

## ISC10D012 Report on ISD Program of Work – Academic Year 2009/10

### Project reports

Development of ISD space	<p>The joint Library-Estates refurbishment of the Entrance Floor to the Library was completed successfully and ready on time for the start of year. Initial feedback has been very positive. The new design makes best use of Denys Lasdun’s original vision whilst bringing the Library into the 21st century. The revamp brings in light from all four sides of the building and includes a feature arched glass wall, behind which sits the ‘high demand collection’, formerly short loan. In front of this, the ‘one-stop-shop’ helpdesk has been created. For the first time there is an area for eating and drinking with two long dining tables, funded by the Annual Fund of the UEA alumni, with feature lighting and power for laptops. Thanks to improved group study facilities on Floor 0, the rest of the building has been re-zoned into quiet or silent study space.</p>
Research Support	<p>This was the first year for which we drew together strands of work across ISD to create a research support project. Within this project, we have:</p> <ul style="list-style-type: none"> <li>• Completed a review of research structures and processes highlights areas particularly in need of improvement</li> <li>• Established a research support service within ISD. This is headed up by the new Head of Research Computing. One additional systems developer post was created within this new team</li> <li>• Defined the services to be delivered by the research support team in an approved Service Level Definition (SLD)</li> <li>• Successfully tendered for and are currently in the process of installing and configuring a new HPC cluster. The new cluster increases the capacity of the research computing service</li> <li>• Increased personal filestore for research staff from 2GB to 10GB</li> <li>• Conducted an option appraisal of digital repositories. This led to work to replace the existing repository based on Digitool with a new repository based on EPrints. The repository is to be used as a central publications database as well as for holding the full text of research publications and provides direct links to people pages in the CMS. A new policy for the mandatory deposit of publications information was approved</li> <li>• Created a vision for the development of a virtual research environment (VRE) to support research. (Work to create the VRE will be undertaken in 10/11)</li> <li>• Reviewed the use of web services by researchers and research groups</li> </ul>
Teaching and Learning Support	<p>It was agreed at the start of 2009/10 that work in this area would be delayed so that ISD could concentrate efforts on UEA London, the security breach in CRU also impacted our ability to progress work in this area.</p> <p>The ISD Education Board has now met twice. They have reviewed comments from the auditors on the use of VLE and agreed an approach for the coming year to investigate this further and consider whether development of policy in this area is required. A program of work has been agreed for 2010/11.</p>
SITS	<p>A report on the progress for the SITS project was reported to the SITS Board in September, a copy of this report is included as an appendix</p>
Reclassification	<p>Since 2006 the Library has been going through the process of reclassifying its resources to standard Library of Congress in order to streamline its back-of-house processes. The most prominent part of this work took place throughout the 2009/10 academic year with books being moved to their new classmarks and all are now in their final resting place.</p> <p>As well as ensuring the long-term sustainability of our collection, other benefits have included</p>

	<p>opening up sections of stock previously obscured by the old in-house classification scheme. We are able to provide clearer signage and have gained fuller catalogue records for many of our items. The whole process has also served as a stock check, helping us to identify and replace missing books, as well as allowing for cleaning and tidying of the shelves at the same time.</p> <p>Although the most prominent part of the work is now finished, there are a number of ongoing tasks from 2010/11 onwards. These will primarily focus on the cleanup of data.</p>
Telephony	<p>The project has been hampered by major technical challenges that delayed the start of the roll out of handsets significantly and caused the program to be put on hold again during the spring until the major problems could be resolved. The majority of these have now been overcome; largely due to the amount of pressure UEA staff have been putting on Siemens to get them resolved. Despite the problems most of the planned phone roll out was completed during the year. Handsets have now been rolled out to ITCS, Arts 1 and 2, NBS and NAM and the Council Chamber (used for clearing and other call centres), as well as a significant number of handsets to cover moves, adds, changes and fault resolution, saving UEA money that would previously have been spent employing contractors to change the cabling for this purpose. This included being able to respond very quickly when staff had to be evacuated from Earham Hall and we were able to give staff having their own phone numbers back, using new VoIP phones, within four hours of the problem being reported to us – at no extra cost to UEA.</p> <p>Due to the technical difficulties experienced the project was not able to complete one of the planned buildings – ZICER. The program for this year has been drawn up to cover MED, CAP Queens and Elizabeth Fry buildings and ZICER will be completed during the coming year as well.</p> <p>Outside of the scope of the project but interfacing to it was the installation of the new telephony bearers (connections to the outside telephony world). These were moved in early July in preparation for clearing and all external incoming and outgoing UEA calls are now running over these connections. This give us a greater capacity for calls as well as resilience because calls in all number ranges are now spread across all bearers so one failure will not impact one specific number range.</p>
Sustainability	<p>In the 2009/10 PoW tasks to improve the sustainability of IT services were subsumed into the JISC funded Sustainable ICT Service Provision (SISP) project. The overall aim of this project was to determine the sustainability of UEA's ICT services in terms of their energy consumption and CO<sub>2</sub> emissions and to investigate and implement strategies for improving sustainability. The project started in October 2008 and finished at the end of March 2010. Not all elements of the project plan were fully executed (for instance server virtualisation), and with the benefit of hindsight we would have been better to focus on fewer outputs as maintaining the necessary level of staff resource to fulfill project commitments was not easy. Nonetheless, measures implemented during the project have achieved a significant reduction in power consumption attributable to IT services both in our Data Centre and in our desktop computer provision.</p> <p><b>Data Centre power savings</b></p> <p>In the Data Centre we have achieved a c. 22% reduction in our power draw equating to c.950,000KWh (950MWh) per year and a reduction in CO<sub>2</sub> emissions in excess of 513,000kg. This represents an annual saving for the University of around £97,000. The saving was achieved by:</p> <ul style="list-style-type: none"> <li>• Changes to the electrical distribution equipment</li> <li>• Improvements to air flow in the computer suites as a result of re-organising server racks into hot and cold aisles</li> </ul>

