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Breaking the mould – Stakeholder engagement to build a case for, and then deliver the transformation of a 1960s library into a 21st century library and learning space

Introduction

The University of Kent was established in the mid 1960s on a hill above the historic English city of Canterbury. When it admitted its first students the role of the university library was firmly fixed as a grand facility at the heart of the academic process. Indeed it would have been inconceivable that a university would not have a large and well stocked library to support its teaching and research activity.

The architect's vision was for an inspirational centrally located facility that would grow in four roughly equal stages to form a building of some 30,000m² containing the University's physical collections and a range of facilities and services found in university libraries at that time, as described by Martin (1990).

Innovation has always been a feature of the library service at Kent, as evidenced by the fact that in 1974 we were the first academic library in the UK to have a computerised catalogue (Martin, 1990). However the original plan for the building was gradually eroded, with each phase to extend the building suffering a degree of value engineering that reduced the planned scope of each extension and ultimately resulted in a building that departed considerably from the original vision.

By 1996 two elements of the original plan had been completed in three phases, at which time the university had a student population of some 8,000 students. In 2005 the student population had grown to 13,000 with no further growth in library facilities. Internally the configuration of facilities and services was geared towards traditional independent study using largely physical resources and banks of desktop PCs.

Over the four decades since the university's inception, undergraduate teaching had undergone a significant shift towards the use of more varied study modes and activities including the use of group work and we were on the cusp of a technological revolution, an early sign of which was the introduction to libraries of large numbers of desktop PCs and other workstations in the 1990s.

By 2005 the needs of our users had clearly changed; they still needed many of our existing services and facilities such as a comprehensive stock of books and journals and a place to work independently and in silence, but they also required to be able to work collaboratively with other students and researchers and they were using more technology in new ways. It was becoming increasingly clear that large silent reading rooms and formal clusters of desktop PCs were no longer sufficient to meet the needs of our increasingly diverse and demanding users.

The first transformation

In 2004-2005 the newly converged IT and Library service (Information Services) started the process of transforming the Templeman Library to better meet the needs of its users. Interest and investment in learning space design was growing across the sector as

evidenced by Knight (2006) and reflected in JISC¹ sponsored work at that time. Over the following two years we reviewed our use of space and the services we delivered within it and adapted them. This period saw the introduction of social learning spaces including a café within the library security cordon; the introduction of self-service issue and return terminals; the creation of group study and social study spaces; the replacement of a counter-based short-loan collection with a self-service high-demand collection; the introduction of, firstly, a laptop loan service and then self-service netbooks to supplement the desktop PC service; developments in signage including PC availability indicator screens; a general shift towards on-line self-service; and a significant improvement in opening hours. A timeline of incremental changes made to student-facing library-focused services from 2006 to 2013 is included at the end of this paper.

These changes coincided at Kent with the start of a shift from physical to digital high-demand undergraduate resources and strategic decisions in our collections development to favour e-books over physical where possible and the embedding of scanning services within the university's virtual learning environment. However whereas library use had been falling from the late 1990s and up to 2004, the introduction of new services saw a significant increase in library occupancy levels and the use of library resources, with peak daily footfalls increasing by 47% from 2004 – 2007 and more than doubling by 2010 from c. 4,000 in 2004 to over 8,000 a day in 2010. Figure 1 shows the significant growth in occupancy levels during this period although the data are based on snapshot headcounts on nominated days provided to SCONUL² (SCONUL, 1994 - 2015) on an annual basis and are only indicative.

