The Open Agenda at the University of Salford

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In this case study I have shown how this trajectory is taking shape within one university. While this can be conceptualized in an abstract sense – the “Generic Open Access University” – this is not to suggest that convergence can be steered along a preordained plan, since the pace of change is generally to rapid for traditional management systems. It is more a matter of understanding the connections between opportunities when they arise.

Looking to the future, it is reasonable to conclude that open access repositories are now firmly established across a majority of universities in Britain, since well over one hundred are now listed, and more than eighty of these are institution-wide facilities clearly badged to specific universities. The point of this case study is not to repeat this success story, but rather to map out the opportunities for major changes in the way that research and teaching are conducted, and in how innovation systems can be advanced.

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JISC

The Open Agenda at the University of Salford

Case study

October 2011

The University of Salford is at the heart of a network of research and innovation that extends from international partnerships to local engagement. As such, the university aims to create economic and social value through innovative ways of working together. A key element to this is openness.

Digital Futures

In this case study, I show how the decision to launch an Open Access repository – now increasingly common place in universities in Britain and elsewhere – is part of a broader strategic decision to adopt "openness" as an organisational concept at the University of Salford. I talk about new ways of working that take advantage of the benefits of Open Access to research outputs, open curriculum content, open innovation and – in the future – new protocols for Open Access to data.

In the sections that follow, I first tell the story of our Open Access repository. By means of the abstract concept of a "Generic Open Access University", I then show how a university's Open Access repository can be seen as the core of intermediary agencies and a wide range of networked connections. I go on to illustrate what this can mean in practice through the example of two University of Salford projects, the first an exercise to map "innovation pathways" that connect three of our research groups with their worlds, and the second ongoing work that makes use of advanced visualisation to connect databases central to the provision of public services.

The case for "open"

The University of Salford's Open Access repository was initially set up in April 2007, at a time when the university's library services were integrated within the division responsible for information technology. This was at an early stage of what was to become a comprehensive restructuring of administrative and professional services, including establishing the library and all its functions as a division in its own right. It was also at a time when IT systems were antiquated, decentralised and uncoordinated, making it very difficult to establish institution-wide services based on platforms that were to an appropriate standard. In consequence, the formal launch of the University of Salford Institutional Repository (USIR) in July 2009 came as part of a comprehensive programme of change across the university as a whole, and at the beginning of a planned investment of more than £10m into a comprehensive, new IT system.

At this time, and in common with many other universities, we were actively planning for the Higher Education Funding Council for England's (HEFCE) Research Excellence Framework. There had been considerable discussion of moving on from the previous dependence on journal accreditation to an emphasis on impact factors that would include citation indices. The Research Excellence Framework was later to be postponed and the hope for citation indices largely abandoned. But in mid-2009 there was widespread expectation that citation indices could have a direct relationship to the amount of block grant funding allocated through the Research Excellence Framework by HEFCE.

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USIR – the University of Salford Institutional Repository

The combination of organisational change, a major investment in IT infrastructure, the long-overdue profiling of the Library as a division in its own right and the anticipation of the monetary value of citation indices made an emphasis on Open Access an obvious strategic choice. We debated making the deposit of publications in USIR compulsory for all our staff, but "compulsory" is a requirement best used as infrequently as possible in any university. We opted instead for a system of incentives buttressed by recognising and sharing best practice, and by appropriate support.

Our approach to providing incentives was based on clear and visible leadership for USIR from me, as Vice-Chancellor. The point here is not so much that academic staff will do as the VC says (and such endorsements may have the opposite effect). It is rather that such visible leadership serves as an interpretation of the university's key objectives, and provides a clear endorsement for the work of the professional staff who are essential to a viable and accessible repository. Through the two years since we formally launched USIR, we have held regular events that have brought together USIR and Library staff and contributing academics, recognising key milestones (such as the 5,000th deposit) as well as the largest number of downloads and citations for individual articles. We have found that both repository contributors and professional staff take great pride in their achievements, further promoting the wider use of USIR.

