

INTEGRATED INFORMATION INFRASTRUCTURE IN THE UNIVERSITY OF SALFORD

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1. Introduction

This paper describes the evolution of an integrated information service over a 20 year period. The main focus is on progress since 1997, when the newly appointed Director of the University Salford converged service, then called Academic Information Services, gave a paper at Eunis97. In his paper, Mark Clark (1997) outlined the challenges that he had to face in creating a new organisation from the managerially converged service in the University and the separate library and IT departments of the recently merged University College Salford. Despite the challenges, full convergence of the academic IT and library services was achieved. Since then the service at Salford, now called Information Services Division (ISD), has been transformed not only as it has acquired new responsibilities but by building on its early implementation of convergence a fully integrated service has been created. Current responsibilities include: library services; learning resources provision; support for learning technologies and the institutional VLE; student academic and administrative computing; telephony infrastructure and services; IT infrastructure and data network,; freedom of information, data protection and copyright; and ICT, information skills and business systems skills development for all University members. The integrated approach has enabled a flexible service, with strategies designed to ensure alignment to the current and emerging needs of the customer and the organisation.

The paper examines the context of ISD developments in relation to models of service convergence and to the University of Salford setting. It highlights organisational change using case studies to illustrate the role of the concept of the “Integrated Information Infrastructure” (III) in aligning services to the requirements of key stakeholders. It reviews benefits to the organisation, to staff and to customers and finally looks at the skills that staff need for the future of integrated information service delivery.

1.2 Models of convergence and integration

The joint management of library and IT services in higher education institutions (HEIs) originated in the US in the 1980s, though as Clive Field (2005) notes, its take-up since has been greater in the UK than the US. Salford was one of the earliest adopters in the UK in 1988 along with the University of Plymouth.

There are many types ‘converged’ library and IT services with different portfolios and organisational structures. In his 2005 survey of converged library and information services in universities in the UK, US Australia and Europe Terry Hanson (2005) isolates three models.

The first model involves ‘oversight at Pro-Vice Chancellor level’. This involves a common reporting line for heads of library services and of computing services (perhaps also others). The key feature is one of co-operation but otherwise separate services. His second model is that of ‘strategic co-ordination’. There is a senior post of Director/Dean of Information Services who exercises some co-ordination. Considerable autonomy is given to each area within an agreed strategic framework but with significant levels of interdependence and co-operation and with limited integration at service level. Hanson’s third model is ‘service level convergence’. These services have a senior post of Director/Dean of Information Services who exercises active co-ordination. However, here, there are significant levels of interdependence and significant levels of service integration. Job roles and titles are redefined.

Another way of categorising convergence is to emphasise the drivers behind the joint management of such services and the culture of the institution. The ‘Learner Development/Support’ model has an explicit focus on the learner and may include the library and student/academic computing, media services, learning development etc but not always corporate network services. It is usually, but not exclusively adopted in the UK’s ‘New’ universities (those institutions which gained University status in 1992). The ‘Information Services’ model has a service focus. It can include library, computing (staff/student and corporate information systems) as well as media services. It is mainly (but not exclusively) adopted in ‘old’ or pre 1992 institutions.

The line between these models is blurring as the concept of developing seamless services in a truly student centred institution is widely adopted as shown for example in the model recently adopted at the University of Bradford and the remit at the University of Salford, which will be discussed below.

1.2 The Salford context

The current University was formed in 1996 by a merger of the then University of Salford with University College Salford (formerly Salford Technical College) and a number of nursing and midwifery colleges. The institution, which can trace its origins back to 1896, thus has characteristics of both ‘old’ and ‘new’ universities. It has 16,000 FTE students and 2,500 staff. The University’s mission is to be an “enterprising university” by ‘achieving excellence in education for capability, research for the real world and partnership with the business and community.’ The University has recently developed a new strategic framework to enable it to fulfil this mission.

The University of Salford operates within the culture of the UK higher education sector which is currently one of significant and continuous change. The Leadership Foundation for Higher Education (2005) identified fifteen areas of change as key strategic challenges for the sector during the period 2005 – 2010. These include: widening participation; funding; governance; IT e-management/e-learning and internationalisation. In particular, developments such as the initiation of the fees regime, the focus on ‘Enhancing the Student Experience’ and the National Student Survey will result in differentiation in marketplace. Universities will need to be clear about what their purpose is and about their complete offer to students as they strive to attract fee paying students as customers. In common with other universities in urban conurbations the need for Salford to differentiate between neighbouring institutions is a strong driver for change.