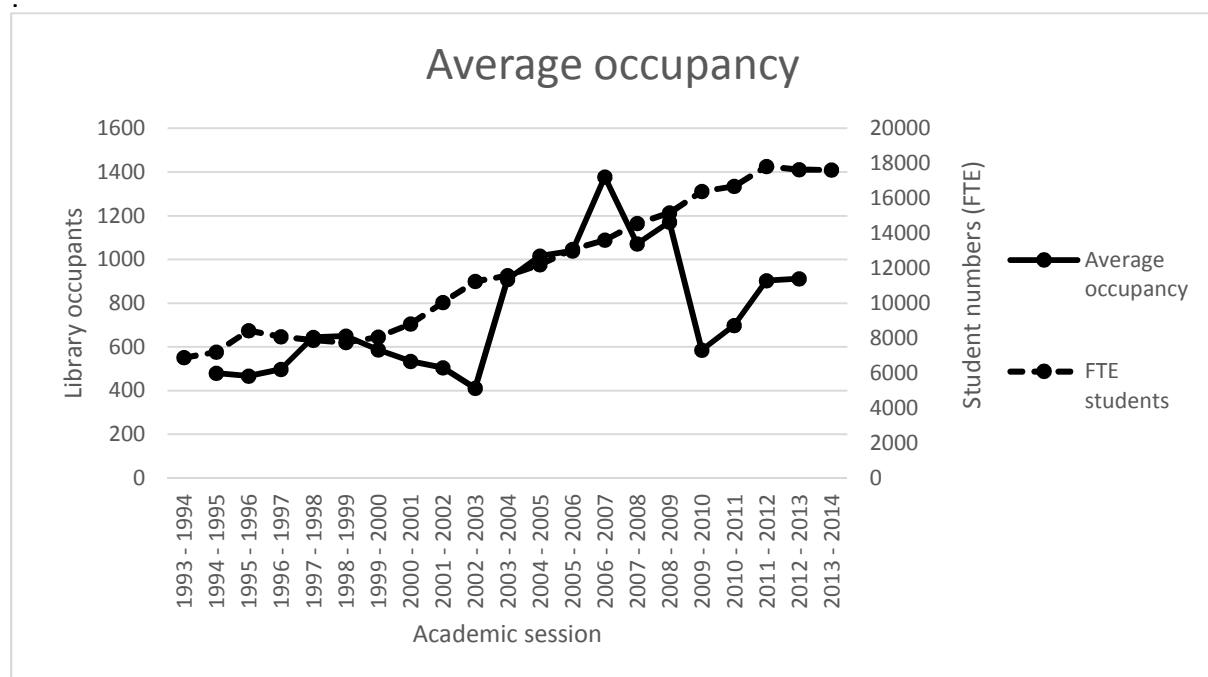


Figure 1- Average library occupation figures based on head-count data on predetermined census days shown against registered students returned to HEFCE on an annual December census date.

Further changes followed including the introduction of automated book handling, the transfer of low-usage book stock to offsite storage and the creation of still more study spaces.

¹ Joint Information Systems Committee (JISC) – jointly funded through the Higher and Further Education Funding Councils of the UK and responsible for furthering the provision and use of technology and related services in tertiary education

² Society of College, National and University Libraries (SCONUL)

Despite adopting a careful consultative approach to the introduction of changes, by 2008 the transformation which in many ways had been a roaring success, had also introduced a number of new problems including: an imbalance in the provision of different types of study space; confusion over what constituted appropriate behaviour in different spaces; a perception that the library was too busy and study spaces and resources were difficult to find; and a sense that the library no longer met the needs of researchers and postgraduates, nor for that matter the needs of undergraduates towards the end of each term and the examination periods. Figure 2 shows the recorded level of student satisfaction in the annual national student survey (NSS) of final year undergraduates. Much has been written about the shortcomings of the NSS methodology as described in a recent HEFCE report (Callender, Ramsden and Griggs, 2014), but the figures for Kent show a dip against national trends shortly after library usage increased that was backed up at the time by our own internal surveys and a rise in complaints.