Supporting users

At the same time, an appropriate level of professional support has proved to be essential. At the first meetings linked to the formal launch of USIR, we pointed out that using the repository in an appropriate way did not preclude publication in a restricted access journal, that authors are not necessarily required to agree to all publishers' terms as a condition of publication, and that copyright law gave authors clear rights and opportunities. However, a significant proportion of potential contributors felt anxious about unanticipated legal consequences and reluctant to divert time from research and writing to learning a new set of procedures that they felt would be complex and time consuming. This feedback was used to inform repository staff in the support and advice that they provided to users, and the mediated deposit service that we continue to provide today.

Since its formal launch in mid-2009, we have continued to refine the USIR platform. In December 2009 USIR was migrated to be hosted externally, on a server at EPrints at the University of Southampton, resulting in a considerable improvement in functionality. By January 2010 we felt that USIR was sufficiently well established to launch a formal Open Access Policy and Mandate (revised in June 2011), requiring that all newly published materials and REF-returnable articles are deposited, in full text form when copyright permits.

Number of records in USIR: July 2009 – August 2011

By August 2011, USIR held over 5,000 records. There was a notable increase in the rate of deposit after September 2010. This may be due to a general "adoption effect" as the use of USIR began to be seen as a normal practice across the university community. However, it also coincided with the acceleration of our preparations for the Research Excellence Framework, and the first of several "mock REF" exercises in which we matched the published research results of all our academic staff against the subject areas announced by HEFCE for the REF exercise.

Monthly downloads from USIR have increased at a higher rate than deposits. Between our official launch in July 2009 and August 2011 there were 135,952 downloads with a year-on-year increase of over 250%. Users are primarily in the United Kingdom and the United States (accounting for 41,069 and 21,531 downloads, respectively) and the rhythm of the academic year in the northern

hemisphere is clearly evident in the monthly levels of overall demand. However, there have also been significant levels of use from China, Korea, India, Australia, France, Germany, Malaysia and Canada. As more data become available, it will be instructive to match the global distribution of use with our university's particular areas of research strength and international partnerships of research collaboration.

Downloads from USIR: September 2009 – August 2011

Comments from users

In this performance-related HE culture, it is motivating to be able to submit manuscripts that which have not yet been accepted, as it feels like 'evidence' is on hand to yourself and the community that concrete progress has been made towards REF/personal career goals. A charity is interested in having a link to one output, so that sounds like a win-win for society and Salford."

(School of Social Work, Psychology and Public Health).

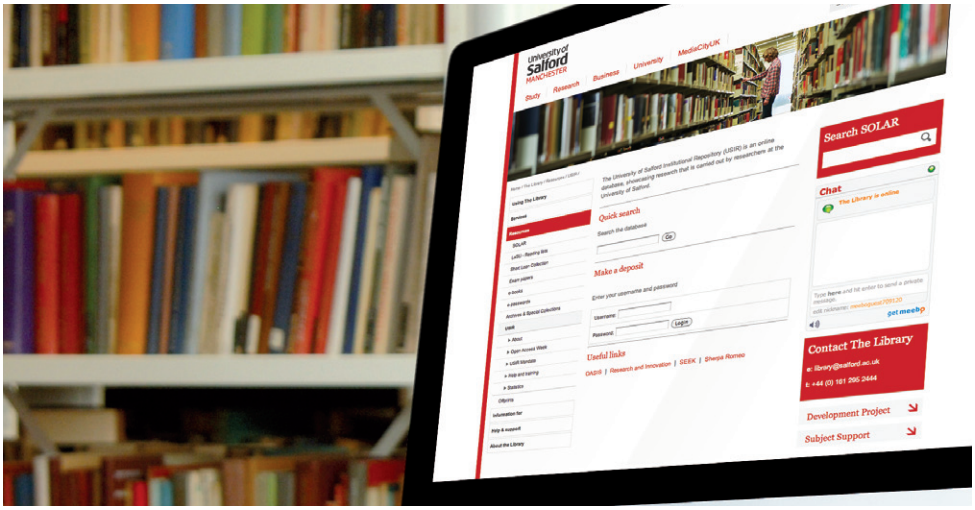
I use USIR. An academic from a Mexican University contacted me about a paper – now he uses it with his students as one of the main papers for discussion, so currently I am waiting to be cited ... in Mexico! Also there is now the possibility in the future that I will write a paper with this person. So but for USIR this would never have happened."