- Server de-commissioning and replacement

Because the implementation time periods for the above overlapped it is not possible to accurately separate out the effects, however we estimate that changes to the electrical distribution equipment probably accounted for c.50% of the power decrease, improvements to air flow 40% and server decommissioning and replacement 10%

An estimated further potential saving of in excess of 700,000KWh per year (>£70k) has been identified once server virtualisation plans have been implemented during the next eighteen months, and c.275,000KWh per year (£28,000) will be also saved when the current UPS running at 70% efficiency in our older Computer Suite is replaced with a modern 90-95% efficient model. Subject to availability of funding this would also be done within the next eighteen months. Other potential measures for generating additional savings have been identified for further investigation and possible implementation, for example increasing Data Centre operating temperatures (thus saving on cooling) and using natural ventilation to aid cooling.

The project also conducted a study to look at the feasibility of UEA hosting sustainable Data Centre services in the region. The feasibility study has yet to be fully considered, but early impressions are that demand for such is limited. However, there may be some mileage in considering co-hosting of data backups with other institutions.

#### **Desktop computer power savings**

In student IT areas we achieved a c.40% reduction in average PC power consumption, equivalent to c.270KWh per PC per year (c.£27) . The annual power saving totalled for all the power managed PCs in the project was c.130,000KWh (c.£13k). This saving was achieved by using power management software to switch systems into 'sleep' mode (c.1W) when inactive out of hours and in some cases also when inactive during daytime hours. If similar were applied across all student IT areas in the University<sup>1</sup> around 350,000KWh per year of power (c.£35k) would be saved.

Some preliminary investigation using power management software on staff PCs has shown that this would most likely be problematic owing to very varied work patterns and the need of some to remotely connect to their desktop systems out of hours. The project therefore funded a study using the web based CRed system for implementing behavioural change, to determine the effect on energy consumption attributable to both IT and non-IT use. Evidence from roll-out of this system in earlier trials at UEA and in local authorities indicates that CO2 emissions can be reduced by as much as 12-15% using this system as part of a wider staff engagement program.

Some piloting of thin client devices as student print stations and library information workstations was also undertaken. From this it was determined that there was an operational power saving to be achieved by using thin clients, but the saving is smaller than savings achievable using power management on fat clients and taking into account implementation costs it would only be financially viable if deployed on a greater scale for a wider variety of applications. In light of this it has been recommended that investigation of using thin clients on a wider basis be undertaken when UEA has a virtual server and virtual desktop infrastructure is in place.

<sup>1</sup> Currently the software is installed in all student IT areas under ITCS management and a few faculty managed student IT areas that were sampled in this project.

