Presentation Title

Taking the plunge. Repositories and Research pooling in Scotland

Defining the Problem

The ERIS Project is working with stakeholders to understand what will motivate them to deposit their research outputs and integrate repository use into a standard part of their research life cycle. A specific focus of the project is on the needs of Research pools.

Research Pooling is defined as the formation of strategic collaborations between universities in disciplinary or multi-disciplinary areas involving the international quality departments or individual researchers across Scotland[1]. The emergence of research pooling since the 2001 RAE exercise[2] has made a significant contribution to the development and success of Scottish research[3], and as institutions digest the outcome of the 2008 RAE and plan for the Research Excellent Framework (REF), the pools are considering how they can best manage their strategic approaches and meet the growing return on investment and other reporting demands of their investing partners.

In particular, the ERIS project is working together with the research pools to create 'virtual repositories' that represent aggregations of research outputs as collected from their participating members institutional repositories, ensuring that the practical requirements of these repositories as stated by the research pools are met.

In doing this, the project must deal with a number of problems that have been presented during early analysis. In addition to the complications of creating an aggregation of repository metadata and associated content from multiple institutions[4] (with differing approaches for deposit and description) the project must also work with the research pool communities to define deposit requirements and policy, identify consistent approaches to defining 'quality' of research outputs, accurately represent academic author attributes to measure success of collaborations and identify and flag outputs so that they can be correctly associated with the research pools.

The project must also work with the pools in order to assist them in making best use of their aggregated content, particularly in order for them to meet their reporting needs, but also to help with the development of systems to manage knowledge transfer, expertise management and to facilitate collaborative activities both nationally and internationally.

Objectives and Scope of Study

Whilst the ERIS project has a broader overall remit[5], this presentation proposal is chiefly reporting on the work that we are undertaking with the research pool stakeholder groups, and based on the problems identified in the previous passage.

We are looking to meet the following objectives in five key areas.

1. Define the data that is required by the research pools to meet their reporting needs, and map that against data currently stored by institutional repositories.

    Specifically;

- Identify what is defined by the research pools as making up research output, i.e. pre-print, post-print or grey literature
- Identify what the research pools define as being a 'quality' output for reporting purposes.
- Define how research pool outputs can be identified from amongst other IR content.

2. Working with the research pools, identify how they would like to interact with the virtual repository spaces once they are in place, for example through the provision of standard report formats, or via more open approaches such database driven queries or via application interfaces (API)

3. With the knowledge of what the pools would like to collate, and what they would like to be able to do with the data, review existing data available in Scottish institutional repositories to identify the 'gaps' that need to be filled, and translate these into system requirements that will allow for the development of enhanced (local) repository functions.

4. Developing a critical mass of content. Working with the research pools, the institutions and other national pressure groups, propose strategies for ensuring that as complete a record as possible is deposited into institutional repositories to ensure that there is a sufficient overall coverage of research pool content, such that the virtual repository spaces are able to provide the data that the pools need for reporting and management purposes.

5. Based on the identified demand, establish the business case for centralised services to support the repository information needs of research pooling, and identify if there is sufficient call for such services to offer sustainability in the long term.

Reporting on Methods,

The following methods have been used to collect data required by the project. The presentation will summarise these approaches, and how the resulting data and observations are being used to inform the ongoing work.

- Collection of qualitative data on the research pools gained through meetings with senior pool staff, and in particular with the pool administrators

- A review of the formative evaluation requirements for research pooling commissioned by Scottish Funding Council[6] and a review of needs against the latest UK REF consultation documents[7]

- The undertaking of a technical review of metadata requirements and a gap analysis between existing and desired 'enhanced' repositories

- How results from the data collection have been fed into the project workpackages responsible for the development of the aggregation and harvesting architecture

- The undertaking of a review of current strategies deployed by Scottish institutions for engaging with researchers, academics and other third

parties (such as subject repositories) for the purposes of building an institutional record of research outputs.

NOTE: The ERIS Project is currently work in progress at the point of submission and results and/or observations may be subject to some change between now and the conference date.

Results and Initial observations

Our investigations have revealed a number of requirements that the research pools wish to meet, some of a higher priority than others. The task now is to prioritise these requirements with the pools, and implement solutions, both via enhancements to existing local repository systems, and through new developments, particularly around the central aggregation and its 'virtual repositories'

The presentation will summarise the following identified requirements;

- Provide the means to identify the sum total of output for the pool
- Provide a showcase of output on behalf of the pool
- Provide the ability to record evidence of impact against published materials and projects
- Ensure content is accessible as much as is possible, and ensure that it is searchable and visible through standard search engines such as Google
- Provide the ability to relate outputs to funding programmes/projects
- Identify compliance of deposited outputs against funding programme mandates
- To provide information on the success of collaboration efforts, brought on and facilitated by the pools (intra and extra pool)
- Develop the definition of, and recommended approaches for the measurement of quantity and quality of outputs by research pool members (needs to be both information to assist in a summative evaluation, and through provision of simple bibliometrics such as citation counts)
- Facilitate knowledge/expertise management based on information gained through examining research outputs
- Identify the impact of capital investment in resources (other than human) for example due to improved facilities and services brought about through pool investment.
- Provide information to manage efficiency of spend in research - using knowledge of cross institutional outputs to prevent re-inventing the wheel in research areas
- Provide information to assist with management of strategic investment in areas/institutions in order to 'up' overall quality of research works - i.e. where to spend money on additional resources
- Maintain alignment with the REF (e.g. keep notions of 'quality' as expressed by the REF in line with notions of 'quality' by the pool)

Conclusions

Scotland is uniquely placed with the way in which research pools have been set up, and can demonstrate the value that they have brought to Scottish research over the past 5 years. Research pools themselves are continuing to develop, and as initial funding cycles start to come to a close, they are in more of a need than ever for management information that will allow them to plan for the future.

Their requirements are a cross over between research information management and institutional repository services, and the identified requirements provide an opportunity to create hybrid systems that bring the repository much closer to the researcher and research management – providing the much needed motivation to build a critical mass of research outputs (of all types)

Will this however be done based on a federated set of subject repositories brought about by the research pooling initiatives, or will it be brought about by institutional efforts to acquire content and provide local individual services?

The presentation will attempt to compare the existing repository scene in Scotland against the emerging needs of research pooling and also look at the services that could be developed which could be operated on a centralised basis, and with which a sustainable model could put in place.

Based on the projects observations to date, the requirements are achievable, but only if Scotland's institutions who make up the research pooling initiatives work closely together to make it happen. This brings about its own political challenges, but the success of research pooling and the impact it has on the strength of Scotland's research output make it a very realistic proposition.

Applications

The work being undertaken by the ERIS Project will be of interest to other repository federations, and for subject repository managers and developers.

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[1] http://www.sfc.ac.uk/research/researchpools/researchpools.aspx
[2] http://www.sfc.ac.uk/web/FILES/Our_Priorities_Research/research_pooling_article_july08.pdf
[3] http://www.timeshighereducation.co.uk/story.asp?storyCode=404806&sectioncode=26
[4] http://cdlr.strath.ac.uk/pubs/dunsireg/iriswp5recommendations.pdf
[5] http://eriscotland.wordpress.com/about/
[6] http://www.sfc.ac.uk/web/FILES/ReportsandPublications/Formative_evaluation_of_research_pooling_Part_1.pdf
[6] http://www.hefce.ac.uk/pubs/hefce/2009/09_38/