other views.
Feedback to the IT Review Panel regarding the Draft Report – 30th Nov 2012

This feedback is a joint submission from the following senior managers of the University Computing Service, who in some cases will submit supplantary individual comments:

Summary

The report contains 142 numbered paragraphs of greatly varying significance, for example line management reporting of a merged IT organisation to the Registry appears in paragraph numbered 82. This feedback to the ISSS below is limited to a small number of particularly significant factors in the report rather than dwelling upon the many less substantive but clearly worthwhile statements within the report.

The most substantive elements of the report include the proposed merger of the UCS and MISD, the creation of a new committee structure, and the line management of the proposed organisation to the Registry.

The proposal to merge the UCS and MISD does not recognise the difference in cultures, roles and requirements of those organisations and consequently the relatively simplistic proposal to merge would likely harmonise those cultures, roles and requirements without necessarily benefitting teaching or research, support the differing needs of the colleges and the departments, or maintain the balance between support for the arts and the sciences. While a simple assessment would assume the work of MISD and the UCS is “all IT”, there is actually relatively little overlap between the activities of the two groups. The report also neglects the other large central IT providers.

Staff of the UCS and MISD are working hard to co-locate both organisations into a single building in West Cambridge, with both the Director of MISD and myself committed to seeking adjacencies in activity where those exist. That process is relatively low-risk and achieves most of
the organisational benefits that might have been apparent in a complete merger, while preserving the focus and alignment of each group on their respective objectives.

**Specific issues**

COLLEGIATE UNIVERSITY - the colleges were "out of scope" for this review, possibly on the rationale that IT within the colleges would not be considered. In effect this led to a process within which the colleges were not consulted at all, although college members could individually ask to be heard. The fact that the resources of the University Computing Service are entirely, and seamlessly, addressed to the collegiate university, not just the departments, has been completely ignored, and the review process has been insensitive to the likely significant impact on the colleges of a change in the structure and governance of IT services provision.

TEACHING - the review has neither consulted nor considered the likely impact of the proposed changes on the provision of teaching in the university. This issue is compounded by the complex mix of senior staff in the university who have differing experience in the relative priority of teaching and research, and the differing IT demands those activities imply.

ADMINISTRATION - the proposal is that the line management reporting of a new merged IT entity would be to the Registrary. This would transfer a significant number of academic related staff into that reporting line, providing the largest expansion of the administration for a considerable period. The university is poorly placed to manage the effective prioritisation of effort between enterprise-wide administrative initiatives and IT investment directly benefiting those engaged in teaching and research. We are confident there are very few colleagues in the collegiate university that would wish to see the scope of the central administration expanded, such that the only palatable argument for this administrative reporting line would be that those concerns are misplaced. While the motivations of our colleagues in the administration are undoubtedly worthy, we believe their perception of the IT needs of teaching and research is limited, to the disadvantage of those activities in the event of the proposed restructuring of the UCS.

CULTURE - the University Computing Service has deep roots in the provision of IT services, support and training to those engaged in the primary activities of the collegiate university, namely research and teaching. This requires an academic sensitivity and alignment which recognises the need for exceptional flexibility, while delivering services on a huge scale with high performance levels and robustness. This is simply a fundamentally different mind-set than will be found in most commercial IT departments, and administrative IT support necessarily values highly the lessons learned in the commercial world. Within the less research-led elements of the HE sector there is a prevailing view that the more commercially-minded their IT, the better it will be, and this thinking should be beneath the wider aims and aspirations of Cambridge. The review fails to recognise that the culture of the IT staff involved is different and the proposed merger rather is simplistic as a result.

PARITY - the report unfairly seems to conflate the role of the UCS in delivering university-wide services to 55,000 users scattered across 200 institutions, connecting 130,000 network devices, with the administrative departmental IT function supporting the major central administrative
systems. Perhaps there is an assumption that the provision of student or staff access to these central administrative systems equates to the multi-faceted delivery across the collegiate university of services by the UCS but if so that assumption is flawed.

TIMING - the report of the IT Review is arriving at a time in which the UCS is facing an unprecedented series of major infrastructure projects, from migrating the UCS staff to a new building, to managing a complex series of moves of the core infrastructure to accommodate plans for the New Museums site, to planning the provision of research-grade networking to the extensive development of Northwest Cambridge. It has not been recognised that the timing of the proposed changes is unfortunate and introduces risk, other than to embed an assumption that these organisational changes should be implemented in the shortest possible time.

COMMITTEE - the proposed ISSC is too high-level (if there is such a thing) with the report suggesting immediately below it would be a "technical advisory committee", so in the proposed structure there is no equivalent of the ISSS (or the prior IT Syndicate), composed of a mix of college and department academic staff that really care about our IT services. With the best will in the world, the top-level committee is not qualified to interpret recommendations that would come up from the technical advisory committee.
Response to the Review of I.T. Infrastructure and Support

The Department of Plant Sciences agrees with the vast majority of the Principles as set out in the Review of I.T. Infrastructure and Support, in general terms at least. While it is self-evident that we should “expect the quality of our information services and systems to be commensurate with our standing [as a leading University]” (A2); that “high priority should be given to the support, development, and retention of talented and committed computing support staff” (A7); and that “the University’s needs for information services and systems are met in a way that reduces carbon dioxide emissions” (A9), it was extremely reassuring to see these in writing.

However, we collectively feel it is more difficult to support certain of the other Principles, at least in the Review as written. On first reading it appears impossible to argue with Principles A3 and A4 (“Every member of staff ... should have ... access to a desktop providing an appropriate level of service” and “Every student should have access to the computing facilities and network services necessary to properly pursue their course”). Given these, however, Recommendation D1 is too vague. It is difficult to imagine how a Department (or a School) could sign up to have “responsibility for ensuring...access to levels of service set by the ISSC” (D1), when it is as yet totally unclear what level of commitment or cost this would involve, despite the outline given in Paragraph 45.

Nevertheless, the Department of Plant Sciences strongly agrees with the basic idea underlying Recommendation C4, i.e. that centralising certain provision could lead to appreciable benefits from economies of scale, allow local Computer Officers to concentrate on tasks “where their specific local knowledge and particular skills could more profitably be applied” (Paragraph 94) and provide benefits in terms of continued career development for I.T. staff. However, more information on the nature of the evidence that “suggests that support for routine computing operations can successfully be provided remotely” may be appreciated, both within this Department and elsewhere. A critical and transparent examination of this evidence is probably crucial before any University-wide decision is made.

Unfortunately, and arguably, the report was lacking in this regard. Taken collectively members of this Department are strongly in favour of this proposal. However, it might be that the members of other Departments/Institutions would welcome the chance to assess the experience of those Departments/Institutions that are already subscribed to a centralised model, e.g. Zoology in the School of Biological Sciences and/or the constituents of the School of Clinical Medicine. We feel it probable that publicising information on the experiences of these Institutions would reduce any fears that a centralised service would be less capable of a timely and personalised service than local Computer Officers, but equally we feel that it is important to do so.

Further information on the likely nature and cost model for centralised back-up (Paragraph 102) would be welcomed. Our consensus is that this provision is not only extremely important in and of itself, but that evidence of solid arrangements is increasingly required by funding bodies when considering requests for computing support, and so more information on this particular aspect of provision would be very important to us as a Department.

A number of research groups within this Department are heavy users of high end computing, and on balance we welcome Recommendation G1; that the oversight of this provision should become a University-level responsibility. However, the exact purpose of the ISSC Research Computing Sub-committee (Recommendation G2) remains somewhat unclear. Perhaps this committee will help with setting some central strategy for high end computing – evidently rather lacking at present – and this is to be welcomed. However we do note that it is rather difficult to see how the panel’s suggestion that
“there should continue to be a mixture of provision across the University between local clusters and centrally provided and managed facilities” (Paragraph 138) fits with Principle A9 on carbon dioxide emissions. Might it be that more centralisation here is appropriate?