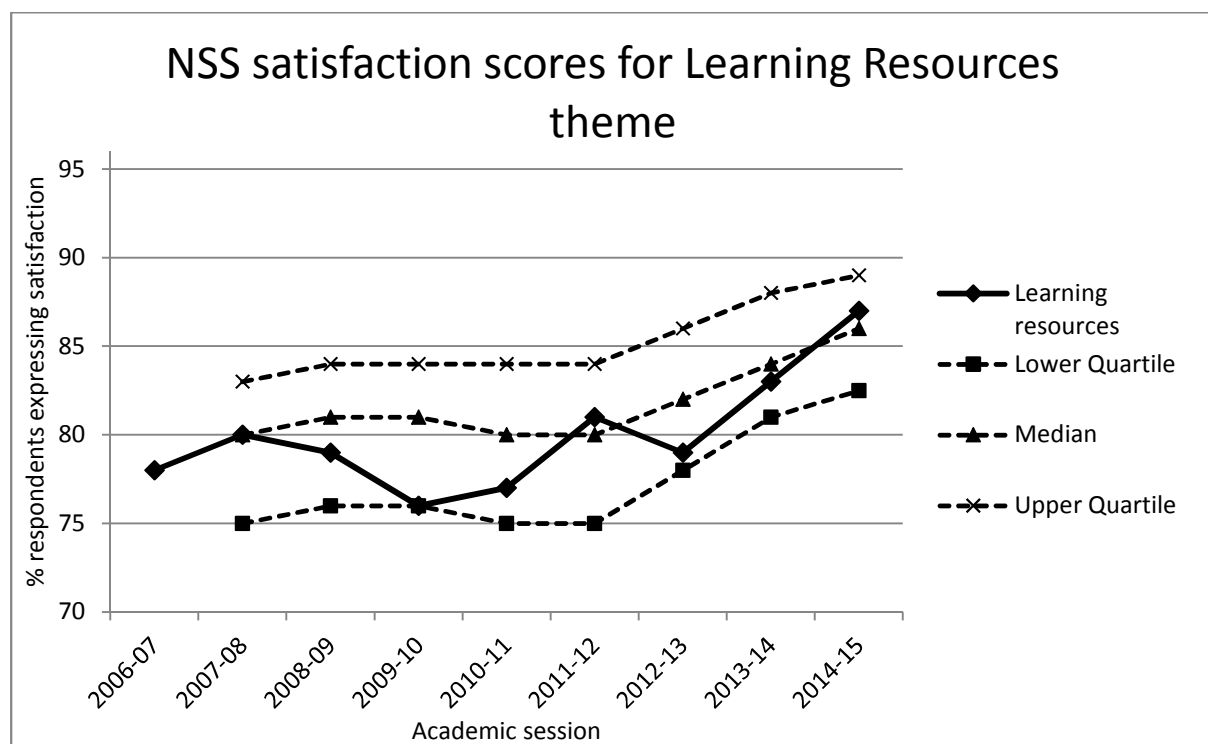


Figure 2- National student survey results showing levels of satisfaction amongst final year undergraduate students for learning resources (library and IT provision) at Kent compared to sector averages for non-specialist HE institutions. Based on HEFCE published data (HEFCE, 2007 - 2015)

Partnership working

Information Services routinely works closely with stakeholders across the University. We are represented on the various academic bodies including Senate and the Education and Research Boards as well as the Student Experience Board and we meet regularly with stakeholder representatives from professional service departments and directly with the student body. We draw up annual operational plans which we consult on widely and we survey the student body annually and discuss our findings and proposed response with student representatives and at Senate boards.

Following the introduction of student loans in 1997 as a means of partially recovering the costs of undergraduate education (Alley and Smith, 2004), and the subsequent introduction of a national student survey in 2005, universities were under pressure from students and

others to carefully consider and improve the student experience (Curtis, 2005).

At Kent this prompted reflection at institutional level and a desire to better support students academically and deliver more effective and convenient support services. Amongst professional and academic service departments there were discussions about what services to provide and where and how they should be delivered, with an increasing desire amongst those departments that engaged directly with students to deliver student-facing services from the centrally located library.

Information Services worked with our various stakeholders to help better understand the improvements which had already been made to the library service and the many challenges all services faced, whilst exploring how things might be improved further. Ultimately this engagement, which took the form of presentations and papers as well as many informal conversations, gained support and funding for a more detailed review of possible options.

Breaking the mould

In 2008 a detailed options appraisal was undertaken (Long, 2008) to determine how the library might be further developed, particularly given that recent approaches had focussed on transforming existing services and spaces, while the library had not increased in size since the mid 1990s when the entire student population was smaller than the number of people by then making use of the building on a daily basis.