(Salford Business School).

We had a lot of requests for copies of publications and I thought it would save the centre a lot of work if they were in USIR. Adding the details of each publication is very easy and only takes a few minutes to complete the USIR proforma."

(School of the Built Environment).

Over the two years following its formal launch, USIR has risen in UK and global repository rankings from 31st and 358th in July 2010 to 22nd and 270th in July 2011. This suggests that, in comparative terms, our combination of leadership, policy and professional support has been successful.



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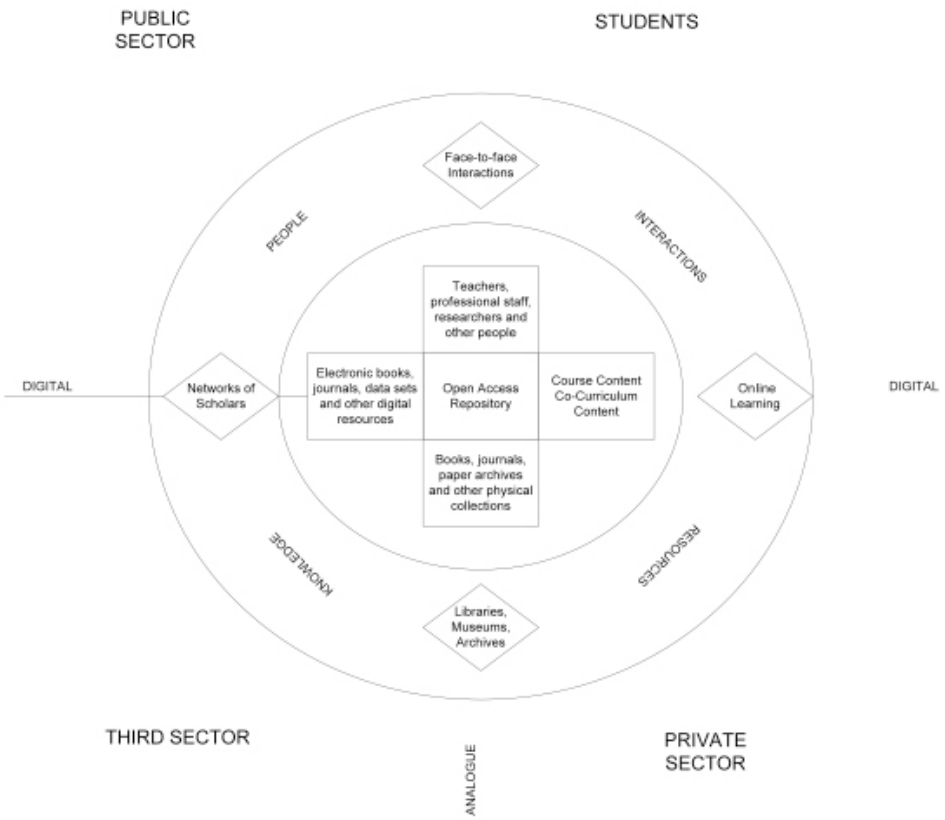

Generic Open Access University (from http://wiki.gray-area.co.za/index.php?title=Main_Page)

The Wider Ripples of Openness

As with other Open Access repositories, USIR's trajectory since its launch clearly demonstrates its value. However, our intention in placing it at the heart of our research and innovation strategy has been part of a wider concept of "openness" that takes account of the still-emerging opportunities offered by digital data and information. This can be conceptualised as a widening ripple effect, starting with the now recognized benefits of institutional repositories and widening to include open content for curriculum development, open innovation and open data.

This wider role can be conceptualised through an idealised and generic "Open Access University", developed as an experimental resource in partnership with the Shuttleworth Foundation, hosted at **http://wiki.gray-area.co.za/index.php?title=Main_Page** and subsequently presented as part of the Communia "University and Cyberspace" collaboration.

The Open Access repository is at the heart of this model, in the place that the library has occupied from the earliest days of the university. The repository is, in turn, surrounded by teachers, professional staff, researchers and other people. Together, they make sense of the Open Access Repository: they organise and interpret content and they relate core and formal digital collections to other sets of data, reports, objects, collections, practices and organisational structures.