	<p>Reports from the project are available from the project's website at <a href="http://www.uea.ac.uk/is/sustainable-ict">www.uea.ac.uk/is/sustainable-ict</a> .</p>
Service Continuity	<p>Service continuity checklists were completed for all priority A and a number of priority B services. The decision to introduce an ITIL approach has impacted this work and we called a halt on getting remaining checklists completed until the service catalogue was completed.</p>
Customer relationship management	<p>At the start of the 09/10 academic year, the CRM project launched Netcommunity as a live service for all alumni. Through the rest of 09/10, work on the project was to complete the integration of the system with other UEA systems. The project is now in the process of being closed and transferred to live service</p> <p>There was a significant investigation into the suitability of Raiser's Edge as a corporate CRM solution. Further work on this question is dependent on the availability of the next version of Raiser's Edge which has greater configurability and security controls. This is expected to be available during 10/11</p>
Information Framework	<p>Lack of resource for the original scope of the information framework project meant that little progress was made. Therefore, a different approach was taken focusing primarily on the development of records management policies.</p> <p>ISSC approved the high level records management policy at their June 2010 meeting, and is available on the web at <a href="https://intranet.uea.ac.uk/is/strategies/infregs/recordsmanagement">https://intranet.uea.ac.uk/is/strategies/infregs/recordsmanagement</a></p> <p>Further policies and discussion documents around policies will be developed through 10/11</p>
Managed Print Services Pilot	<p>An invitation to tender was sent out to the suppliers on OGC framework agreement for a Managed Print Service for staff printing and copying. The tender evaluation process resulted in the detailed planning for the Managed Print Service pilot being progressed with Ricoh. An audit of current staff printing and copying activity was conducted in April/May in the Arts Building (the pilot area). A report with recommendations was presented by Ricoh which identified the number of devices and the potential for achieving savings. Detailed testing of the solution and planning for the pilot then followed. All of this work has taken longer than originally anticipated and has rolled forward into 2010/11.</p>
Managed PC procurement	<p>The contract with the existing PC supplier is old enough for us to retender. The statement of requirements was drafted and issued to desktop computer and notebook suppliers on the SUPC, and the project team are part way through the process of evaluating the responses before making a final recommendation. The current plan is working towards having a live service with the successful supplier in January 2011</p>
Smartcard roll out	<p>A review of Smartcard functionality was undertaken and a new Campus Card Strategy agreed by ISSC. As a result we have reviewed and streamlined the process of card production and encoding in order to enable bulk printing of cards. This will enable a wholesale replacement of non smartcard campus cards between October and December 2010. The process of replacing cards and enabling wider use of offsite production is built into the 2010/11 program of work.</p> <p>Smartcard technology has been built in to the new Library entrance gates and will be included on the printers/copiers installed as part of the Managed Print Service</p>
Review of the conditions of computer use	<p>This work was completed on schedule and a new Conditions of Computer Use was approved by ISSC in July 2010. The Conditions of Computer are available at: <a href="http://www.uea.ac.uk/polopoly_fs/1.3460.LATEST!cou.pdf">http://www.uea.ac.uk/polopoly_fs/1.3460.LATEST!cou.pdf</a></p>
Review ISD contingency planning	<p>The review of the top level ICT contingency plan was completed on schedule, and the updated document was approved at the June 2010 ISSC meeting. It is available on the web at <a href="https://intranet.uea.ac.uk/is/itregs/businesscontinuitydisasterrecovery">https://intranet.uea.ac.uk/is/itregs/businesscontinuitydisasterrecovery</a></p> <p>The updated plan and the process of the review were audited by the University auditors in</p>

	July 2010
UEA London	The UEA London IT infrastructure was fully deployed at the London site on schedule and has provided a resilient service with only a small number of minor issues since the first intake of students. Server racks, servers, networking and storage equipment were installed at UEA in preparation to deploy the service. The racks were then stripped down and reassembled under supervision at the London site. Technical guidance was provided to the builders of the UEA London computer suite room to ensure a resilient service could be operated. A number of issues surrounding City University's directory services integration have taken a considerable amount of time to resolve which has had an impact on our resources for other projects.