A sense that the University of Salford needs to be both clear about its purpose and fit for that purpose in the future has led to a major change initiative within the institution. 'Deciding the Future' was a full scale review of the governance structure of the University in the context of developing a learner centred institution and developing a governance and management structure to reflect this. The initial report was drawn up by a group of senior University staff, including the Director of Information Services. All University staff were invited to comment on the report via a series of consultation meetings or by e-mailing the Vice Chancellor personally. The implementation phase of the programme, 'Realising our Vision', is now underway and is already impacting significantly upon the portfolio of services delivered by Information Services Division.

2. Convergence at Salford: history

In 1988, driven primarily by economic considerations, Salford became one of the first Universities (with Plymouth) to establish a converged information service with integration of academic IT and library services, Harris (1998.). As a result, Academic Information Services (AIS) was formed. The model was along the "strategic co-ordination" lines with a single director, the sharing of accommodation (staff and service space) but with parallel structures of IT and library teams, managed by separate deputy directors.

In 1996 Academic Information Services entered another phase as the appointment of a new Director coincided with the merger of the University with the local university college and a number of nursing and midwifery colleges. A new service was defined and implemented along the lines of the "service level convergence" model. Professor Mark Clark (1997), then AIS Director, presented at the EUNIS97 conference on the challenges that he faced in establishing the new service. Issues such as a lengthy assimilation process, generic job descriptions, network integration were highlighted.

The decision to integrate administrative computing and learning technologies into the Academic Information Services portfolio of responsibilities resulted in the creation of ISD in 2001. This coincided with the appointment of a new Director, Tony Lewis. Responsibilities for copyright, data protection and freedom of information followed soon after giving us the wide responsibilities outlined earlier. As a result of the 'Realising our Vision Programme' responsibility for learning development is also likely to come to ISD in the near future.

The commercial background of the Director, together with the variety of experience of the other members of the senior management Team of the Division, from both academic library and strongly commercial cultures have given the Division a new focus, new tools and enabled the integrated approach to be developed further.