The report was right to comment on the strengths of the UCS, in particular that “the network, on which so much depends, simply works” (Paragraph 73). The network backbone is clearly totally fundamental to the successful operation of I.T. in the University, and the quality of service here is greatly appreciated. However, members of this Department also agreed with “the organisation of software licensing and sales was felt to be an area where a better service could be provided” (Paragraph 75). It seems inconceivable that in such a large University that provision of software licenses is not better organised, and that the range of software packages that can be licensed centrally is so meagre and slow to adapt to changes in potential requirements. Much more information on what is meant by “the UCS is taking steps in this area” would be greatly appreciated.

Some members of the Department were disappointed by the evident lack of focus in the Review on issues surrounding I.T. for Teaching. We do hope that Departments will be offered a chance to comment on their perception of this important area of University I.T. provision at some time in the future. In particular, despite a broad feeling that the CamTools software used to support teaching performs well in comparison with other similar software, many staff in this Department felt that the system has become less usable since it was first developed. The perception is that this is perhaps due to a lack of investment: what was state of the art five years ago looks rather dated now.

Finally, in general we have a rather negative perception of other centrally provided software tools. Certainly we feel they compare badly to equivalent commercial products. Tasks that should be relatively simple (e.g. setting up a webpage using Falcon, reporting on graduate students via CamSIS) are felt to be far more difficult than they might be. While this response is clearly not the perfect forum for raising detailed technical issues concerning centrally-developed software, as a Department we would welcome a well-defined channel for providing this feedback. It might also be that Departments and Institutions could have some influence over the design of these components (or indeed the decision on whether commercial alternatives are adopted instead).

Summary

1) The Department of Plant Sciences is in agreement with the majority of the Review.

2) The minimum appropriate level of service for Desktop users must be more carefully defined.

3) The centralisation of routine computing operations is strongly supported.

4) A robust solution for back up is an urgent requirement.

5) UCS process surrounding software licenses could be improved.

6) Centralisation of High Performance Computing should be considered.

7) The lack of consideration of I.T. needs surrounding teaching was disappointing.

8) End users should have more influence over the design and continued development of centrally-provided “home grown” software tools.
9) Commercial tools could routinely be considered for these functions.
Dear Dr Bellingham,

In response to the University Review of IT Infrastructure and Support, members of the Girton College have reviewed the document and reported that the proposals were, broadly speaking, beneficial and should be accepted. At the same time we assume that there are likely to be changes in the way that we would communicate with what is now the UCS, for support, and look forward to further information in due course.

Yours sincerely,

Professor Susan J. Smith, FBA, FRSE, AcSS

OJG, UK.
Comments on the IT Review

Dear Jim

I am responding on behalf of the Faculty of Mathematics.

Preliminaries

The IT Review gives a helpful high-level overview of the state-of-play of much, although not all, IT within the University. The review recognises both that there is much that is good about IT in the University, and that the University has a large number of IT staff who are dedicated to providing a high quality service. Many of these staff regularly go the extra mile, and could significantly increase their salary if they chose to move to non-academic employment.

In a time of financial stringency the Faculty of Mathematics concurs that it is vital that the University obtains value for money from its investment in IT personnel, equipment and infrastructure. The current review does not contain a detailed analysis of how this is to be achieved, instead, as Prof. Oliver noted in his Open Meeting presentations, the aim of the review was to propose the structures that would be able to make the right decisions to deliver the best services for the University; in his words it “concentrated on structures, on governance arrangements, and on culture”. This response similarly concentrates on these three key aspects, however in due course it is only a detailed analysis, and a successful implementation, that will deliver value for money.

Statement of Principles

There is little that could be disagreed with in the statements of principles. However, a number of detailed comments follow, and the proof of the pudding will be whether the high-level proposals in the review will successfully address the principles.

A1. While obtaining best value from current resources should be an aim, was it wise to rule out cost-cutting? If, repeat if, it was desirable to reduce staff numbers, then this could be achieved without redundancies given that staff retire and move on to other posts (albeit at a slower rate in Cambridge than elsewhere).

A3. This principle, rather curiously, uses the word “desktop”. While the review defines “desktop” in the generic sense to denote a display and input device giving access to a common set of personal computing functions, etc., its use seems somewhat archaic. Indeed there is no reference to smartphone, tablet or iPad in the review; ensuring support for such highly mobile devices is a different kettle of fish to supporting a “desktop” sitting on a desk or even a lap. The review panel’s crystal ball might have been a touch too cloudy here. The principle also refers to “at minimum … a desktop”; in...
future members of staff may require more than one “desktop” (in fact some/many already do).

A4. Members of staff, as well as the students referred to, require access to network services. While it is accepted that the terms of reference did not include Colleges, the fact remains that Colleges provide crucial IT support for many students, and the University needs IT that integrates seamlessly with College IT. This issue needs to be addressed, perhaps to a greater extent than is covered in the review.

Moreover, the review is largely silent on IT support for teaching: the word teaching occurs only six times, and only once without “research” (which occurs 44 times) in close proximity. Research is the life blood of the University, but teaching deserves more consideration than it appears to have been given.

A6. Agreed, but the governance structures must involve staff who understand and anticipate “technological developments”, and it is not clear that the proposals in the review have given this aspect enough weight.

A7. In order to make the most of our “talented and committed computing support staff”, and to make the “best use of their skills”, an understanding of the different cultures in the various parts of IT support throughout the University is necessary, especially if there is to be structural change.

Recommendations

B1. The Information Strategy and Services Syndicate should be replaced by a strengthened Information Services and Systems Committee (ISSC) which is better equipped to shape and drive the provision of high-quality information services and systems across the University.

The formation of an Information Services and Systems Committee (ISSC) is one of the three key recommendations. There is no dispute that the Information Strategy and Services Syndicate (ISSS) needs to be strengthened in order to shape and drive the provision of high-quality information services and systems across the University. Indeed a number of speakers at the Discussion on 10 July 2007 predicted that the ISSS would not work, and that the then proposals were being rushed through. The current ISSS has a number of Achilles heals,

- not least the fact that it does not have full budgetary control of all central IT (i.e. the UCS, the MISD, the CARET, the HPCS), and
- the fact that MISD has two masters, i.e. “The work of the MISD will also be overseen by the proposed new Syndicate; its Director will continue to be accountable to the Registrary for the proper performance of his duties”.

What the current ISSS has going for it is, on the whole, an IT informed (or savvy) membership.

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1 The other two being the proposed merger of the UCS and MISD, and the appointment of the ISSD.


3 See http://www.admin.cam.ac.uk/reporter/2007-08/weekly/6087/3.html (a statement to which the current Chairman of the Faculty of Mathematics regrettably signed up).
The proposed ISSC has a high degree of common membership with the Planning and Resources Committee (PRC), which, it should be noted, rarely has the time to scrutinise the ISSS Minutes sent to it.¹ The Heads of Schools are already on very many committees (in at least one case apparently over 30) with the result that it is not clear that the ISSC could be much more than a rubber stamp. Further, it is important that the Chairman, expected to be the Senior Pro-Vice-Chancellor, is IT savvy. There is no doubt that the current incumbent is, but systems put in place now need to be robust, and history might suggest that there is no guarantee that future Senior Pro-Vice-Chancellors would be appropriate Chairmen, whether for the ISSC or the ISSS.