## Review and planning reports

Review of Student ICT provision	<p>The current student ICT provision was reviewed, and an option appraisal considered two outsourced solutions from Google and Microsoft. The Microsoft solution provided the best match to UEA's requirements; however neither solution met all of the requirements, especially in regards to filestore provision which was unable to completely replace the existing UEA file storage. The outsourcing of student email and filestore will not be progressed for the academic year (2010/11), due to the short timescales and systems team staff resource limitations. The student filestore quota has been increased to 5 Gb. A review of how the existing webmail system can be improved will be conducted during the academic year 2010-11.</p> <p>Over the summer, the focus has been on upgrading the student desktop to Windows 7 for the start of the academic year.</p>
Development of AV strategy	<p>Following a consultation process, an AV strategy was developed and approved by ISSC which outlined a direction for AV services over the next 5 years and provided indicative costs for major initiatives. It is intended that this strategy will help to plan future service developments and feed into budget rounds and plans as appropriate. The strategy is available at: <a href="http://www.uea.ac.uk/is/strategies">http://www.uea.ac.uk/is/strategies</a></p>
Review of digital communications	<p>A review of staff and student communications has been undertaken by MAC. The outcome of this has suggested alternatives to some existing email list distribution methods. A pilot has been run for the alternative and an agreed approach suggested. Staff and students will be sent weekly bulletins linking to web pages for further information.</p> <p>A review of email distribution lists has been undertaken. The output of this review will feed into the 2010/11 team plans within ISD which are looking at replacements for the mail list servers.</p> <p>Further work is required to identify and publicise a standard set of distribution lists and agree an approach to maintaining these</p> <p>Investigation and development of other forms of digital communication (sms, mobile apps, etc) is still to be completed</p>
Review of Content Management Systems	We were unable to progress work in this area.
Library acquisitions budget value for money exercise	<p>In 2009/10, ISD baselined an additional £50K per annum to reduce some of the negative impact of exchange rate fluctuations. This action, plus some agreed journal cancellations and the temporary 15% VAT rate, helped to sustain core subscriptions.</p> <p>In 2010/11 the main challenge will be to absorb the increase in VAT from 15% to 17.5% which</p>

	will leave us with approximately £32k in deficit. Over the summer UEA was proactive at a national level in lobbying for a stronger consortia approach to negotiating journal deals. We also met with representatives from the main publishers to discuss issues of sustainability.
Service costs – ICT provision	We were unable to progress work in this area and have carried this work over to 2010/11
Review of Faculty and Divisional requirements for Finance systems	Work has started on this review and it is being carried forward into the 2010/11 program of work.
TV Studio	An ISD project was initiated associated with the refurbishment of the TV Studio and this will run into 2010/11. It includes identifying additional use of the TV studio to ensure better space and equipment utilization and working with FTV and other users of the studio to develop a full requirement specification and appropriate tender documentation for upgraded equipment.

### Service plans

The ISD Strategy 2008-13 identifies eleven keys areas or groupings for ISD service delivery; the table below summarises activity in each of these areas.

Library resource provision, including management of the physical and electronic collections and information skills training.	<p>Jane Helgesen, Information Skills Librarian devised a new program of interactive information skills workshops to be launched in the 2010/2011 academic year, complemented with a set of online tutorials.</p> <p>We continued to develop closer ties with faculties and schools. The library review meetings between Heads of School and the Head of Library Academic Services with Faculty Librarian and school library representatives are now an annual occurrence. In addition Faculty Librarians continued to attend staff student liaison committees. Examples of changes arising from these meetings include the re-zoning of reading floors, the streamlining of the re-shelving processes and the installation of additional library catalogue PCs.</p> <p>We also continued to increase our investment in e-books specifically targeting Schools where the NSS feedback suggested book availability was an issue. We also received additional supplementation from the University's TESS (Teaching Enhancement and Student Success) fund for additional e-books across the board focusing on items in high demand.</p> <p>We assisted with the implementation of the new E-prints Digital Repository. This provides a centralised repository for the depositing both metadata records and the full text of UEA generated research papers. Following an extensive consultation with Faculty Executives, ISSC agreed a mandate for the depositing of publications data from 2007 onwards. A proposal to mandate full text will be considered further at the next ISSC meeting. The repository now holds over 10,000 metadata records which have been ingested from separate databases held across faculties, and it will be launched formally in October 2010.</p> <p>The new optional approach to the deposit of e-theses into the UEA digital repository went live on 1<sup>st</sup> April 2010. Between May and August 2010, over 60 e-theses were deposited within the repository.</p> <p>We launched the archive of environmentalist Roger Deakin on May 7<sup>th</sup> with an event at the Sainsbury Centre. This archive is a significant resource and its deposit received national media attention.</p>
IT infrastructure in teaching spaces,	The Thomas Paine Study Centre opened in November 2009 which provides many new technology-rich teaching spaces. Following on from this, TESS funding enabled four teaching

