The UK Research Reserve (UKRR): machinations, mayhem and magic

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Abstract

Purpose – UKRR is an innovative programme that ensures that copies of print journals remain available to the research community indefinitely. At the same time the aim is to free up substantial and valuable space in academic libraries resulting in significant cost savings. This paper provides an update on this groundbreaking initiative – one year into Phase 2. It outlines the processes and workflows which underpin UKRR and reports early findings.

Design/methodology/approach – A descriptive account of the UKRR process and methodology is provided indicating how they support the programme's overarching principles.

Findings – It is still early days in Phase 2 of UKRR, but already interesting data are being gathered. These will inform further analyses.

Originality/value – UKRR is a high profile national programme which is attracting a lot of interest both nationally and internationally. It is a practical example of a shared services initiative in the UK.

Article Type: Case study

Keyword(s): Collection management; shared service; UKRR; UK Research Reserve; national collection; document supply.

Introduction

The UK Research Reserve (UKRR) is now entering the second year of Phase 2, which began in February 2009. Since the last article about UKRR appeared in this journal, (Wright and Crawford, 2008) there has been a large increase in both the scale of the programme, and the

complexity of the processes required to run it. These processes and associated workflows are the focus of the current article, which is intended to inform the LIS community of the methods used to run UKRR. However before we launch into the detail, it is best to remind ourselves of the high level principles behind the UK Research Reserve.

UKRR is a vibrant example of a shared service initiative bringing together the Higher Education (HE) sector and the British Library (BL) in a mutually beneficial partnership funded by the Higher Education Funding Council for England (HEFCE). The aims of UKRR are threefold:

- To protect research information
- To free up valuable space in HE libraries to support changing institutional priorities such as teaching and learning, as well as improving the student experience
- To achieve substantial capital savings in UK HE

The question of duplicate holdings across the HE sector and the urgent need to resolve the problem of insufficient shelf space to store physical collections had been known for many years, however prior to UKRR there was no infrastructure in place to allow the sector to address these issues in a systematic and coordinated fashion. The funding made available by HEFCE provided the framework for establishing a partnership between the HE sector and the BL, whose presence provided the security required for higher education institutions (HEIs) to feel confident in de-duplicating their own collections, safe in the knowledge that access to the material was none the less guaranteed.

Pilot phase

UKRR first emerged on the landscape in 2007 as a pilot project. The pilot eventually comprised eight university libraries¹ and was led by Imperial College London. Its major achievements were:

- More than 8,000 titles added to the Research Reserve
- Over 11,000 metres of shelf space released
- Lendable BL holdings strengthened
- Demonstrated proof of concept, which provided the basis for the successful bid to HEFCE for the current Phase 2.

The pilot phase finished in 2008, and provided the springboard for Phase 2.

Phase 2 – the background

¹ Universities of Birmingham, Cardiff, Exeter, Liverpool, Newcastle, St Andrews, Southampton & Imperial College London

Phase 2 of UKRR was launched in February 2009 and builds on the successful partnership between the HE sector and the British Library, with Imperial College London remaining the lead institution. The 5 year programme (2009 – 2014) is funded by HEFCE to £9.83 million. The funding consists of 4 strands which support the overarching aims of the Research Reserve:

1. Access enhancement: Capital funding to the BL for the Integrated Request Management and Delivery System (IRMDS) programme (Appleyard, 2010). This capital programme is being used to modernise, improve and replace the technical infrastructure used for the BL's remote document supply services.
2. Collaborative collection management: These monies fund UKRR members to select, process, transfer and securely dispose of duplicated low use print research journals. It also funds the BL to process the material and fill gaps in its Document Supply Centre (DSC) collection.
3. Bridging fund: This is a contingency fund to cover any shortfall between the BL's subscription income target and their actual receipts.
4. Other: This covers the programme management and operational costs.

The programme is overseen by the UKRR Board and a number of support groups which handle particular aspects of the programme e.g. a SCONUL led Mediation Panel. There is a dedicated team based at the BL (both Boston Spa and London) working on UKRR, whilst the UKRR programme staff (2 FTEs) are based at Imperial College London Library.

The ambitious target for UKRR is to process 20,000 metres of material annually, across its five year timeline.