The proposed ISS[C/S], may also fail for the one of the same reasons that has bedevilled the current ISSS, i.e. the head, or heads, of IT having more than one master. The Registry has a legitimate interest in those systems which support the business processes and reporting requirements for which he is ultimately responsible. Similarly academics and students, i.e. the significant majority of the University, have a legitimate interest in those systems which support their research and teaching.⁵ The tail should not wag the dog. The head, or heads, of IT should be placed under the direction of the ISS[C/S] (cf. the Registrary/Librarian being placed under the direction of the Council/Library Syndicate), and for line management purposes should report to an IT savvy Chairman of the ISS[C/S].

For reasons of installing confidence throughout the University, and demonstrating that changes to IT provision will receive due consideration, the constitution and role of the ISS[C/S] should, like the Library Syndicate, be enshrined in Statutes and Ordinances (S&O); indeed assuming that the revision of the S&O goes through, the regulations for the ISS[C/S] should be a Special Ordinance. In which case, the ISS[C/S] should continue to be a Syndicate.

The membership of the ISSS should consist of people with appropriate authority and expertise, including technical expertise, to oversee IT provision. The membership should be closer to that of the current ISSS, rather than the proposed ISSC which is too top heavy, and too light as regards representatives of the wider Collegiate University. As a straw in the wind (based on the membership of the current ISSS, the Library Syndicate and the proposed ISSC) the membership might be:

- The Vice-Chancellor (or a duly appointed deputy) to Chair
- Two members of the Regent House appointed by the Council;
- Four members of the Regent House appointed by the General Board;
- Two persons appointed by the Colleges;
- The Chairmen of certain Sub-Syndicates or Committees (if not otherwise members);
- The Registrary (if not otherwise a member);
- One person elected by the Computer Officers of the Collegiate University;
- Not more than two members of the University in statu pupillari ;

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¹ E.g. with the result that problems with the X5 project have largely passed it by.
⁵ Without which the business processes would be redundant.
• Not more than two external members appointed by Grace;
• Not more than two persons co-opted by the Syndicate.

If not already members, the University Librarian, and the Director[s] of IT and the Finance Division should have the right to attend.

The Council and/or General Board might choose to appoint one or more Heads of School and/or one or more PVCs. It would be sensible if some of the Chairmen of any Sub-Syndicates or Committees overlapped with the members appointed by the Council or General Board.

Depending on the number of Sub-Syndicates, etc., the number of members appointed by the General Board might be reduced.

One of the members of the ISSS should be designated Deputy Chairman. Further, in order to improve succession planning, in the case when it is known that the Chairman is to stand down, the Deputy Chairman for the preceding year should be the Chairman-elect.

B2. There should be an ISSC Operations Sub-committee that takes responsibility for the delivery and day-to-day operation of the University’s information services and systems.

There will be a need for Sub-Syndicates and/or Committees, e.g. a Business Committee, a Joint Network Management Committee, and a Research Computing Sub-Committee, which might be better named the High-Performance Research Computing Committee (see below). In addition, given the importance of Business/Enterprise Systems, there should be a Business Systems Sub-Syndicate, and given the legitimate interest that the Registrary has in such systems, consideration should be given to appointing the Registrary as Chairman of that Sub-Syndicate.

As regards the proposed ISSC Operations Sub-committee it is not clear that this is a Committee responsible for “operations”; it appears to be one primarily responsible for co-ordination and advice across institutions. The proposed membership appears suitable for the inter-institutional role. Also, might it not be better for much of the advice role to the ISSS to come from more specialist Committees, e.g. the Sub-Syndicates and/or Committees referred to above?

Whatever structure is adopted, it should be clear where responsibility lies, and to whom the relevant IT staff report. This might be best achieved if the most important of the Sub-Syndicates and/or Committees appear in the S&O.

C1. The University should appoint an Information Services and Systems Director.

C2. The UCS and Misd should be merged into a single organisation under the leadership of the new Director as soon as possible. The ISSC should examine whether other central service providers should also migrate to the new organisation.

Like some other aspects of the review, these two recommendations need to be taken in inverse order. The University should not appoint an Information Services and Systems
Director (ISSD) unless UCS and MISD are merged. However, if they are merged, then the University should appoint an ISSD.

While there may be advantages in a merger, and while the perceived strengths and weaknesses of the UCS and the MISD are given in the review, few tangible benefits of a merger are identified, other than the rather soft-focus:

“with the boundaries blurring between Information Services and Technology, service provision increasingly required a coherent technical architecture across systems and infrastructure”.

If a merger is to proceed, then stronger justification⁶ should be given than there has been up-to-now.

It is also crucial that the issue is addressed of how the two cultures are to be combined, and whether or not a merger can be achieved successfully, i.e. without doing more damage than good. A shotgun marriage⁷ is unlikely to work. The cultures of both organisations are very different. This is illustrated by the contributions to the Discussion on 20/11/12. Of 12 contributors, 10 were from the UCS, another was from a departmental CO, and none were from MISD. The culture of the UCS is one of confidence in the University’s self-governance (see the comments on B1 above), and a constructive willingness to question received wisdom. It is straightforward to discover the shortcomings of the UCS: ask almost any member of the UCS staff. Hence the University knows from the Discussion that a healthy section of the UCS is open to change; the views of the staff of MISD remain largely unknown to the wider University.

This difference in cultures (such as hours worked⁸, attitude to pay, willingness to talk frankly) needs to be taken seriously if a merger is to go ahead, and if the University is to end up with the best of both cultures, rather than the worst.

If there is a merger then the HPCS and CARET should be included.

Unrealistic expectations should not be placed on the ISSD. If the ISSD is to be accountable to the Chair of the ISSC for the delivery of its strategy, plans and decisions, and if the strategy, plans and decisions include (para 64 and my emphasis):

- being responsible for ensuring that the University’s information systems are fit for purpose and deliver the administrative and management needs of the University, taking due account of the needs of users, both centrally and in Schools and Institutions;
- being responsible for setting minimum levels of service provision;

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⁶ E.g.
- more coherent planning (e.g. as regards data centres), and
- a reduction in the re-invention of the wheel, not only as regards content management systems (para 54), but as regards wireless provision, phone and email directories, calendaring and other “groupware”, etc.

⁷ As apparently originally envisaged over the summer.

⁸ On Sunday 14 October 2012, the day before final UCAS submissions, a problem developed with one of the University’s webservers. I reported the problem to the UCS at 17:07 and had a reply at 17:19 referring to the MISD. There response from MISD was far slower.
being responsible for ensuring that all services and systems provide value for money;
then the ISSD is unlikely to have the appropriate levers if the University is to “continue to have a highly devolved structure of decision taking about the organisation of provision”.

If an ISSD is to be appointed, then the University needs to get the recruitment right. To this end there should be a review of how recruitment panels for IT are constituted.

C3. The existing central provision of services including e-mail, the backbone network, the JANET connection, and the provision of information services such as CUFS, CHRIS and CamSIS, should continue, with future priorities determined by the ISSC.

The ISSS should have full budgetary control. However, given the importance and cost of Business Services such as CUFS, CHRIS, CamSIS, etc., there should be a Sub-Syndicate with a budget fixed by the ISSS from the resources available to it.

C4. There should be a central service that offers an affordable supported desktop service to Schools, Departments and Institutions.

Any “desktop” service needs to be sufficiently flexible. Should there be two or more services, e.g. administrative and academic, and how many OS should be supported? Some other institutions support a laptop service centrally, should Cambridge? If so, what operating systems should be covered? For the future, is it not also important, indeed possibly as or more important, that central software services support multiple operating systems, e.g. should it not be as easy to use CamSIS under MacOS, iOS, Android, Linux, etc. as on Windows (at present it is not).

D1. Schools and non-School Institutions should have responsibility for ensuring that their staff and students have access to the levels of service set by the ISSC and referred to in A3 and A4. Schools, Departments and other Institutions should consider whether this can most effectively be done by local provision, at School level, or by use of a centrally provided service.