<p>including IT teaching areas, 24 hours IT area, self study spaces and AV services in lecture rooms.</p>	<p>rooms in the Arts Building to be enhanced with visualisers and interactive whiteboards. This funding also enabled the upgrade of Lecture Theatres 1 to 4 deaf aid loops and replacement of the audio system in LT1. Progress was made towards the roll out a video and audio streaming solution which will be launched early in the new academic year. Plans were also progressed for a new server infrastructure to support the Mediasite Lecture Capture solution in the Thomas Paine Study Centre lecture theatre, DEV, NBS and LAW which will be commissioned during 2010/11.</p> <p>All the centrally bookable teaching rooms now have sound systems installed.</p> <p>During the autumn of 2009 a desktop for UEA London based on Windows Terminal Services technology was developed and deployed.</p> <p>Over the summer the rolling hardware upgrade process was perform in the IT Areas. This resulted in all of the central IT Areas being suitable for a 64-bit Windows desktop.</p> <p>A new Windows 7 desktop developed and deployed during September 2010. By migrating to Windows 7, UEA remains within the Microsoft operating system support matrix.</p> <p>During the spring and summer the Desktop Services team assisted Faculty and Central support teams in the migration of research and administrative users from Office 2003 to Office 2007.</p>
<p>Staff and student enquiry services, including IT helpdesks, Library helpdesk.</p>	<p>As part of the Library Entrance Floor refurbishment, we upgraded our returns sorter to have 2 internal inputs to reduce queuing. We also opened up the entrance to the 24 hour area from Floor 0 instead of the roadway on Floor 02, again enhancing the student experience. We made a number of changes to our front-line staffing to ensure we are better able to meet the changing needs of the university, provide a consistent level of service in the early evening and at weekends and ensure flexibility for the future; for example the Library Reception and Helpdesk teams have been merged and the co-located centrally on Floor 0, and a new generic job description has been introduced for Information Assistants working in the Library. Following a review of some of our back-of house process we have introduced changes which we hope will lead to improved user experiences and greater resource availability – these include the introduction of open-access holds, revised processes for re-shelving items and some minor changes to holds and loan limits. Following a successful pilot, we have also moved to 8am opening (with helpdesk services available after 9am).</p> <p>As well as dealing with routine queries, the IT Helpdesk has provided support for users to guide them through a significant number of changes to the IT systems this year such as the move to Office 2007, the launch of the new student printing service, the implementation of forced password changes and most recently the change to Windows 7.</p> <p>We made considerable strides in improving the accessibility of our services, including additional assistive technology, induction loops at the helpdesk, height adjustable benching and study pods designed for wheelchair access. Much of this provision was again supplemented by TESS funding.</p>
<p>IT infrastructure, including two computer suites providing resilient email, filestore, backup and authentication services.</p>	<p>Issues previously reported surrounding Windows Server 2008 SP2 and RADIUS (EduRoam etc) authentication were successfully resolved in the spring, using a Microsoft hot fix and isolating the RADIUS service so that it could no longer take the entire authentication service down. Since undertaking this upgrade the older Windows Server 2003 hardware has been decommissioned and the domain is now operating in native Windows 2008 mode enabling the benefits that this brings.</p>

	<p>Microsoft’s System Centre Configuration Manager (SCCM) has been enhanced over the summer to support patching and hot fix distribution and the deployment of Windows 7 desktops in ISD and faculty managed IT areas. Over the year we intend to implement Quest Management Extensions for SCCM which will allow the service to manage Linux and Macintosh machines. It will also be possible to perform software and hardware audits on computers. This service will evolve over time to provide these additional services with delegated access to faculty IT support being made available.</p> <p>Major SAN infrastructure upgrades have taken place over the summer vacation including an upgrade to the Ontap firmware on the NSeries filers to provide Windows 7 compatibility. The SAN fabric that provides the underlying infrastructure of the SAN has been replaced and simplified with new Brocade hardware to enable the removal of the older McData equipment and switch from compatibility mode to native Brocade operation. During this upgrade every SAN connected device had to be moved to the new SAN fabric. Due to the redundant design of the SAN it was possible to achieve this with a minimal amount of system downtime. This has helped to resolve a number of issues we had been experiencing with devices not being able to see SAN disk. Further work is now required to balance services appropriately.</p> <p>Significant additional disk capacity has been added to the SAN which has enabled comprehensive increases to default central file store quotas. Undergraduate and INTO Norwich students now receive 5 GB, staff and taught postgraduates 10 GB and research staff and postgraduates 50 GB.</p> <p>An additional NSeries cluster has been installed in our second computer suite that will allow for the mirroring of data from our existing NSeries cluster. The aim of this is to improve recovery times in the event of data loss and work is now being undertaken to evaluate the best candidates and uses for this functionality. We will be working with our storage partners Tectrade to undertake this work.</p> <p>The last remaining SAMBA file server ‘fileserver4’ has now been decommissioned. All file services previously provided are now delivered using our NSeries filer appliance.</p> <p>A new TSM backup server has been installed to replace and consolidate our two original TSM servers. This has allowed us to upgrade to version 6.2 of the software and clients are now in the process of being migrated to the new server over the next few months. There have been a number of teething issues around this work and we are working with our storage partners Tectrade to overcome these.</p> <p>Working in partnership with the East Anglian Film Archive (EAFA) and HUM IT support over the summer a project was undertaken to provide facilities to allow EAFA to digitise footage for long term archiving. The solution provided utilises parts of our existing SAN infrastructure and tape library allowing automated archiving of the footage to tape and is expected to be used as a model for other film archives wanting to undertake such a project.</p> <p>The operations team continues to replace IT server hardware as part of the planned hardware replacement process. The replacement servers are more power efficient, easier to manage and more powerful than the servers they replaced. This has led to a significant reduction in electricity consumption across both computer suites.</p>
Network and Telephony,	The wireless networking project has been completed this year. This project was to install wireless access points in all the UEA buildings (excluding residences) and was spread over a