Membership

Membership to UKRR was open to all UK HEIs during 2009 and the UKRR community now comprises 29 members:

University of Aberdeen

Newcastle University

Aberystwyth University

Northumbria University

<i>University of Birmingham</i>	<i>University of Nottingham</i>
<i>Cambridge University Library</i>	<i>The Open University</i>
<i>Cardiff University</i>	<i>Oxford University Library Services</i>
<i>Durham University</i>	<i>Queen Mary, University of London</i>
<i>University of Edinburgh</i>	<i>University of Reading</i>
<i>University of Glasgow</i>	<i>Royal Holloway, University of London</i>
<i>Imperial College London</i>	<i>University of St Andrews</i>
<i>Kings College London</i>	<i>University of Sheffield</i>
<i>Kingston University</i>	<i>University of Southampton</i>
<i>University of Leeds</i>	<i>University of Sussex</i>
<i>University of Liverpool</i>	<i>University College London</i>
<i>London School of Economics</i>	<i>University of London Research Library Services</i>
<i>The University of Manchester</i>	

Membership by annual subscription, ranges between and £5,000 and £10,000 a year depending on the JISC banding [1] of the institution. This income goes directly to the BL as a contribution to the storage costs of the Research Reserve. UKRR members not only contribute to the distributed national collection but are also eligible for tangible benefits through their membership. These are:

- Access to HEFCE funds for de-duplication which are based on the amount of material which the member is offering UKRR
- Improved document supply service from the BL. This comprises 24 hour delivery on all document supply requests and branded secure electronic delivery [2]
- At the institutional level, capital cost savings on any repurposed space

How are UKRR's aims achieved?

UKRR aims simultaneously to build a collaborative collection – the Research Reserve, whilst providing the means for UKRR members to realize significant space savings in line with the ambitious space-saving targets of the overall programme. To achieve this it seeks to ensure

that at least three copies of all holdings offered for disposal by UKRR member libraries are held in collections within the UKRR community. The first copy is held at the BL as the access copy, where it is used to fulfil document supply requests for researchers across all sectors. Two further copies are held by UKRR member libraries as preservation copies in the distributed national research reserve, in order to ensure that future access to these print journals is safeguarded.

The space released represents not only capital cost savings but also an opportunity for the libraries to repurpose space which better meets their changing institutional priorities. For example the space released through de-duplication in Phase One allowed many of the members to create new study spaces and IT facilities for their users.

Processes and Workflows

The guidelines for the overarching process are captured in the UKRR Handbook [3], a living document which details the different processes, roles, responsibilities, and parameters within which UKRR operates. As collaborative collections on this scale are still new territory for libraries, there is little precedent to be followed when developing processes. Consequently procedures and workflows are constantly being refined and streamlined. The experiences of UKRR members and staff during the last year have led to suggestions to develop and alter processes, so that the handbook and support documentation become more useful tools for UKRR practitioners.

High level processes:

In broad terms the UKRR process has four stages:

1. Selection: The member library selects the low use print journals which it wishes to de-duplicate. There are many factors which inform the choice of titles and these decisions are

made by the individual institution. They may include consolidation of libraries and collections, clearing a specific area, and implementation of collection management policies.

2. Submission: The details of the holdings the library is offering are submitted in a standardised format. The UKRR template spreadsheet is downloaded from the website www.ukrr.ac.uk, and the member completes sections giving the bibliographic details of the journal and the details of local holdings for de-duplication. The quality and consistency of the data provided at this stage is critical to the success of the de-duplication process, with errors having a significant impact on the ease of data processing. Enumeration which does not match that of BL holdings or those of other UKRR members or the inclusion of preceding and continuing titles in the holding can all significantly increase the effort required to identify the material offered with any degree of certainty. As UKRR focuses at the issue level and not just the title level, gaps must also be identified in order to ensure that the research reserve collection is as complete as possible. The final piece of information required is the length of each offered holding, to centimetres, as this is the figure on which the funding for members is based.

3. Comparison: At this stage an analysis of the offerings begins. Two parallel strands of activity take place, one undertaken by the UKRR team based at the BL and the other by the member library. The BL activity focuses on checking holdings data to ensure that the offered material has been identified correctly, and establishes whether the title has been offered to UKRR before, if the offering matches existing BL (not UKRR) holdings, and finally whether the BL wants the offered holdings to either gap fill or add to its loanable stock. The second piece of comparative analysis is undertaken by the UKRR member, and is the process whereby duplicate holdings of the material being offered are identified within the UKRR community, and, if so, at which member libraries. This process is known in UKRR parlance as ‘scarcity checking’ as it identifies how rare the offered material is, and expresses this as a measurable value.