Good idea, but if it is going to become policy how is it going to be ensured that such Institutions deliver? What levers will the ISSC Operations Sub-committee (or whatever it turns out to be called) have? Would the University be happy with such levers?

D2. Each School and non-School Institution should identify or appoint one or more IT Co-ordinators.

The review touches on the fact that two of the biggest problems in the University are

- re-invention of the wheel (whether by writing multiple in-house systems across the wider Collegiate University, or by buying in multiple commercial systems again across the wider Collegiate University), and
- the related problem of propagating best practice across Institutions and Colleges, e.g. para 128 states:
“The panel would wish therefore to encourage larger Departments to share their work on these issues, to avoid unnecessary duplication, and to allow less well-resourced departments to benefit from the investments of larger ones. It is precisely this sort of co-operation that the panel would want to see promoted via the new governance structures recommended earlier in the report.”

IT Co-ordinators, and the modified ISSC Operations Sub-committee, are two ways forward. However, neither will work unless there is buy-in. This needs to be done by persuasion and argument. There is no magic bullet, and for IT Co-ordinators to work they need to maintain close links with departments, etc.

E1. The University, Schools and Institutions should review the career structures and employment arrangements of its computing support staff with urgency, with the aim of improving the mobility of individuals and the flexibility of teams.

This is overdue; the University is not making the best use of its staff. The restructuring at the Medical School, at Mathematics and of some College IT support teams shows that improvements can be made. However, change is unlikely to work without some loss of sovereignty at local level, and that is not going to happen without good will, persuasion, good preparation (possibly over years rather than months) and trust. The latter is crucial. Top-down, shotgun marriages and mergers that look like take-overs (whether at central, School, or local level) are unlikely to engender trust.

F1. An intuitive user interface is a critical component of modern systems, and Project Boards for the development and purchase of particular systems must ensure that this is considered at every stage of development.

Yes, but see also the comments under C4 re usability on different platforms.

F2. The ISSC should strengthen the involvement of Schools and Departments in decisions about strategic investment in information systems to ensure that their needs are properly considered alongside those of the central administration.

Yes, but the Shattock review essentially said something similar, and little happened. Whatever body is responsible for the Business Systems, and whoever is the person where the buck stops, must have one master/mistress, and that master/mistress should be the ISSS and the Chairman of the ISSS respectively. If the person where the buck stops reports to someone in the central administration, then [corporate] human nature is such that the Business Systems are most likely to serve the needs of the central administration.

F3. The ISSC should review whether urgent action is needed to provide basic user-oriented facilities to assist with the everyday business of academic and administrative staff.

Yes, but see the points made in C4 above.

F4. A modular approach to information systems development should be adopted based on a common architecture and public, clearly documented, interfaces to accelerate delivery and stimulate innovation.
It is not clear what is meant by “common architecture”. However, “it is important that major central information systems are constructed in a modular way with clearly documented interfaces to facilitate the development of … departmental add-ons”.

G1. The oversight of provision of large-scale high-performance computing should become a University-level responsibility.

The panel “considered research computing to be work that used sophisticated, often dedicated, systems for complex calculations or the manipulation of large data sets”. This is a rather narrow definition of research computing. Further, what is large-scale, medium-scale and small-scale is a moveable feast. While the current HPCS should become a University level responsibility, some flexibility should remain in how and where medium-to-large scale computing is arranged.

G2. There should be an ISSC Research Computing Sub-committee that takes responsibility for the provision and coordination of high performance research computing facilities.

There should be a Committee that takes responsibility for the HPCS, but it needs a more appropriate name given that most research computing takes place at low to medium scale, and a central committee should not be responsible for that.

Detailed Comment

Included in para 73 is the statement:

“The network, on which so much depends, simply works, and was something where any weaknesses would be instantly apparent to a large number of people.”

The network doesn’t “simply work”. It is supported by a dedicated responsive staff, and an informed committee with a technically competent Chairman. This is one of the reasons why the telephone replacement project, distinguished itself from a number of other enterprise-wide systems by delivering on time and under budget. Another reason for the success was that it was clear where the buck stopped, with the Director of the UCS making it clear it was his responsibility. The University might learn something here.

Yours sincerely

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Dear Jim

Review of IT Infrastructure and Support

Thank you for the circular dated 25 October 2012. The Council of the School discussed the report today and their response is as follows:
1. The School strongly supports the principles and recommendations.
2. The School must be involved when the proposed service levels for staff and students are considered.
3. The School agrees that plans to combine UCS and MISD are sensible, but notes that implementation and the transition will need careful handling.
4. The School did not get a feel for the cost of implementing the recommendations and is concerned that sufficient resource will be made available for the purpose.
5. Faculties and Departments are keen to stress the importance of local institution based support but also the benefits of city centre based general helpdesk and other user-facing services including IT teaching spaces. Institutions expressed some concern that the range of equipment and software supported may become restricted.
6. The recommendation regarding support for ‘desktop’ service should be extended to take into account the rapid growth in mobile IT usage. The reference to ‘intuitive interfaces’, however, was welcome.
7. The School is [currently considering the creation of has agreed to create] an IT Coordinator post as a part-time secondment of an existing Computer Officer, to take forward the recommendations of the School IT Officers.
8. The creation of a Research Computing Sub-Committee is sensible but should not diminish the need for accelerated development of computing for learning and teaching, the latter does not feature highly in the report.

Yours sincerely

[Signature]

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Information Strategy and Services Syndicate

Response to the IT Review

Process

 Syndics received the IT review shortly after release. The Review was discussed at their meeting on 15 November 2012. The Syndicate agreed that those Syndics who were neither members of the Review Group nor employed within UCS or MISD should meet to discuss a response. At their preliminary meeting they agreed to concentrate on governance issues. The Syndicate had noted that the purpose of the consultation was for the Review Group to take account of comments before finalising their Report.

The sub-group of the Syndicate (see annex) met again on 26 November to agree the terms of this response. A final draft was circulated to the full Syndicate with a note that the names of any Syndics who wished to note their dissent could be recorded.

Summary

The Syndicate believes it should be explicit that the purpose of IT and the new structure is to serve the University’s mission “to contribute to society through the pursuit of education, learning and research at the highest international levels of excellence”, and that the only satisfactory standard of provision is one that fully lives up to that aim. We suggest that the aim will more likely be achieved if the Director is supervised by the Chairman of the ISSS/C1 and is accountable to the Chairman for the implementation of strategy.

IT/IS is a commodity: the Syndicate welcomes the suggestion of a service level charter for users and students against which the provision can be measured, however it further notes that these expectations will extend to College as well as University provision. Colleges provide all undergraduates, many postgraduates and some UTOs (as well as

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We refer below to the ISSC, as in the Review Report, but consider that the role we suggest for the Chairman, as the person to whom the Director reports, may make it more appropriate to reconstitute the Syndicate, i.e. the ISSS. References to “the Syndicate” in our response are to the current Syndicate.
their own staff including JRFs and CTOs) with their principal place of work from which they will access these University provided services.

The Syndicate supports the main thrust of the review:

- centrally provided services delivered by a single department under single overall management and oversight by the ISSC with the role for its Chairman noted above (though there is divergence over the urgency of achieving this single department);
- University-wide common minimum standards of IT service provision;
- Better co-ordination and connections between locally and centrally provided services providing more structure to the range of services and for the personnel involved.

It is however essential that the structure is flexible and is able to support diversity of approach to, as well as cohesion in, achieving the highest standard of provision.

The Syndicate has, in particular, some serious reservations about how this change may best and most enduringly be achieved.

We are concerned that a number of matters are given a low prominence in the report – for example support for teaching and non-HPC research, but we agreed that, as others have already highlighted these issues and as we were assured that the Panel were already aware of these concerns, our response should focus on governance.