<p>management of the internal network, external network links, and telephony.</p>	<p>number of years. The system now consists of over 450 access points installed across the Norwich and London sites. The EDUroam service is now available via the wireless network. This allows visitors from other EDUroam sites to connect to the wireless network here without having to register, and for members of our community to use services at other sites.</p> <p>A new and enhanced VPN service was installed and launched over the summer. This provides role-based as well as individual access control.</p> <p>JANet (Joint Academic NETwork) who provide our external Internet links, have migrated the UEA Norwich and Kings' Lynn (Queen Elizabeth Hospital) sites onto the new East of England Regional Network. The provisioning of our second 1Gb connection is currently running behind schedule, however equipment has been made available to facilitate this enhancement.</p> <p>UEA's telephone line provider was changed over the summer. The migration didn't go as smoothly as planned and this raised a number of issues with our internal telephone exchange, which is maintained by a different supplier. Having to work with two different suppliers to enable the provision of one service can often be problematic and reviewing the migration will highlight lessons for the future.</p> <p>The new Telephony system has been integrated with Estates and Identity Management systems – leading to the provision of a new online directory containing people, phones and rooms. The Telephonists are now the key contact point for updates to phone and room number information.</p> <p>Power over Ethernet switches continue to be deployed in support of the VoIP project. This activity will continue for a few more years to come.</p>
<p>Research computing, provision and support for a 160 node cluster used for high powered computing.</p>	<p>Following the recruitment process starting in March of 2010, Dr Wadud Miah was appointed HPC Systems Developer, joining the Research Computing team in June having previously held a similar position at Rutherford Appleton Laboratories.</p> <p>The current cluster facility was migrated to standard UEA QAS/VAS authentication in June following a period of testing, removing any reliance on less secure legacy authentication processes.</p> <p>An intensive tender process for the new High Performance Computing cluster was concluded in the summer, with the contract awarded to Viglen Ltd. The new facility consists of 168 nodes, in a four node chassis format, providing a total of 2016 Intel Westmere cores, with a peak performance of 21Tflops. The cluster will be dual boot Windows HPC and Linux, with a focus on sustainable IT as well as accessibility and usability. Installation of the cluster started on September 27<sup>th</sup>, with UEA expecting to begin acceptance testing on the 11<sup>th</sup> of October, followed by managed user migration and access in Q4.</p> <p>Usage on the cluster remains high, with a number of users with significant demands for processing time and/or resources. Storage requirements have continued to increase, with additional storage being required to be added to a number of departmental HPC filestores. A project is underway to integrate a newly purchased 100TB storage array into the cluster to meet the increased demands that the new cluster will generate.</p> <p>To develop use of the HPC cluster across faculties, investment has been made, particularly in</p>