4. Decision: Using the scarcity data and also in light of the responses from BL, a final decision on the fate of the offered material is made. This decision, known as the retention status, is assigned to each of the offered holdings. The status may be retain, secure disposal, transfer to BL as part of the Research Reserve collection, or a combination of each of these i.e. part of the holding may be required by the BL with the remaining part safe to de-duplicate by the member library.

The following figure illustrates the above process in more detail.

Detailed Workflows

This beguilingly simple high level workflow masks the complexity of the underlying processes, and the devil is most certainly in the detail. As UKRR is an iterative process conducted over the course of 5 years, the decisions made at any stage will affect and influence those made downstream. To help manage the processes more effectively for both UKRR and members, work is conducted in 6-monthly de-duplication cycles with each having a processing target of 10,000 metres of material for UKRR and the BL. The intention is to complete all 4 stages outlined above within the same cycle [Cycle 1 ran from July – November 2009, Cycle 2 runs from December 2009-May 2010].

For those of you interested in detail or indeed fascinated by workflows, figure (3) outlines the UKRR process undertaken by staff at the BL. The different responses referred to push as many decisions upstream as possible, which enables the appropriate action to be taken as early as possible. For instance for titles where a holding has been offered previously a response can be generated quickly, whilst a physical sample may be requested from the UKRR member if it proves difficult to identify the material offered. Once any queries are resolved, BL can decide whether they require the material being offered.

The second activity at the comparison stage is the scarcity checking, a manual process whereby titles are searched for on individual library or union catalogues such as SUNCAT or COPAC, and matched holdings within UKRR member collections are identified. Readers of this publication will no doubt be familiar with searching for journal holdings in other libraries, however the process has been found to be complicated somewhat when entire runs of material are being matched. The level of granularity required to ensure that all the offered holding is matched at the issue level rather than at the title level poses a serious challenge. The process, regardless of the length of holdings requiring matching, is time consuming. The simplified example below shows how the holdings retrieved at the title level need to be translated into matched holdings data. A search for the title offered by Library A will retrieve multiple holdings, however only Library C has an equivalent holding which is in fact more complete, making it an ideal candidate to hold a preservation copy.

It is of course possible that Library C may offer their holdings for de-duplication, so in order to balance the seemingly polarised goals of building a national reserve of print journals whilst releasing space in libraries, a complex set of criteria have been developed to allow multiple holdings to count as one matching holding. These criteria seek to ensure that a substantial holding in one location is not replaced with a fragmented collection of holdings across many libraries.

The scarcity process is complicated further as not all holdings listed against UKRR members' collections are controlled by the member library service (e.g. departmental or college libraries), which means there is a risk that holdings identified during the scarcity check could be disposed of outside the de-duplication coordinated by UKRR. Consequently members must also be aware of the scope as well as the content of each other's collections. Initial investigations into automated holdings retrieval have shown that focussed searches at the title and location level can be successful, but translating this data to the holdings level has proved elusive due to the variety of formats used when sending offered holdings to UKRR, or entering them in bibliographic and holdings data records.

Ultimately the deciding factor in both the amount of time taken and effort required to complete the UKRR process, as well as the outcomes of the process, entirely depends on the profile of the holdings offered to UKRR. Short runs of popular titles tend to be easily accounted for elsewhere in the UKRR membership and consequently marked for disposal, whilst long uninterrupted runs of unusual holdings are difficult to match and tend to be marked for retention.

The key metric here is the title to metreage ratio i.e. how many titles per metre are being offered. This is because 100 metres comprising 100 titles is more complex and more time consuming list to process than one of 100 metres comprising 5 titles. Finding the balance between the two is the key to ensuring UKRR members and partners are able to cope with the potentially complex and time consuming process.

Future Plans

The current thrust of the work is not only ongoing processing to meet targets, but also to address the challenges which we have grappled with in the early cycles of activity. As noted above the UKRR workflow is inevitably iterative, with amendments and improvements introduced whenever possible to ease the processing for all parties. However holdings are currently treated as distinct entities, with responses provided at this level. The next challenge is to take the retention status to the issue level, so that duplication within UKRR can be tackled further with corresponding space savings for members.