**Governance – committee oversight**

The Syndicate agrees, from experience, that to be fully effective its successor body must be properly empowered. The Syndicate agrees strongly that it must have strategic oversight of all IT and must be provided with sufficient discretionary resources to shape and deliver the IT strategy. The new structure simply will not work if oversight of IT is divided and if funding to take the discretionary parts of the strategy forward is insecure or inadequate. There should be concern if significant IT/IS activity were to fall outside the scope of the ISSC as the ISSC must be able to decide issues authoritatively and to manage non-compliance.

The overlapping membership of the new ISSC with the PRC and RMC was discussed by the Syndicate, but the Syndicate agrees that a separate committee is desirable to
avoid the agenda of those bodies being crowded and their members overburdened. Although the proposed core ISSC membership, in particular of Heads of Schools, does provide the necessary authority for strategic decisions and funding in which the Schools will be fully engaged, this representation does not provide the IT/IS-specific expertise rightly recognised as necessary in to the proposed constitution. A less technical committee may also not be so persuasive to the professionals in this area and may be unable, through lack of direct relevant experience, to make some of the decisions which the Syndicate has had to address, including being able to judge whether project costs are too high (or low) and timetables realistic or not. We are also concerned that the Report places undue emphasis on control through funding: many mistakes in IT policy are quite inexpensive to make, the cost only being apparent later.

As the report notes, much of the real work of the ISSC (in the sense of holding the service deliverer accountable for the service it provides and the improvements required by users) will therefore be done elsewhere and the Syndicate endorses the view of the Review Group about the importance of the Operations Sub-Committee. However, this body as proposed shares few if any members with the ISSC, and sufficient senior membership is not guaranteed. It would be more appropriate for the Chair of the ISSC to chair this sub-committee (or a senior member of the ISSC); a Chair independent of the main central service provider would certainly seem necessary (rather than the Director). It is vital that the recommendations of the Operations Sub-Committee to the ISSC are not constantly being overridden; or that ISSC becomes a mere rubber stamp; or that it becomes a tool for the Director to impose his or her will on the ISSC. Divergence of opinion, especially through what may be a very testing time, will be harder to manage without significant cross membership. While the Syndicate appreciates that the Review Group wished to leave the ISSC with the ability to decide how to operate, there does need to be more thought about the wider committee structure since this potentially affects the membership of the ISSC itself. Similarly the interaction of the ISSC and the Operations Sub-Committee with other committees such as the Research Sub-Committee and JNMC, and with Project Boards and Systems Committees, needs some more definition at this stage.

An alternative starting point would be a strengthened Syndicate based on the current ISSS membership with the Director, Librarian and Registrary as members and a Pro Vice Chancellor as Chair. This would also help to establish links with other committees, an area which has not always worked well with the current structures and is possibly one of the main causes of the Syndicate being less effective than it might have been.
The Syndicate’s effectiveness has also suffered from not having any remit to consider IT staff issues, the importance of which the Report rightly acknowledges, as well as from the rejection of its early application for funding for Project Office and high level competent administrative support. We have some much valued officer support but need more.

Although the review did not cover the provision made by the Colleges for themselves, College staff and students will not want there to be pointless differences in the provision available to them between their department and their College, or between Colleges through the Collegiate infrastructure, or indeed between any institutions of the University. Many “University IT Services” will be delivered to students through college infrastructure when they are in college, to differing quality as a result of varying capacity to provide an IT infrastructure. Opportunities for convergence and universality of provision should not be missed as a consequence of different institutional governance, neither should we stifle the innovation which Cambridge’s heterogeneity allows; the need is to identify where differences are beneficial and where they are merely accidental. Colleges must be as fully involved in the strategy and its implementation as Schools and central institutions will be. As such the proposed college membership of the ISSC looks insufficient to reflect the various college perspectives on IT provision that are represented on the current Syndicate.

**Governance - management**

The Syndicate realises that there are sensitivities over the implementation of the new management structure. The Syndicate agrees that the aim must be not a merger or a joint service (much less a takeover), but a single, new service, newly managed. Co-location may help to encourage and facilitate this objective but a great deal of energy and commitment will be needed - and it will take time.

There are concerns that the cultural differences may make unification less straightforward than the Review Group envisages and it is essential that both academic and administrative computing have appropriate respective prominence in the remit of the merged organisation. It is important that the new organisation fully benefits from the strengths of both the UCS and MISD, technical and business respectively, and that it exploits the synergies between the work that both separately do.
The totality of the new service does not fall within the Registry's normal domain. The Syndicate believes that it would be appropriate for the Director to be supervised by the Chairman of the ISSC and to be accountable to the Chairman for the implementation of the strategy. However, the range of services under the Director’s supervision make it appropriate that the Director’s appraisal be conducted jointly by the ISSC Chairman with the Registrary (on the assumption that comparable Directors are similarly within the oversight of the Registrary and principally to ensure parity of treatment of the Director).

A particular challenge for the ISSC will be to ensure that within this new organisation the correct priorities for resourcing are made between the needs of the academic community and statutory compliance. It is too easy to view the latter as an unarguable requirement not open to discussion, but in reality there are balances between risk and cost, and costs may vary greatly depending on the choice of IT systems. Explicit input from the General Board and Council on these priorities may help in defining the balance: and to enable such discussion it will be essential that the ISSC is better integrated with other relevant bodies of the University than the current Syndicate has been. The Syndicate's suggestions above for the supervision of the Director should also be beneficial in this regard.

Annex

The sub-Group of the Syndicate which prepared this response on behalf of the Syndicate consisted of (* indicating members present on 26 November):
Dr Jim Bellingham
Secretary, IT Review
(by E-mail)

IT REVIEW

This note summarises the views of the School of the Physical Sciences, where the Review has been discussed at the Needs Committee, at the IT Committee, and at the Council of the School.

Within the School there was clear support for the overall aims of the review, and in particular the need for a clear strategy with the needs of users at its heart and the importance of clear leadership of central service provision. It was however felt the report could, in places, give a stronger account of how its proposals would lead to improvements, and thus present a more convincing argument.

In all the discussions, there were real concerns about whether the oversight structure as set out would be effective enough to capture users’ needs and feed them in to decisions at the right level. In particular, at the highest level (for example on the ISSC), it would be important to ensure that there were people with sufficient experience in computing to understood user requirements. But it was felt that the problem went wider than the proposal for the senior committee.

Another challenge for the committee structure was felt to be ensuring that Schools and Departments have effective leverage over the central organisations, both in strategic decisions about (for instance) which service to develop, and in more detailed issues of functionality and delivery of services. There was a sense that the channelling and feeding back of views needed to involve both IT staff and users. Both were needed, and neither was sufficient by itself. This needed to be effective at a variety of levels. Different possibilities were floated: one idea discussed was a user group, positioned to one side of the main ISSC committee, feeding in views. It might have a structure of School representatives who could then depend on a network within their Schools. Another suggestion was to involve former Heads of Department, as people with highly relevant experience, who might not be overstretched by their current duties.
It was felt that a great deal of pro-active work by the new merged body would be vital in the whole area of communications, both from the centre to users, and also in receiving user views.

There was support for the proposal for central oversight of Research Computing, and the move of the HPCS to a central body was felt to be sensible for management reasons, although there was a fear from some members of the School that such a move could make it too distant from, and thus less responsive to, its customers.

There was concern, particularly in our IT Committee, but also elsewhere in the School, at the proposal that the Registrary should be the line manager of the proposed new head of the merged organisation. There was a fear this could make the merged organisation into a MISD takeover of UCS. The concern over this was rooted in a fear that the Registrary reporting line would lead to lack of support for more academic IT needs and projects. The job of University IT Director is very important and should report, appropriately, to the VC.