These intermediary agents, in turn, provide links with a wider circle of knowledge, people, interactions and resources. This wider circle can take the form of face-to-face interactions, online learning, networks of students, libraries, museums, archives and a host of other organisational forms. Indeed, this is by definition an unstable,

messy and highly creative zone, driven by social responses to new technologies.

Exercises such as this can help to imagine the form that the wider ripples in the pond of digitally-enabled openness may take. Two specific examples from the University of Salford serve to illustrate this further. The first is an exercise to plot and refine innovation process. The second is a new way of working through our "Virtual Salford" system.

Open pathways to innovation

Innovation can be understood as the creation of new processes and products through the application of knowledge. In the terms of the abstract model of the generic, Open Access university, "knowledge exchange" is the set of intermediate agencies that connect the inner core of the repository of research results with the wider networks of private, public and third sector organisations.

There is growing evidence that innovation thrives in open systems, through adding value to innovation networks rather than by restricting access by means of regulation and legislation. This, though, presents new challenges in measuring value, essential to the formulation of appropriate policies and practices and in ensuring a comprehensive sense of the utility of innovation through knowledge exchange, whether this work is to private benefit or contributes to the public good. In seeking new approaches to these opportunities, the University of Salford has launched a project to map the "innovation pathways" that connect individuals and groups within universities with external partners, of whatever kind. Taken together, such innovation pathways describe parts of the complex, multi-layered and intertwined networks that structure and enable contemporary ways of working.

In the first stage of this project, we have carried out pilot studies with two teaching and research centres and a business unit: Design Against Crime, Housing and Regeneration and the Centre for Construction and Innovation.

As its name suggests, Design Against Crime develops and applies best practice design principles to improve the safety of urban spaces, working in partnership with both police and security services and with community organisations. While producing conventional research outputs, including peer-reviewed journal outputs and presentations to national research assessment exercises, this group has to its credit significant innovations with clear social and economic benefit that are not easily measured by conventional methods. Similarly, the Housing and Regeneration Group has a rich network of connections with a range of organisations. The Group offers professional qualifications that attract a range of practitioners, building networks of alumni. Its work in housing, regeneration and sustainable communities is influential at national, regional and sub-regional levels in policy matters through the publication of papers, involvement in think tanks and representation on boards. The Centre for Construction and Innovation (CCI) serves as an interface between the University of Salford's School for the Built Environment, and public authorities and the construction industry. Given this role, the CCI generates innovation pathways as its primary modus operandi. Indeed, this group has a strategic, targeted approach to building and maintaining relationships, and has been rewarded with an established reputation in their area and a wide range of requests for their services.

Work with each of these three pilot groups started with a structured workshop to establish the extent, range and nature of partnership working and knowledge exchange in each of

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their areas of interest. The outcome of each workshop was an inventory of knowledge exchange relationships that included the identity and geographical location of the partner, how the partnership originated, a timeline, its current strengths (including the history of the relationship and the extent and nature of commitments) and details of the nature of work undertaken together (including projects planned, in progress and completed). Importantly, the workshop inventories also included details of formal academic inputs and outputs, such as research grants awarded and peer-reviewed publications. This ensures that the wider innovation pathways fully subsume more specific and formal forms of conventional research reporting.

These pilot projects show how innovation takes place through a rich network of partnerships with organisations and individuals outside the university. Many of these relationships are investments with no immediate financial return, and require an atmosphere that is not primarily driven by the need for income generation at the group level. The benefit to the university is often in reputational capital, leading indirectly to an increased ability to attract research funding, or well-qualified students. Often, such research and teaching income may go to another part of the university. For example, the University of Salford works in the area of housing and regeneration in several Schools, located in different Colleges. The reputation built up by the Housing and Regeneration Group (which is in the School of Environment and Life Sciences) may result in increased postgraduate registrations in the School of the Built Environment, or in the College of Health and Social Care.