	<p>software licenses, to increase functionality required by more non-traditional departments. The Research Computing team is also concentrating on user outreach and training, including a training session scheduled on High Performance Computing for the Faculty of Science Postgraduate School's Personal and Professional Development program in December.</p>
<p>Teaching systems including the VLE, Portal, Library Management System, and some specialist teaching software.</p>	<p>The Library section on the Portal has been redesigned to try to leverage more value from our resources. We changed the 'Search the Library' portlet to make the options available much clearer for users.</p> <p>Work has been undertaken to replace and standardise hardware supporting the Library Management System. In addition the underlying databases have been migrated to our standard framework, which brings more resilience and security compliance.</p> <p>The Digitool digital repository has been replaced with e:Prints which will bring a range of usability and functional benefits to how we manage publications data, digital objects and e theses. Broadsearch, the library search tool, has been upgraded and moved to new hardware and database infrastructure. Metalib and SFX have both been upgraded and moved to new resilient hardware.</p> <p>The Portal and VLE have remained stable throughout the year, with minimal down time. Little work has been undertaken on these as we await the outcome of a wider review in 2010/11 leading to possible upgrade or migration. The Portal was used to support the Booker Prize project for the 2010/11 start of year.</p>
<p>Administrative and web systems, including Finance, Student Records, HR, Estates and the UEA web site.</p>	<p>Core infrastructure and databases supporting HR, Finance and Estates system has been upgraded. There have been significant delays upgrading the Finance system due to system issues as well as bugs which have required supplier intervention, the upgrade will now be happening during November 2010.</p> <p>There has been ongoing work to improve the resilience and availability of our web systems. This year we have seen additional loading issues on our sites, indicating increased usage. We have been able to optimise the sites and delivery mechanisms to address this</p> <p>Security considerations have been high on the agenda across the corporate applications. We have undertaken a range of work to improve both security and auditing of our systems</p>
<p>Audio visual services, including video conferencing, TV studio, off air recording and access grid.</p>	<p>The video conference facility was upgraded and relocated in the AVS Studio accommodation. The Access Grid was used to support a series of the MAGIC lectures to Math post graduate students at other participating HE sites which will continue in 2010/11. Plans are progressing for the refurbishment of the TV Studio.</p>
<p>Print group services.</p>	<p>The main activity was contributing to the Managed Print Service project (see project section).</p>
<p>Security, policy and compliance.</p>	<p>There have been a number of investigations that have taken place including assisting with the investigation into the security breach in CRU. A greater number of FOI and EIR requests have been dealt with then in previous years.</p>

Appendix – Report on SITS project deliverables

**SIS Project Summary 2009/0**

In October 2009 the SIS Project Board agreed a prioritised set of objectives for the SIS Project Team for the academic year 2009/0. This paper summarises the progress that has been against each of those areas.

Item	Priority	Owner	Description	Impact	Status
1.	A+	Academic Division	<b>HESA Developments</b> The data quality and setup for HESA can be improved through improved automation and tasks. The full specification has not yet been received but changes would need to be in place for May 2010.	Staff	Completed
2.	A+	Academic Division	<b>Support For Tier 4</b> It is unknown how much time will be required to support Tier 4 but it should take priority over other areas of work. At the very least support will be required to implement the SMS interface and the absence monitoring module.	Staff and Student	Completed
3.	A+	ISD	<b>Project Management</b> The project will continue to be managed by the SIS Project Manager, Emma Koro.	Staff and Student	Ongoing
4.	A	Academic Division	<b>Event Modifications</b> New events have been requested to allow fieldwork and NHS research passports to be stored in SITS. The latter required an e:Vision interface due to the complexity of the records being created.	Staff	Completed
5.	A	Academic Division	<b>Events And Timetabling</b> Timetabling developments will continue throughout 2009/0 with the aim of being fully functional for September 2010.	Staff and Student	Ongoing
6.	A	Academic Division	<b>Postcode Checking</b> A SPOT/SITS implementation that will be able to background check address records, fix where possible and flag as requiring information where not possible.	Staff	Completed

Item	Priority	Owner	Description	Impact	Status
7.	A	Academic Division	<b>Research Student Meetings Pilot And Full Rollout</b> Functionality to allow students to complete questions to annual progress meetings, which would then be passed to the Supervisor for confirmation of details. This is linked to Research Student Training and if possible should be released together.	Staff and Student	Removed from PoW with agreement of SIS Project Board
8.	A	Academic Division	<b>Research Student Training Pilot And Full Rollout</b> Allowing students to complete details of research events attended online, and passing to the Supervisor for confirmation of details. This is linked to Research Student Meetings and if possible should be released together.	Staff and Student	Removed from PoW with agreement of SIS Project Board
9.	A	Academic Division	<b>Reverse Registration Phase 1</b> Reverse registration will take place from December 2009, for new students starting in January 2010.	Staff and Student	Completed
10.	A	Academic Division	<b>Reverse Registration Phase 2</b> Support for reverse registration Phase 2 which will be for new students starting in September 2010.	Staff and Student	Ongoing
11.	A	Academic Division	<b>Statistics For Modules</b> Modules to give additional information to students on the range of marks.	Staff and Student	Completed
12.	A	FIN	<b>Support And Maintenance Of SAM</b> The Student Accounting Module (SAM) will continue to be maintained and supported by the SIS Project Team.	Staff and Student	Ongoing
13.	A	ISD	<b>Continued Technical Support</b> The SIS Project Team will continue to provide second line support for existing functionality. Depending the scale of problems this has potential to impact available development time.	Staff and Student	Ongoing
14.	A	ISD	<b>Internal Development Standards</b> Standards are required for the development of E:Vision content, as currently the style is particular to the developer, giving an inconsistent look and feel to the process screens. We also plan to review the language that is used on screens and where possible move away from SITS acronyms to UEA language.	ISD	Ongoing
15.	A	ISD	<b>Internal Documentation For Key Functionality And To Support Disaster Recovery</b> CIS is reviewing all internal documentation to ensure that information is correct and up-to-date.	ISD	Completed