The point was made that duplication (which the Report was felt to criticise), was not necessarily a bad thing. Unnecessary duplication was the problem, but there could be good reasons to offer two similar services. However it is also recognised that with the rapid pace of technology development in the 21st century it is not feasible to expect smaller Departments to develop the skills base to support all these emerging technologies without sharing expertise with other departments or centres of excellence within the University.

The implementation of these proposals would need to ensure that we did not unintentionally damage those (many) elements of the current service provision that worked well.

One advantage of the present structure was felt to be that the central organisations, and UCS in particular, had the space to innovate. The sense of the meeting was that this needed to be preserved, but made more subject to an overall strategy built around the needs of users, so that the real investment went to those services that were most needed.

To conclude, I also offer below some views expressed by individuals, but which were note the main focus of discussion in our committees.
With best wishes

Other points made by individuals:

There was no mention in the Report of the UCS’s courses in a variety of topics, nor the provision of advice by the UCS on numerical methods and techniques. The point was made that many in the School benefit from these. Physics felt they might benefit from these links becoming stronger with a UCS move to West Cambridge.

Support for the idea that School level working and co-ordination would be the solution to the problems faced by very small IT teams in Departments.

There was a question about whether the high level committee and the proposed Research Sub-Committee lacked technical expertise.

There were doubts about how the finances would work for minimum service standards, if cash-strapped Departments were required to provide more.

There were doubts about the validity of comparing spend with other HEIs in the way that the Report approached it.

The current UCS Managed Cluster Service was moving in exactly the direction the report suggests of a flexible and modular service, although this was not without considerable challenges.

The new organisation should be built around specific services with service owners who have the resources and are accountable for high quality delivery.

With a move to West Cambridge proposed as well, was this the right time to propose a merger? Or would the disruption prove just too much?
Consultation on the Review of IT infrastructure and support.

Response from the Bursars’ Committee Sub-Committee on IT and Telecommunications on behalf of the Colleges.

IT&T has been asked by the Bursars’ Committee to respond on behalf of the Colleges to the Review and its recommendations. We have invited all Colleges to let us have any comments they wish to be made and they are reflected in what follows. We have had the benefit of seeing the final draft of the submission you will receive from the College IT Managers (CITMG). We are supportive of the points that they make and do not labour them again in what follows: we have tried to take a higher level view of the implications for the Colleges, while recognising the importance of the detail.

The Colleges are by the terms of reference of the Review Committee ‘out of scope’ of the Review (cf. Appendix A: The Review Committee is charged with making recommendations to the Council and General Board for the governance, organization, and strategic development of IT infrastructure and support across the University, excepting only that provision made by the Colleges [emphasis added]). There was no College representative on the Committee; a submission was received from the CITMG. The discussion with Ian Du Quesnay (and James Mattheson) was as one of the College Representatives on ISSS and concerned the problems of ISSS rather than the Colleges. We have been reassured during the open meetings and elsewhere that we have not been out of mind. That is good to know. We take this opportunity to make a substantial submission.

The University of Cambridge is a collegiate University and the extent to which that is so is not fully recognised in the report. Three quarters of those with accounts with UCS have a College affiliation; just under half use their College address as their preferred address. That analysis omits those postgraduate students who are accommodated by the Colleges and it also omits the many members of College staff who are users of the IT services provided centrally by the University who have no other University connection.

Of course most users of the University’s IT infrastructure use it in different ways and for different roles in both University and College: and that is a key point. Students, both undergraduate and postgraduate, UTOs with College Fellowships and roles from supervisor to Director of Studies and Tutor (and others), CTOs and JRFs who lecture or supervise for their Departments or Faculties and submit to the REF, all of these want and need to be able to use and access IT provision with equal ease whether they are in the University or in their College (or even at home!). That is fundamental to the nature of Cambridge and it is easy to overlook its implications. For some UTOs, the College provides the Principal Place of Work; for others the Preferred Place of Work (especially when writing). Such people need to be able to access whatever they could access in their Department with equal ease in their College room. It is not so easy to leave the Colleges out of scope, at least as users of the IT services provided centrally by the University.

ISSS inherited and has never moved from a strategic vision for a seamless wireless network throughout the collegiate University. In so far as that was envisaged as being a centrally provided service it has not been delivered. The Colleges are major providers of such wireless services: based on a recent survey to which 24 Colleges have responded, they have deployed around about 1200 APs around 900 of which are now non-UCS. Eduroam per se is not the
issue any longer as it is now available on a model which does not require the College to use UCS APs. Of the 484 APs known to be planned for 2012-13 less than 7% will be UCS APs. Eduroam is already provided by 94% of College APs. It is absent only in 2 Colleges. The situation is different for Lapwing ticketing. That is at present restricted to UCS APs. and 50% of the responding Colleges have a web-based authentication system other than Lapwing. If the strategy was to roll out a wireless system over the entire collegiate University, the failure consisted in not finding a suitable pricing model that made the purchasing institutions (and Departments as well as Colleges refused to take the UCS APs with resulting lack of control on what services they provide). But at least in this case we have finally reached a point where arguably the most important feature of that strategic vision is being executed by the Colleges, although opinions are strongly divided as to whether this devolved deployment will reveal significant problems or not as it gathers momentum. Centrally provided services must be available at reasonable price and offer value for money. Both were achieved in the case of Project Granta and in the case of the telephone services (both VoIP and its PABX predecessor): in those cases agreement with the Colleges was thrashed out on the predecessors of JNMC and Colleges provided c. 40% of the capital for establishing the unified telephone service and about 33% of the capital for laying the infrastructure of Project Granta.

The collegiate University is a place of education, learning, teaching and research. The services provided by the University Library and CARET, VLEs and the rest are at the core of our shared mission. It is a great pity that they too have been left out of scope. To mention only the obvious: the UL runs Voyager and that is the main library catalogue for the College Libraries as well as for the University and the Departmental Libraries. All the electronic resources of the UL need to be as accessible in College as in the University: while e-journals work well enough from most locations (other than from home) not all electronic resources do. Although CamTools may not be much used by Colleges as such, many Fellows use it as in their teaching roles for supervision and for dealing with students in preparation for coming into residence. This is now with Misd.

We support the idea of a unified IT service provider: but would wish to see it encompass more than just the areas covered by UCS and Misd. If we were starting with IT now (which we are not), we would start with a unified service. It may well be that we should end up with one. But we do not see it as urgent to make the change and are not confident that the change will and of itself solve the problems that the Review Committee has identified.

The Review has much to say about the need to replace the ISSS with a more effective body: in terms of its terms of reference; its control over budgets; its authority with the service providers; its integration with other major bodies in the University. We fully accept and support that view. However we do not feel in the light of what is said in our response that the reduction of College representatives from three to one is acceptable when the representation of other bodies is being increased and two external members are to be added who may or may not have any experience or instinct for how the needs of a collegiate University differ from those of a more centralised metropolitan University. We ask for that to be reconsidered and the suggestion withdrawn.

We are also surprised that the new Director is envisaged as both reporting to the University Registrar as his or her line-manager and that it is proposed that the Director be the Chair of the Operations Sub-Committee to which he or she will be accountable for the services
provided as well as for responding to the emerging needs for change and development. The Chair of ISSC (if that what it is to be) needs to be the person to whom the Director is accountable and to whom s/he reports and by whom s/he is appraised. Whether the Registrary has a role or not seems only to depend on ensuring parity of treatment with other Directors. But it needs to be recognised that the Registrary is the head of UAS and as such responsible for ensuring that many statutory and compliance duties are met. The Review recognises the problem of over-powerful owners dominating the budgetary priorities and requirements on big systems; the risk of the clearly identified, strategic objectives (good management data reporting to all users; wireless networks; useful and appropriate identity management; record management; document management (the list is endless)) get forever pushed back down the list of priorities in the face of those claiming to be statutory requirements, necessary for compliance, or urgent.