The opportunities for knowledge exchange within the university, between disciplines, Schools and Colleges, and across teaching, research and innovation, are also significant. All respondents referred to the added value of maintaining contact with practice through working with external organisations. The strength of some relationships has also resulted in input from external organisations into university activities, for example through the Employer Panels in Housing and Regeneration that steer the curriculum, and by staff from Greater Manchester Police taking part in teaching criminology as an outcome of the partnership with Design Against Crime.

Much of the innovation process investigated and mapped in these workshops has previously been obscured, or invisible, in traditional and formal systems of tracking the university's work. Although all financial transactions for these projects are managed and audited through the university's financial systems, these systems cannot record the investments or outcomes of networking, relationship development or impacts.

Reciprocal relationships and networks such as those described here provide the foundations for innovation to flourish in an open innovation environment. In most instances, innovative activities have developed over time from an initial contact that establishes common interests, to partnership opportunities for funded projects. In successful projects, each partner recognises the value of the other allowing for the informal development of ideas and progression to new opportunities. While this conforms to classic inter-organisational marketing strategies and tactics, actions are, in most cases, implicit and instinctive rather than deliberate. Codifying practices in the ways suggested here will enable appropriate recognition of the value of this work, and the opportunities it brings.

Virtual Salford

An example of the way in which open innovation is enabled through an understanding of the potential of knowledge exchange between organisations is the growing use of the "Virtual Salford" system that we have built as part of our commitment to new ways of working. This system uses advanced visualisation to communicate across large and previously isolated databases. This is enabling a wide range of public and social services to work together in new ways. For example, the system is enabling Salford City Council to re-envisage the interrelationship of its full range of social services to households, education authorities to look at the relationship between the location and capacity of schools, household demographics and transport systems and the Greater Manchester Police to examine crime statistics in new ways. Large areas of housing in the Irwell Valley are at risk of flooding, given changing climate patterns; this approach allows the Environment Agency to model risk across the river's floodplain. Energy efficiency can be mapped to the level of streets and buildings and there is significant potential for new approaches to public health issues.

The Virtual Salford project shows the clear value of open repositories of information and of mutual agreement by different organisations to work within a clearly understood network, across which digital information is exchanged. Previously, key sets of information, often very large, were locked in mutually unintelligible databases and were restricted to bounded organisations such as the police, the fire and rescue service, the environmental agency and a range of different departments within local government. An open innovation model, of the kind modelled around the abstract exercise of the Generic Open Access University and in the Innovation Pathways project, enables new ways of working, often with unanticipated and radical outcomes. The University of Salford's investment in MediaCity at Salford Quays anticipates that partnerships with other universities and global organisations such as the BBC will allow this approach to be scaled up to a significant degree.

A carbon emissions map of part of Salford

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Looking ahead

Considered in one frame of reference, it is a long journey from the decision to start up an Open Access repository as part of a set of library services, to the opening of a new campus, partnerships with the BBC and a virtual model of social and public services across a cityscape. This sense of distance is attenuated by established professional channels that position information professionals working with digital publications in communities of practice that may be quite distinct from specialists in data mining, or advanced visualisation, or web-based entertainment. However, if one characteristic is definitive of the digital present and future, it is rapid convergence. Whether in terms of technology platforms or ways of working, we are seeing systems that were previously distinct from one another coming together in new ways and, in doing so, enabling and driving rapid change.

The convergence of Open Access, open content, open innovation and open data is an example of this more general digital phenomenon. In this case study I have shown how this trajectory is taking shape within one university. While this can be conceptualised in an abstract sense – the "Generic Open Access University" – this is not to suggest that convergence can be steered along a preordained plan, since the pace of change is generally too rapid for traditional management systems. It is more a matter of understanding the connections between opportunities when they arise.

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This case study has been produced for JISC.

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Further information and resources

University of Salford Open Access Repository:
www.library.salford.ac.uk/resources/usir/USIRPolicy.pdf
and details of the open access mandate are given on page 2, including the latest revision to include all REF submissable outputs.

The URL for USIR is
http://usir.salford.ac.uk/

and our information web-pages are at
www.library.salford.ac.uk/resources/usir/

Ranking Web of World Repositories:
http://repositories.webometrics.info/

Design Against Crime:
www.designagainstcrime.org/

Centre for Construction Innovation:
www.ccinw.com/

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