3. The Integrated Information Infrastructure

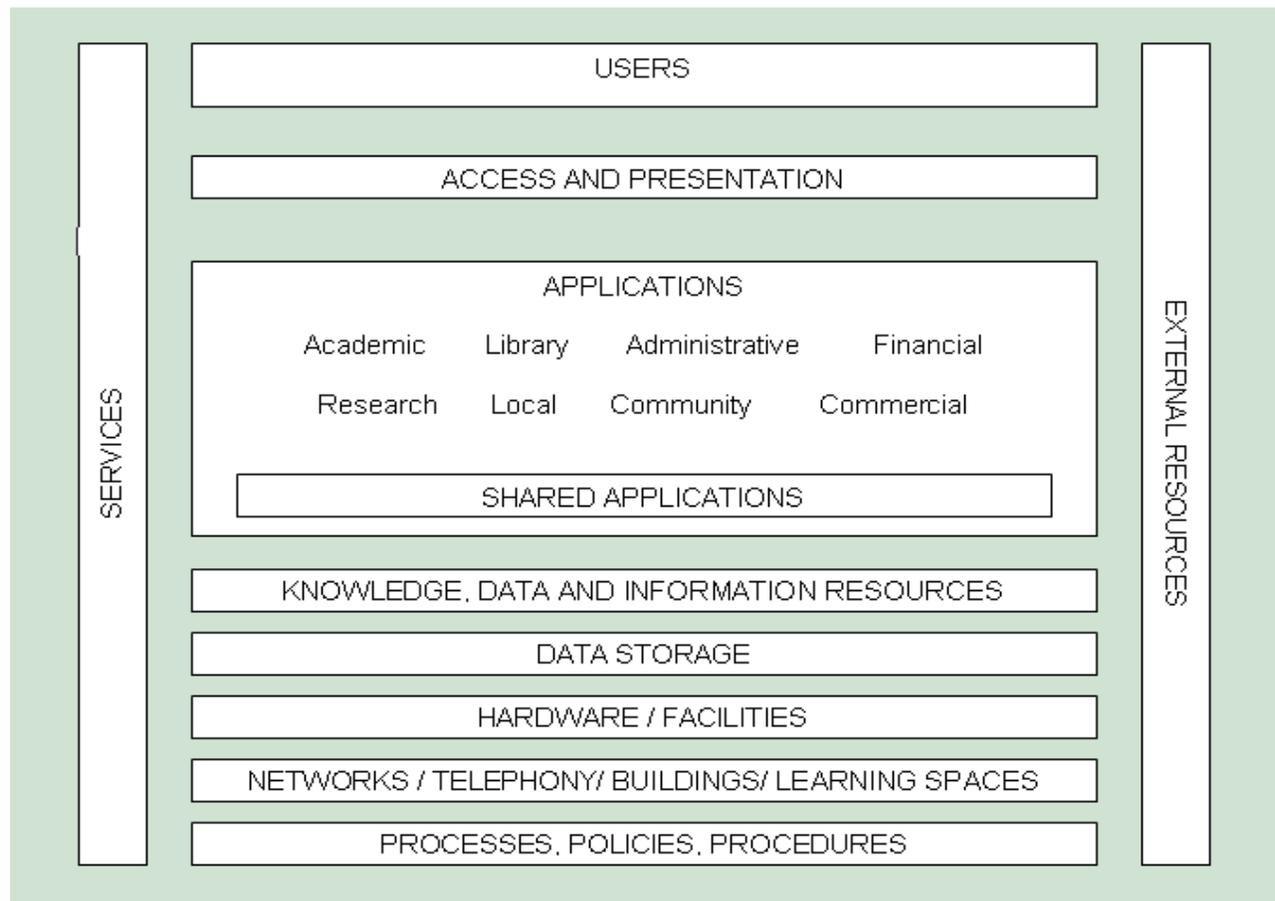
3.1 Vision

Some of the key principles from the establishment of Mark Clark's AIS service of 1996 are still important today, even with a larger range of services and a wider customer base:

“the customer wants a single point of entry to service support and is often unable to discriminate a problem to a service provider. The complexities of infrastructure or service mechanism are of little importance to them.” Clark (1997)

At the centre of the ISD’s vision is the Integrated Information Infrastructure (III). This concept enables the ISD Management Team to create integrated strategies, ensuring that the complexities of ISD services are invisible to the user. Our vision is of a service which is seamless to customers but fully aligned to their needs.

Diagram 1: Integrated Information Infrastructure



Strategy maps are common tools for IT or information service providers. For ISD the “Integrated Information Infrastructure” strategy map ensures that the integrated approach can be evidenced and that the library components of the strategy (e.g. library buildings and learning space infrastructure) have as much prominence as the IT components of the ISD infrastructure (data network, etc.)

In addition to the integrated approach, there has also been an evolution of roles, processes, and service principles which support the realisation of our III vision. An example of the evolution of a role is the wider and growing responsibilities of the Liaison Teams. Along with their traditional

responsibilities for the provision of information resources and information skills development they have recently acquired responsibility for support of the Administrative and Professional Services staff. To enable this work a number of new tools have been introduced. These include a customer relationship management framework, key account planning tools, a divisional project methodology and the use of the ITIL (Information Technology Infrastructure Library) to manage service management across all our services.

3.2 The development of integrated service delivery

An early element of integrated service delivery, after the merger of the University with the College, was the delivery of a combined library and IT services helpdesk. Initially care was taken to ensure that on each session one member of staff with an IT background and one with a library background were timetabled on each desk. It was expected that the staff would pro-actively learn from each other and would be able, between them, to answer any query directed at them, or know who to refer queries to. Supporting documentation, in the form of an online manual was created. Again, this did not discriminate between 'library' and 'IT' queries but was designed to enable staff to support users whatever their need. A review of service delivery highlighted the need for consistency of service and a minimum skill/competency level for staff taking part in the Enquiry Desk rota was developed which was underpinned by a structured training programme. This meant that staff from both library and IT backgrounds could now be individually expected to answer a range of enquiries relating to the Division's portfolio. The need to ensure that the desk was staffed by both library and IT staff at any one time had disappeared. The culture of delivering integrated enquiry and response services from a single desk was an important factor in staff willingness to engage with the CRISP programme.

4. Benefits of the integrated approach

4.1 Organisation

For the organisation the benefit of having staff who approach new initiatives, problems, with an integrated approach can not be underestimated. The case studies illustrate how ISD has moved away from the traditional backgrounds, roles and tensions around integrated service provision to the implementation of a new approach to the experience of the learner and to project implementation. The integrated approach uses the skills and knowledge of individuals, but also breaks down the traditional barriers. For the University the Division has become not only a key enabler for institutional change, but a catalyst for a transformation of the approach to delivering services.

4.2 New types of team

At Salford the vision of the Integrated Information Infrastructure impacted on the creation of ISD 2001. A new structure was created which has enabled the development of multi-professional teams. Some of these teams work permanently in the five Units of the Division. Others are time limited project or task and finish teams. All are 'hybrid' in the sense of containing staff from several professional backgrounds, some in specialist roles, some in more general roles. Roberts and Weaver (2007) have spoken of the concept of 'salad not soup' and, in delivering the integrated information infrastructure, difference in professional and role difference is valued. Whether individual staff are generalists or specialists all are encouraged to develop a view of the bigger picture and to embrace change.