The manager of the Director needs to be a senior Academic if the service is to prioritise learning, education, teaching and research: and that seems to us to require one of the Pro Vice Chancellors (though not necessarily the Senior Pro Vice Chancellor: it could be the PVC Education or Research or whichever PVC had the most interest and understanding in any particular set of individuals: and there might even be benefit if the interests of these different areas were to have input over time to shaping strategy, priorities and delivery).

The focus of the Review is on services provided by UCS and MISD. Broadly speaking the Colleges find UCS the easier to deal with. There is a basic and widespread recognition that in IT matters the UCS provides robust and reliable services: the Granta Backbone; the CUDN; the VoIP telephone system are fundamental to all that we do. They do not ‘simply’ work as users of BT and Virgin know. They may be taken for granted but that is a mark of their success. Many Colleges rely on other services: email; Raven for authentication for all their own web based services; managed desktops (aka MCS or PWF); and more besides. It is crucial to the present model that these are delivered and maintained centrally and create a de facto minimum standard which a College can adopt or not as it wishes and replace or not according to its resources and priorities. We are pleased to hear that there are no plans for changing this provision or the basis of this provision. But we are concerned again that this is not a pledge to leave things forever the same. That is important for our belief that College representation on the senior oversight body of IT should remain at its present level rather than be reduced as proposed by the Review Committee. Given the size of the Colleges’ investment in the capital infrastructure of both the telephone service and the Granta Backbone (noted above) and their recurrent expenditure on CamSIS at around £350k per annum and a further payment to UCS for network charges (around £220k), there is a specific case for including Bursars on the successor body to ISSS (and on JNMC and SISC). But it may be simpler to decide the appropriate number of College representatives (at least three) and leave the Colleges to decide what mix of Bursars and Tutorial users that should be.

The College’s experience of MISD is more limited and, for most Colleges far less happy (although a few have recently had some helpful support). The main services used by Colleges are the University Card and CamSIS. The first, after a stumbling start, now works well and most Colleges have dropped their own cards for access, barrier control, identification, and even payment. CamSIS is still inadequate to the needs of Colleges, especially in terms of reporting and its lack of user-orientation. But it costs Colleges two or three times the cost of older systems that were better at delivering information and functionality to College users and those in College roles. And progress towards meeting
those needs is painfully slow. It is highly improbable that, if in 2000 the Colleges had been invited to partially fund a service that costs over £2m a year to run, they would have accepted.

Principles

A1. The aim of this Review has been to make proposals to help the University obtain the best value from its considerable investment in IT, not to cut costs. There is absolutely no intention that this review will lead to redundancies.

It is very difficult to understand, given the emphasis in the last sentence (which in the consultation meetings has been taken to mean that the current Directors of UCS and MISD will continue), how the new Director is to be brought into the structure. It will not help with the very difficult challenge of creating a new unified service out of the existing entities (which have very different cultures) if these turn out to be slippery words. As Bursars we understand that restructuring and voluntary severance are distinct from redundancy. Others may not see it like that. This is not College business but we would emphasise that if the unification is to happen it needs to win hearts and minds of those continuing; there is a significant risk that getting it wrong will delay the many and much needed improvements in the service offerings of both UCS and MISD rather than bring closer the day when outstanding issues (leaving aside desirable and increasingly urgent new requirements) will be addressed.

A2. As a leading University, in the UK and the world, we should expect the quality of our information services and systems to be commensurate with our standing.

Agreed. But we are not surprised or particularly concerned that other, non-collegiate Universities who may or may not have a bigger IT spend than Cambridge, may have this or that provision which we would also like to have: different institutions set their own priorities differently.

A3. Every member of staff whose role requires access to information technology should have, at minimum, access to a desktop providing an appropriate level of service.

The concept of a ‘desktop’ which occurs in curious square brackets in para. 45 is ill defined. It is unclear in what sense it is a device, a configurable portal, or on demand access to licensed applications or some combination. It may not apply to Colleges: but if ‘staff’ includes academic (or non-academic) staff who also have their principal, preferred or any places of work in colleges, will need to be able to access the ‘desktop’ whatever it is from within their College, from home or when travelling. The needs of at least JRFs and CTOs eligible for the REF should be considered. Such a configurable portal or desktop will need to be capable of incorporating services and information supplied by the College as well as by the University.

A4. Every student should have access to the computing facilities and network services necessary to properly pursue their course.

Agreed. And again it is important that whatever is provided to students, graduate or undergraduate, is accessible from college accommodation (often the student’s principle place
of work) and for undergraduates it needs to be accessible also from their homes outside of Cambridge if it gives access to information or tools they need outside of Term.

A5. The University needs information systems that promote efficient and effective administration and support its statutory reporting requirements.

The Colleges also have their own needs for information systems that promote their own efficient and effective administration which support their statutory reporting compliance requirements. The main information system we at present share with the University is CamSIS. That promotes neither efficiency nor effectiveness. Its reporting and query facilities are poor and, in spite of repeated reassurances, there is still no plan or timetable for solving them.

A6. The governance and organisation of information services and systems should be driven by a strategy that is based on a clear understanding of user needs. The strategy needs to respond to and exploit the opportunities provided by technological developments.

We whole-heartedly support this. At present the powerful owner of the system is concerned only (or so it too often seems) to see that his or her needs are met. They may not be persons who use the system on a daily basis. The users who do have daily interaction find our present information systems woeful. And even more importantly the data is locked into information systems which do not provide reporting facilities which allow the extraction of the data in the form needed by the various local users. The issue is a general one but for the Colleges the information system that is problematic is CamSIS: in spite of improvements it still fails to meet user needs. We add only that there needs to be sufficient resources available both to address current shortcomings in a timely manner (and ten years is not a timely manner) as well as to respond to new technologies. If the end is wished, the means must be provided.

A7. In order to provide world-class information services and systems, high priority should be given to the support, development, and retention of talented and committed computing support staff. The University should provide these staff with high-quality career opportunities, and make the best use of their skills.

It is unclear how far this can or should include College computing staff. But it may be useful for both the University and Colleges to consider this further. College IT staff are sometimes recruited from the University and sometimes apply successfully for posts in the University.

A8. In Cambridge’s devolved structure, there should be space for innovation in service provision, and different Institutional needs should drive the design and delivery of the services that are provided. Schools and Institutions must accept joint responsibility with the University for delivering the minimum levels of service referred to in A2 and A3.

We fully endorse the first recommendation. Colleges have to be able to solve their own problems in their own way. It is crucial that services are available to Colleges on a menu basis. Price as well as fitness for purpose and level of service will be crucial to the choices we shall want to make. Whenever there is a clear interest and advantage to the University and to the Colleges in using the same systems rather than duplicating the efforts of the other, then it needs to be recognised in pricing structures. It is even more important that service
meets the needs of College users as well as those of University users given that these may not be identical as the roles of the two differ. ISSC (or whatever is to replace ISSS) needs to set and endorse standards which will facilitate the common realisation of minimum levels of service in all component parts of the University. But the importance of the strength that flows from diversity and heterogeneity should also be recognised and permitted wherever it does not result in a level of service lower than the standard set.

**A9. The governance structure should ensure that the University’s needs for information services and systems are met in a way that reduces carbon dioxide emissions as much as is practicable.**

Agreed. We are all subject to Carbon Reduction Tax. The final words need emphasis and ‘practicable’ has to include affordability and value for money.