Item	Priority	Owner	Description	Impact	Status
16.	A	ISD	<b>Review And Implementation Of Recommendations Of E:Vision Content Layout</b> Currently all content has been added to one page in SITS for staff, making it difficult to locate the required information or task. This review will recommend a new layout which will also be appropriate for new functionality.	Staff and Student	Waiting for Administrative Review to be completed
17.	A	ISD	<b>Review Of Training Offered</b> A review will take place of the SITS Student Records training offered to staff	Staff	Completed
18.	A	ISD	<b>Upgrades</b> UEA is required to be up-to-date with all upgrades and hotfixes released by Tribal. There are currently two upgrades per year and weekly hotfixes.	Staff and Student	Completed
19.	A	MAS	<b>Admissions Archiving</b> Request for admissions data to be archived after 5 years of storage.	Staff	Waiting for review of data archiving to be complete
20.	A	MAS	<b>Clearing Support</b> Support for new process screens which are expected to be used in July 2010.	Staff	Completed
21.	A	MAS	<b>Internal Enquiries Form</b> A form to allow internal users to enter enquiries information, removing the need for access to the SITS client.	Staff	TBC
22.	A	PGR MG	<b>Fund Manager Phase 2</b> The consultancy which took place in August advised that Fund Manager could be used to manage research student finances including financial transactions and an E:Vision interface. This task would need to continue into 2010/1 academic year.	Staff and Student	Removed from PoW with agreement of SIS Project Board
23.	A	TPGM	<b>Course Approval</b> Continued development of course approval in preparation for release in September 2010.	Staff	Waiting for testing and sign off from LTQ
24.	A	TPMG	<b>Fitness to Practice</b> MED have requested to be able to store confidential fitness to practice assessments in SITS for students. This information would be used at Professionalism Committee meetings and would need to hold information on incidents.	Staff	Removed from PoW with agreement of SIS Project Board
25.	A	TPMG	<b>Online Module Enrolment 2009/0</b> Setup of Online Module Enrolment for March 2009 for 2010/1 selections.	Staff and Student	Completed

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26.	A	TPMG	<b>Online Module Evaluation</b> Changes to the existing tasks to remove the default answer to questions.	Staff	Completed
27.	A	TPMG	<b>Review Of Access To Online Marks/ Awards For PG Students</b> We are currently unable to release confirmed marks/awards to PGT students via E:Vision, firstly because of the course/block setup but also because many will have lost access to resources by the time the Board has taken place.	Staff and Student	Not started
28.	A	TPMG	<b>Students To Nominate Referees</b> With the current security model, there is no link between a referee and a student, which means that referees do not automatically have access to student marks and awards. A task has been requested to allow a student to nominate a referee.	Staff and Student	Completed
29.	A	TPMG	<b>Training</b> Training and training materials for Student Records and Placement processes will continue to be maintained by the SIS Project Team.	Staff	Ongoing
30.	A	TPMG	<b>Updating Course Profiles Via E:Vision</b> Functionality to allow staff to amend diets via E:Vision. This process is currently managed in SITS client and is one of the more complex tasks. Using E:Vision would improve the quality of the data and user experience, which will feed into the Online Module Enrolment process.	Staff	Completed
31.	B+	TPMG	<b>Release Of Provisional Reassessment Marks</b> Provisional reassessment marks to be released for FOH students via e:Vision.	Staff and Student	Completed
32.	B	DoS	<b>Accessibility Module Review</b> DoS have requested a review of the Accessibility module in SITS to determine whether this would be suitable for storing information on students, and sharing information with appropriate members of staff.	Staff and Student	Completed
33.	B	TPMG	<b>Amending Course Director Via E:Vision</b> Functionality to allow staff to amend the Course Director for a route via e:Vision.	Staff	Completed
34.	B	TPMG	<b>Pilot Of Uploading Assessment Marks</b> A pilot allowing staff to upload spreadsheets of marks into SITS. The pilot showed that the method may be suitable in some schools.	Staff	Completed