4.3 Case study 1 Improving Customer Service: Customer Response Information Services Programme (CRISP)

The key driver of the programme was to provide customer centred support services. Other important drivers were to improve customer satisfaction to ensure that services are cost effective and conform to the requirements of ISD customers. In effect ISD aims to re-engineer its services to put the customer at the centre of service development and delivery and effect a major culture change within the Division and to provide a consistent service to all customers, students or staff, whether they contact us in person, by phone or electronically via a single point of contact

CRISP is therefore a long term programme comprising of a number of projects and initiatives which will contribute towards and improvement in the quality and performance of services and customer satisfaction. The Division is Using ITIL methodology to re-engineer business processes, to restructure enquiry services and implement new call centre management software. Performance will be measured, monitored and reviewed in a climate of continuous improvement.

The Service Desk, the improved customer response centre and virtual 'single point of contact', is in the second phase of its development. Establishment of the centre with a dedicated team of specialist 'Agents' followed the tendering for and purchasing of a new software solution which is now being configured and installed. The ITIL service management framework is also being adopted. Internet Protocol Call centre telephone technology has been implemented as well as additional telephone lines.

ISD's library Enquiry Desks are the physical 'single point of contact' for ISD customers. A pilot of a hybrid staffing model of a dedicated 'core' team supplemented by a rota of professional ISD staff at specified times has been completed. The outcome of this pilot has been the decision to move towards a single 'core' team to staff the Enquiry Desk at all advertised service times (to be developed from existing staffing establishment). This will improve service agility and consistency. In addition, library enquiry desks and issue counters have been co-located. With the implementation of improved Self Service issue, return and charging payment facilities the need for a library counter to deal with transactional processes will disappear. In the long term all face to face enquiries about ISD services including those relating to issue and return will be dealt with by a single Enquiry Desk. In parallel with these developments the Division is gradually reviewing business processes and creating a catalogue of all ISD Services.

4.4 Case Study 2 - Leading change within the institution: development of a School of Law

The integrated approach to support for University developments is key to the success of ISD support for the development and implementation of a new School of Law from 2002-2007.

ISD library services staff were involved in the project in the usual role of developing areas including: information resources; library learning spaces provision; information skills programmes. However, in addition the ISD team supported the implementation of the student information, HR and finance systems ensured that the AV and media service provision in the teaching and moot rooms were appropriate for the programme delivery, contributed to the planning of the building; delivered the data infrastructure including Internet Protocol Telephony; played a key role in the design and delivery of the teaching and learning spaces and ensured that the academic and support staff gained the appropriate skills to use the major administrative systems, develop e-learning content, use the virtual and physical classroom technologies, etc.

Critical to the success of this project was the contribution of the multi-professional team with technical knowledge, a forward thinking approach, knowledge of the academic process and curriculum development, the understanding of the use of formal and informal learning space. The range of skills that the ISD team were able to contribute to this project was as a direct result of the evolution of the University integrated information service

5. Where next?

5.1 Services

It could be said that the physical aspects of the infrastructure are the only elements that are restraining further integration. The idea of ‘Superconvergence’ or further aggregation of university support services is gaining currency within the UK higher education sector and this could be said to be a natural progression. One way of doing this could be the development of a single ‘Learning Hub’ building which would enable students and staff a single point of access to all support services including accommodation, finance, etc. However any development would have to prove that it could deliver improved services to our customers within the organisational culture at Salford

5.2 Staff skills

In the constantly evolving Integrated Information Infrastructure there will be a need for both high quality hybrid professional and specialist roles. However, both will need a view of the bigger picture and a capacity of embrace change. Staff will need to develop key skills outside the traditional service boundaries. The HIMMS project (2002) reviewed skills deemed necessary by managers and institutional leaders for working effectively in converged library and IT services. Key skills for the future in Salford’s integrated information infrastructure will echo these to some extent but the following will be of particular importance

- Customer care – to ensure that we put the learner at the centre of our developments
- Project management - as an approach to service and institutional development
- Sectoral awareness - of the broader issues affecting the institutional culture
- Awareness of practice outside the sector – incorporating best practice from many different sources
- Understanding of the learning and research processes - and how information services are a key element in the process
- Negotiating and influencing - with students, academics, professional staff and organisational leaders to ensure services are tailored to their requirements
- Conflict resolution - developing a role as ‘honest broker’ within the institution
- Awareness of technology – and appropriateness of general developments to the learning and research process
- Professional confidence in the value of information services to the institution and the University experience

Sidgreaves (1995) commented that “If convergence is to work or have any credibility it is because there is acknowledgement and a belief that there can be a real gain from combining the skills and experience of staff working across a variety of disciplines”.

6. Conclusion

The development of the Integrated Information Infrastructure has evolved over twenty years. This approach has delivered for the University of Salford a service fully aligned to its strategic direction with the agility to be able to change in the face of emerging requirements.

It has been said that world class universities do not have converged library and information services, MacCartney (2006). This may be the case, however, we believe that an integrated approach, as applied by ISD at Salford, can deliver world class information services.

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