The exercise provided an opportunity to consider whether the central location of the library might also provide a suitable site for the delivery of other student-facing services, some of which were already hot-desking within the library. Discussions with Student Welfare Services, the Unit for the Enhancement of Learning and Teaching (UEL) and others ultimately led to proposals for a significant expansion of the library and the development of a larger student support hub incorporating library and other services.

Examples of such hubs were emerging elsewhere in the sector and the diversification of space in library developments in the United States was gaining momentum (Stewart, 2011), but our proposals ultimately failed to gain support, partially because the co-location of services had created a need for a larger more expensive building with services competing for space rather than making sufficient use of shared space required to deliver efficiencies. Clearly, if we were to address the pressing issues presented by an undersized library with a 1960s infrastructure in urgent need of modernisation we would need to find a new approach.

The library is the busiest building on campus and combining library and IT services with other student services with similar busy periods could not easily deliver space sharing efficiencies. We were still keen to provide space for other student-facing service departments, but we needed to find a way of delivering other business benefits to help justify the investment required in a significant rebuilding programme.

Incorporating teaching space into the library emerged as an unlikely candidate during the summer of 2011. At first glance the proposal appeared to require considerable additional space and would drive more students into an already very busy building at peak times. However, we worked with the Timetabling Office to consider whether there might be unexpected synergy in teaching space being located within the Library, as we were already considering temporarily redesignating teaching spaces outside of the library as additional study spaces during the summer-term run-up to end of year examinations.

Furthermore the University has a significant research community that is present all year round, but the library becomes a lot less busy once undergraduates break for the summer. The possible incorporation of teaching space in the form of seminar rooms and a lecture theatre when combined with suitable social space and the facilities provided by a café could potentially form the basis for conference support during the summer months.

So it was that in 2012 proposals emerged encompassing the interests of a still larger consortium of stakeholders. The idea was to develop the Templeman Library to meet the increasing demands for library and study space along with modest provision for the delivery of other student support services such as student counselling provided by Student Services and learning and teaching support provided by UELT; additionally the development should include a flexible teaching floor that would provide teaching space during the busiest autumn term and then convert in some way into library space during the spring and summer terms to supplement the library still further and finally combine with library social and café space to provide flexible conferencing facilities during the summer.

Although these proposals were attractive in that they would help maximise our use of space and investment, they were a significant departure for a department that had operated a single-function building for 40 years and it was likely that many existing perceptions and practices would need to be tested and in some cases challenged in order to achieve the desired outcomes.

The thought of an hourly tidal wave of students, heading to and from lectures, flowing through the library past others trying to study independently in silence filled many staff with a sense of dread, particularly when combined with the many other challenges that seasoned library practitioners could already identify with our skeleton plan.

Effective and novel architectural and engineering solutions would be required to support library and IT staff who would have to develop new ways of working and who were already grappling with a vision that wanted to introduce new and novel ways of using technology.

Expectations amongst our stakeholder groups would also have to be carefully managed as their own visions of what such a facility might look like and how it might function would undoubtedly differ from ours.

Nevertheless the vision was developed, business cases written, funding secured, and in the summer of 2013 we started to put together the team of stakeholders and multidisciplinary professionals to deliver our “21st Century library at the heart of the campus”.

A link to Collaboration & Co-design

The collaborative ethos of the Templeman Library’s internal team triggered an innovative approach to seeking a design team to help transform the library building. In a departure from the norm³ the library’s internal team engaged in dialogue during the design competition with the five shortlisted architect-led design teams through presentations, interviews and building visits. This enabled the concept designs developed by the teams to not only address the written brief but also to respond and flex to the experience of the library’s own expert team – a recognition that the process of spatial change is absolutely bound up with the people that use the spaces and the activities they carry out (Blyth and Worthington, 2010; Awan, Schneider and Till, 2011).