**Recommendations**

**B1. The Information Strategy and Services Syndicate should be replaced by a strengthened Information Services and Systems Committee (ISSC) which is better equipped to shape and drive the provision of high-quality information services and systems across the University.**

We agree with the central point here. However, given the extent of the Colleges’ needs and the requirement to have them recognised at every stage of decision making about the development and implementation of an IT strategy for the entire collegiate University, there seems to us absolutely no justification for reducing College representation from three to one on the successor body and we would resist that strongly. What matters is that the successor body has the power and the authority to the implement the strategy it has formulated. That in turns means that the Heads of the Service or Services (it seems wrong to us to leave the University Library and CARET outside the remit of a collegiate University whose mission includes education, learning, teaching and research) need to be clearly accountable to the new body which will set their priorities for all discretionary spending. The new body also needs to control budgets and expenditure on IT in all areas which are discretionary. The new body will need budgets which recognise the cost of making progress on key issues and ensure that all available resources are not consumed in meeting statutory requirements.

The Chair and the membership need to have authority. That does, as noted above, suggest a PVC. But not in our view necessarily the Senior PVC: at different times different PVCs may be more suited to the role. Our view also leads to the view that the Director of the new unified service if there is to be such should report to (be accountable to and appraised by) the Chair of the new body and not by the Registrary (who has an important role as a user and is ultimately responsible for ensuring that the University meets its statutory and compliance requirements). The Registrary is also the head of UAS. He might have a role in ensuring parity of treatment of the Director with other Directors but not in determining IT strategy, funding, implementation or operations.

Finally it is unclear whether the new body should be a Committee because we are unsure what it would be a Committee of. It certainly needs good and well defined relationships with other high level bodies in the University (the Council; the General Board, the PRC). But it
may be better to think of a revamped and strengthened Syndicate or a Board rather than a Committee. We recognise that this is a matter for the University rather than for the Colleges.

B2. There should be an ISSC Operations Sub-committee that takes responsibility for the delivery and day-to-day operation of the University’s information services and systems.

We agree. This Sub-committee is vital and must have a strong user bias. It also needs strong connection with the ISSC (or whatever it is) and should chaired by the same person or, at least, a very senior member of that Committee whose remit would be to ensure that the Sub-committee is informed of, and making requests in line with, the agreed strategy. But the Chair of the Sub-committee should not be the Director of the new service. Rather the Sub-committee should be able to hold the Director to account for the service delivered and the quality of that service and have a clear voice in expressing what the immediate and evolving user requirements need to be addressed. We welcome the inclusion of CITMG representation on the Sub-committee.

C1. The University should appoint an Information Services and Systems Director.

If there is to be a new unified IT service then clearly there will need to be a Director. How that fits with a commitment to no redundancies will no doubt be worked out though we believe it will need to be worked out well if the process is to be successful rather than adding, at least in the short term, to the existing problems. And before such an appointment is made it will be useful to have a view of what services are within the new unified service and we have already indicated our view that a decision about the University Library and CARET needs to be taken before that happens rather than later. A new Director also needs the ability to understand not just IT but the nature of Cambridge with its devolved structures and a tradition of autonomy in all its institutions, including the Colleges. But we are not of the view that a new Director will necessarily resolve all the problems. And we see a greater risk of short term regression while the transition takes place than the Review Committee does.

C2. The UCS and MISD should be merged into a single organisation under the leadership of the new Director as soon as possible. The ISSC should examine whether other central service providers should also migrate to the new organisation.

The merger risks great problems: the cultures of the two institutions are very different. In so far as people stay on, it will be a case of winning hearts and minds. But the service will need to be a new and unified service for the whole of IT provision across the University. It would therefore be useful to have a view of what services are within the unified service before it is created and a new Director appointed, specifically on where the University Library and CARET fit in. The replacement for Voyager is in view but has not yet been discussed with College Librarians in terms of functionality or of costs to Colleges.

C3. The existing central provision of services including e-mail, the backbone network, the JANET connection, and the provision of information services such as CUFS, CHRIS and CamSIS, should continue, with future priorities determined by the ISSC.

All of these services (except for CUFS and CHRIS) are as fundamental to the Colleges as they are to the University. That is why the level of College representation should not in our
view be reduced. Priorities will have to be set with College needs in mind; as will the financial basis on which those services will be supplied. Any proposals for change will require taking account of the impact on Colleges and the principle of providing to all staff and students a minimum agreed standard of provision.

C4. There should be a central service that offers an affordable supported desktop service to Schools, Departments and Institutions.

The definition of a desktop in paragraph 45 is unclear: to what extent this concept applies to Colleges is even more obscure. But those users entitled to access a desktop need to be able to do so equally from within Colleges and if it is to be configurable it needs to be capable of pulling in relevant College service provision. Teaching applications currently delivered by MCS should be migrated to a platform which students can access from their homes or from their College rooms.

D1. Schools and non-School Institutions should have responsibility for ensuring that their staff and students have access to the levels of service set by the ISSC and referred to in A3 and A4. Schools, Departments and other Institutions should consider whether this can most effectively be done by local provision, at School level, or by use of a centrally provided service.

It will be important to work out how this can or should involve the Colleges. But academic staff and students, both undergraduate and graduate, need access to the agreed minimum level of provision in both their Colleges and in their Departments. We clearly recognise the strength as well as the problems that arise from diversity and heterogeneity. But it is clear to us that one size does not necessarily fit all: Colleges, like Departments, are able to innovate, and develop (for instance) local front-end modules for centrally provided Information Systems so that our users have systems well matched to their needs. It is vital that such local front-end modules can both input data and extract data from the centrally provided information systems. The failure to recognise this in the implementation CamSIS made the roll out of that system more protracted and difficult than it should have been and continues to make that system less useful to Colleges than it should be. When the UCS provided Eduroam on a model that allowed it to be used on APs other than UCS APs the roll out in Colleges increased: and almost all have deployed Eduroam.

D2. Each School and non-School Institution should identify or appoint one or more IT Co-ordinators.

No comment.

E1. The University, Schools and Institutions should review the career structures and employment arrangements of its computing support staff with urgency, with the aim of improving the mobility of individuals and the flexibility of teams.

No comment.
F1. An intuitive user interface is a critical component of modern systems, and Project Boards for the development and purchase of particular systems must ensure that this is considered at every stage of development.

Again, we consider this absolutely essential. The users must include College users where the intention is to give them access. The current systems are woefully inadequate for all the recent improvements in this regard. And, in such systems as CamSIS, it will need to be recognised that Colleges have different roles from the University with different needs which need to be satisfied along with those of the University users.

F2. The ISSC should strengthen the involvement of Schools and Departments in decisions about strategic investment in information systems to ensure that their needs are properly considered alongside those of the central administration.

Again we have to emphasise that Colleges need to maintain their strong representation on ISSC and on all relevant subcommittees.

F3. The ISSC should review whether urgent action is needed to provide basic user-oriented facilities to assist with the everyday business of academic and administrative staff.

Urgent action is also required to improve the user-orientation of existing Information Systems.

F4. A modular approach to information systems development should be adopted based on a common architecture and public, clearly documented, interfaces to accelerate delivery and stimulate innovation.

We agree: present systems are monolithic and expensive. Those who work to input data and maintain its accuracy are ill served. Their needs for access to the data they have put into the black box are not recognised or adequately catered for. A modular approach might give a better chance of each module being properly fit for purpose in each clearly defined business process. The databases will need to be able to exchange data machine to machine (or to have access to the data held in the various modules). A modular approach should result in an ability to update and upgrade modules more responsively to evolving needs, in shorter timeframes and at lower costs - if not lower in aggregate, expenditure would at least be smoothed.

G1. The oversight of provision of large-scale high-performance computing should become a University-level responsibility.

No comment.

G2. There should be an ISSC Research Computing Sub-committee that takes responsibility for the provision and coordination of high performance research computing facilities.

No comment.