UKRR Factoids

Pilot Phase 1 - 11km of shelf space released, 8k titles offered to UKRR

Phase 2, cycle 1:

11.4km of material offered across 9.6k individual holdings

8km of shelf space released

1.4k unique titles have been offered

>70% of offered holdings are STM titles

Most frequently offered titles, to date, include '*Annual review of microbiology*', '*Annual review of physiology*', '*Nature*' and '*Trends in pharmacological science*'.

Conclusion

To be frank there are few at this stage – as like all new services our energy has focused on optimizing the workflow and ensuring the processes can deliver the key aims of the programme.

One trend has emerged so far is the low overlap of titles offered by members in Phase 2, around 16% of the total offered. This inevitably impacts on the workflow; titles offered have not been seen previously by UKRR and thus require more processing resource. The overlap of titles may also affect the final status accorded to the holdings offered. However as the data is based on two cycles with differing levels of participation by members, it is debateable whether this is significant enough to indicate a real trend.

No doubt all concerned will be interested to know if this level changes now that membership is closed, as duplication within offered holdings will inevitably impact on levels of retention and disposal. The successful proposal and business model was based a 5 year iterative programme with membership open in the first year, 2009. This would determine the pool of holdings within the membership, so that these holdings could be de-duplicated over the remaining four years. This level of overlap also impacts on the workflow as the number of new titles offered effects the level of bibliographic checking required.

One of the biggest challenges, which will come as no surprise to anyone familiar with serials work is the level of granularity required by UKRR. Our ‘lingua franca’ is issues, parts and supplements; however the complexity arising from differing serials data formats within the 29 members is a challenge, with a means of universal translation proving elusive. However we do know that UKRR is making an impact on our members already:

“At Aberdeen we have chosen to work on those materials for which we have electronic access in perpetuity. We have been able to give assurance to our academics that whilst we are indeed disposing of low use print copies, should there be any need to gain access to these through the BL’s ILL service, this will be possible (and in many cases can be via the scan and send service). Meanwhile, online access is assured (and doubly so for many titles through subscription to PORTICO through SHEDL). UKRR is one factor in our recent decision to postpone plans for a new offsite store in Aberdeen – we think that in a couple of years we may well be able to revise down the likely offsite storage requirements for our print collection.” (Chris Banks, University Librarian & Director, Library & Historic Collections, University of Aberdeen)

In the coming months as the corpus of data grows we will begin to look at the collection in a more holistic fashion as we undertake further analyses.

Appendix A: Glossary of UKRR Terms

In UKRR a number of different terms are used to differentiate between the various forms of journal material.

Title is the top level term and is used to refer to the journal as an entity.

Holding relates to a specific collection of volumes/parts/issues published under the same title which together form an identifiable set. Multiple holdings of one title can be independent of

each other if the individual issues within the holdings do not overlap. Consequently a number of holdings may be required to ensure one complete published run of a journal title.

Offered holding is the collection of journal issues which a member library is offering to UKRR.

Matching holdings are holdings which contain all the material present in the offered holding.

Scarcity checking is the establishment of the number of parallel holdings within the UKRR community which match those offered by the UKRR library.

Retention status is assigned to each of the offerings by UKRR, there are 5 categories:

Dispose: These are holdings which neither the BL nor UKRR require and as such may be securely disposed of.

Retain: These are holdings where it cannot be demonstrated that there are two other copies available within UKRR. Consequently the holding should be retained as part of the research reserve.

BL/Dispose: This category is similar to 'Dispose', however some holdings have been requested for transfer to the British Library.

BL/Retain: This category is similar to 'Retain' although some holdings have been requested for transfer to the British Library.

Not Categorised – this status is applied to those titles which are deemed Out of Scope, not required for UKRR, or withdrawn from the offered holdings by the member.

References

Appleyard, A. (2010), "British Library document supply – a fork in the road", *Interlending & Document Supply*, Vol 38 No 1, pp. 12-16

Wright, N. and Crawford, J. (2008), "Supporting access to the UK's research collection: the UK Research Reserve project", *Interlending & Document Supply*, Vol 36 No 4, pp. 210-212.

Web references

[1] http://www.jisc-collections.ac.uk/jisc_banding.aspx

[2] <http://www.bl.uk/sed>

[3] <http://www.ukrr.ac.uk/members/default.aspx>

Notes Thanks to our colleague, Rachel Richards, UKRR Service Manager at the BL for the BL process workflow figure (Figure 3)