The winning design team, led by Penoyre & Prasad architects, began the project journey by immersing all members of the team – architects, landscape architects, structural, civil and environmental engineers – in the library for at least a full working day each to experience the library first hand as co-users rather than as voyeurs, sitting within the space, using the service, talking to staff and students.

Following the immersive start to the design process a client and design team project group was formed and a strategy for collaboration and communication created allowing for dialogue with the very broad group of library stakeholders including staff, students and the

³ Public sector construction projects in Europe over a minimum spend are subject to rules that require a competitive process. The format of the process varies widely but in general is carried out in a closed way where design teams produce a design in response to but not in dialogue with a client team brief (OJEU, 2014).

local community. An ethos of collaboration and communication that enabled true and appropriate input from stakeholders was a key goal for the project team. Amongst the range of collaboration tools used three stand out as innovative and particularly effective. They are the exploitation of the three dimensional digital building information model, the use of game play and the large-scale prototyping and sampling.

Using digital modelling for new large buildings is now a given but the interrogation and joint ownership of the model by the client team is still rare. For the Templeman project the willingness of the client team to engage with the digital model and to understand its fluctuating state was key. During the design process the model is constantly changing as the design develops in response to client and statutory requirements, design team coordination, site information, cost and stakeholder input. The openness and accessibility of the digital model allowed more concrete conversations about the library's spatial development. The process was not seamless but successfully demonstrated how a developing digital model can be used with both the key client leadership on a weekly or even daily basis and wider stakeholders at key design points to illustrate the design and show how client and stakeholder input is impacting it.

Game play was employed in the design process to get 'under the skin' of how different students use the library today. We wanted to know what activities were carried out by students rather than undertaking an assessment of how the current library was working or failing spatially because the changes in library activities has been so significant since the library was originally constructed. To create truly innovative and appropriate new interior settings it was essential to establish what functions and behaviours the new library needed to accommodate. The game, designed for the project by the architect team, consisted of: a board that described the nature of environments in the library – silent, quiet, social; cards that described activities in the library – essays, group presentations, coffee drinking, flirting...; and spatial environments – living rooms, libraries, zoos, hotels.

The game triggered conversations and lead to the articulation of a series of activities, behaviours and spatial settings of the contemporary university library that are outlined in more detail in a research paper 'ThinkSpace' (Winstanley, 2014). The spatial settings work then linked to the next key component of the collaborative approach – sampling and prototyping.

Stakeholders understand architectural information in very different ways. Whilst some people find it easy to read an architectural plan, others find an artist's impression more useful and often the reality of a space only becomes apparent when it is realized and experienced on completion of the project. Prototyping space can be an extremely effective way of testing out new types of space. The expense of creating a full prototyped space can be avoided by mock-ups or marking out of space, prototyping some elements and using borrowed furniture samples to help create the particular space.

At Templeman sampling and prototyping were key tools in the engagement of students in testing out and commenting on spatial solutions. The incremental development approach used prior to the project had provided data on the use of different spaces and opportunities to pilot different arrangements including the trial of entire spaces such as dedicated research space. The use of prototyping within the project lead to a varied set of environments each suited to different study habits whilst using the same family of spatial elements and furniture.

Conclusion

This paper has set out how dialogue with a broad range of collaborators can provide a platform for the development of service and spatial strategies for change, and how these have transformed a university library from its original purpose as a building with a focus on the storage of books and the facilitation of independent study using physical resources, to a

building that supports a broader landscape of knowledge exchange by facilitating access to the widest collection of information resources and promotes a broad range of collaborative engagement including the reintegration of word of mouth at the heart of the academic process.

The inclusive approach to stakeholder engagement at all stages using innovative and immersive processes and approaches has resulted in a project that has benefited from the wide-ranging understanding of project goals and firm support across the University including from the relatively transient student population.

Although adapting the brief to address the needs of a wider stakeholder community presented some very challenging problems for us to solve and required us to challenge existing practice amongst all stakeholders, ultimately it resulted in a building that is more adaptive and responsive to the ever changing needs of the university.

Appendix A -Templeman incremental development timeline

2006/07

- Cafe opened in Library
 - Presentation/practice rooms introduced into Library
 - Online activation Study Bedroom Service network
 - eJournal titles expanded to over 25,000 – database too large to be hosted internally so Information Services purchased the services of an external company (Serial Solutions)
 - Merger of IT and Library helpdesks leads to the opening of the Help & Enquiry Desk in Library (week days and weekends during term time)
 - Self Issue/Return machines introduced in the Library
 - Go ahead given for planned improvements to college PC rooms
 - Quick Access PCs introduced to Library
 - Additional PCs purchased for group study areas in Library
 - Study bedrooms see an increase in bandwidth
 - Wireless network extended to cover teaching areas, lecture theatres and seminar rooms
 - Students able to monitor their printing online requires connection to Kent network (including how many trees they have used <http://printing.kent.ac.uk/>)
 - Replacement of one third of all PCs in student PC rooms in Library
 - eBooks pump priming funding used to secure e-books for core texts where they exist
-

2007/08

- Wireless network extended further
 - IT and Library websites updated
 - Quick Access PCs in Library increased in number
 - eBooks sourced as standard where possible for all core texts
 - Full scanning service available – articles and single book chapters identified on reading lists are scanned and made available through WebCT
 - New 3-day loan period introduced
 - Printers upgraded in library (allowing double sided printing)
 - Audio tours of Templeman introduced
 - RefWorks (bibliographical software) support offered
 - Shibboleth (government funded) gateway to academic resources investigated as a replacement for Athens
 - Display screens introduced to Templeman allowing students to identify available computers (Library and College PC rooms) - information also available online
 - Refurbishment of Keynes and Darwin college PC rooms new PCs and printers, desktop laptop power sockets and the installation of telephones connected to Helpdesk
 - New library signage introduced
 - Replacement of one third of all PCs in student PC rooms in Library
 - Library term time opening hours extended (8.45am to midnight Monday to Friday, 9am until 7pm Saturday and Sunday and 8.45am until 3am during examination period including Easter vacation)
 - Designated areas for mobile telephone users introduced into Library
 - Status of one of the four public PC rooms in the Library changed from silent to group study
 - Review of Library space and services undertaken and options appraisal launched
 - Templeman library stock can be returned at Medway Drill Hall Library
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2008/09

- Core Text Collection opened
- Core Text online renewal introduced
- Colour printer installed for Templeman
- Additional self issue/return machines purchased
- New Library maps and guides introduced
- Laptop loans introduced for use in Library
- Additional study spaces introduced in Library during the exam period
- Shibboleth adopted for easier access to off-site electronic resources
- New student portal launched
- Refurbishment of Rutherford and Eliot PC rooms (new PCs, printers and laptop points)
- New rules on unattended PC introduced in response to student feedback that PCs are often left unattended for long periods

- Student print overdraft extended in response to students being caught short when printing exam work
- Mobile Device Support Forum opened (helping users to access the Kent network)
- Roaming Helper service introduced to library
- Library Space and Services team bid for Library extension which subsequently features in the University Estates Strategy for 20013-15.
- Information Services' developer team win funding to develop an open source reading list system
- Replacement of one third of all PCs in student PC rooms in Library
- International student support strategy and plan developed and implemented
- Students with disabilities support strategy and plan developed and implemented
- Redevelopment of TR201 provides improved training facilities within Library

2009/10

- Refurbishment of student PC rooms in Colleges
- Moodle replaces WebCT
- Major update to library catalogue with new interface providing additional functionality, including integrated e-Journal search
- Additional laptop power points introduced in library
- Stock check undertaken and 'missing books' removed from library catalogue
- Core Text Collection loan periods revised resulting in CTC weekend loans and revised vacation borrowing
- New informal seating introduced in Library (Level 3 Centre)
- Additional seating introduced into Café
- External seating introduced outside Library
- Laptop loan periods extended from 2 to 4 hours
- Windows Vista rolled out to all student desktops
- CLA scanning service for high demand book chapters integrated with Moodle
- First consultation forum for students with disabilities held
- DVD/video viewing equipment relocated within Core Text Collection
- Mobile phone forum services extended – assisting students with wireless
- Library working with Kent Union to participate in the "Degrees Cooler: A greener campus" initiative (Library received silver award)
- Self-service netbook service introduced giving 60 additional PCs in Library
- Templeman opening earlier on weekdays at 08:15am
- Online payment for printer credits
- RSS services on IS website

2010/11

- Number of eBooks/eJournals increased
- Shelf tidy and missing books project increases accessibility of stock
- Wireless printing introduced
- Carrel users forum launched
- Information Services working with Kent Union to participate in the "Degrees Cooler: A greener campus" initiative (Library received gold award and power saving award)
- Forgotten password managing system (easier for students to reset password)
- New inter-library loan system
- Book sorter installed in January 2011
- New reading list system launched with lists available within Moodle as well as the IS website – October 2010
- New library catalogue interface introduced – summer 2010
- Entrance to the Templeman Library remodelled with power assisted doors and new lift for disabled users, new Welcome Desk and free turning turnstiles – summer 2010
- JSTOR volumes moved to remote store to free up shelf space – summer 2010
- Core Text Collection weeded; reducing number of books on 24-hour loan, reducing shelf height – summer 2010
- Part-time collection in Core Text Collection expanded – summer 2010
- Recycled paper used in student printers and double-sided printing set as the default – summer 2010
- One quarter of all PCs in student PC rooms replaced – summer 2010
- Templeman Library hours extended: now open at 8am (Mon-Fri) and extended weekend opening – September 2010
- Windows 7 rolled out to all PCs in student PC rooms – summer 2010
- Fines for not carrying a library card suspended
- Carrel service extended to provide daily bookings for final year undergraduates and taught postgraduates – October 2010

- Physical library materials (on and off-site) to be re-organised in order to improve access to materials
- Range of payment methods for IS customers extended to include the integration of printer and photocopier payment systems
- All customer contact points reviewed and rationalised

2011/12

- Zoning of the Templeman Library introduced
- Social learning space in Level 1 East (next to the Library Café) created to provide over 100 more social learning study desks
- Library study environment support staff introduced to help manage use of space
- Printing and photocopying services linked with new photocopiers
- Online payment for library fines introduced
- Online payment for photocopying introduced
- Reading list system launched in Spring term with improved links and information from within Moodle in January 2012
- Number of PCs/netbooks in Templeman increased by 20% in January 2012
- Charge status displays for Templeman netbooks introduced spring 2012
- Over 300 study desks fitted with power points on level 3 and 4 of Templeman
- Individual study desks introduced in silent study areas on Templeman levels 3 and 4, increasing available study spaces – January 2012
- Power to individual study desks on level 3 introduced – spring term 2011
- Templeman Library power and network infrastructure improved – summer 2012
- Creation of a Reserve Collection in Templeman
- Thin client netbook pilot

2012/13

- Student led book purchases introduced in spring 2013
- 22 additional study spaces created in a dedicated postgraduate study space on level 3 Templeman in November 2012
- Two Additional 6-person group study rooms created in Templeman level 2 in autumn 2012
- 26 Additional quiet study spaces on Level 2 Centre in November 2012
- Study space within teaching rooms piloted in summer term
- Templeman extension and refurbishment planned for 2014/15
- Extended opening piloted in spring term
- Wireless coverage extended to staff and social areas around campus
- Wireless introduced to all study bedrooms on Canterbury campus
- Lecture capture pilot launched
- Ebook holdings increased to over 300,000 books
- 46 additional quiet study desks created on Level 2 Templeman
- 25 additional silent study created on Levels 3 and 4
- Installed 24 PCs on Level 4 West silent study area
- Mobile App features extended and include classroom finder
- Central research resources fund increased and used to secure important research periodicals
- Library borrowing rights for undergraduate students extended to 16 items
- New small-group study furniture introduced on level 4 Templeman
- Self service collection of reserved items
- New Loan Desk
- DVD collection now on 24 hour loan
- Refurbishment and additional furniture in Social Learning Zone on Level 1 East
- Thin-client laptop loan service which gives access to teaching software introduced

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