How the West was won

Providing repositories across the principality

Introduction
Within Wales there exists a close-knit community of twelve higher education institutions. We have our own funding body, the Higher Funding Council for Wales, our own library and IT forums: Wales Higher Education Libraries Forum (WHELF) and Higher Education Wales Information Technology (HEWIT), and our own National Library. Like the rest of the UK though, three years ago the number of institutions with repositories was very low, and those that existed contained very little in the way of content.

In contrast, today there is full coverage, with each of the institutions running a repository. Some are maturing, some are still just starting out, but the essential building blocks of repositories are in place. With the assistance of the dedicated Welsh arm of the JISC-funded Repositories Support Project (RSP) the repositories are now in place and growing.

Background
Back in 2006, the JISC launched its Repositories and Preservation programme with the vision ‘to establish a network of digital resources and services’ by the programme’s end in March 2009. At this point in time there were only two repositories within Wales; one at Aberystwyth University and one at Cardiff University. Both of these were only being run as pilot services, and contained very little content.

The biggest driver for repositories at the time was as a place to store electronic theses and dissertations (ETDs). There was a sense that theses would make the ideal first candidates to populate the repository – they were home grown documents, were read rarely at best, and would benefit from being made available online, and were taking up increasing amounts of precious shelf space. At the same time our national libraries started thinking about storing theses electronically, through the EThOS project at the British Library, and Repository Bridge project at the National Library of Wales.

At the same time the Research Councils UK were starting to publish their mandates concerning access to research outputs that they had funded. These mandates to deposit research outputs meant that any university that received research funding from these bodies would require a repository in order to fulfil the terms and conditions of the grants. Preserving and providing access to the locally generated research was to a new function to many of the libraries.

With the combination of the libraries driving the ETD agenda, and the libraries and the institutions realising that they had to work together in order to provide repositories to satisfy the research funders, a compelling case for each institution running their own repository was growing.
Repository funding
In 2006 the JISC issued a funding call including a set of projects under the banner of "Start-Up and Enhancement" (SUE) projects. They funded 14 start-up repository projects, and 13 existing repository enhancement projects. These projects were designed to create new repositories or to enhance existing repositories. The projects worked on a matched-funding basis, where JISC would pay part of the cost of the project, and the institution would match the similar amount with local resources.

Under the WHELF umbrella, Aberystwyth University successfully bid for money to buy each HEI in Wales the hardware that it required to run an institutional repository. £4,000 per institution was given, with matching funding being provided locally through the staff effort required to procure, install, and run each of the repositories.

The consortia bid stated the following aim:

“This project proposes to support a centrally managed hardware procurement programme designed to provide every HEI in Wales with dedicated and configured repository hardware as a significant step towards realisation of a Welsh Repository Network. This initiative will provide a cost-effective, collaborative and decisive boost to the repository agenda in Wales and help JISC achieve the critical mass of populated repositories and digital content that is a stated objective of the Repositories and Preservation Programme.”

In addition to providing the hardware required, the project promised to create a suite of twelve case studies, documenting the hardware purchases of each institution. The institutions in Wales are diverse in size and type, ranging from large research-led institutions to smaller liberal arts or specialist institutions. This range of backgrounds would require a variety of hardware and software solutions that fitted with their existing infrastructure. It was hoped that creating the case studies would assist other universities in the future to look for institutions with a similar background and infrastructure plan in order to gauge what hardware they need to buy.

Also in 2006, the JISC had funded the Repository Support Project whose remit was to support the development and growth of the UK's repository network. Part of this included a team of 2.5 FTE staff within Wales, based at Aberystwyth University. A large part of the remit of that team was to provide dedicated hands-on support to the Welsh HEIs.

With the combination of the hardware bid and the RSP, the vision of the Welsh Repository Network of independent but fully interoperable and well-populated institutional repositories could start to become a reality.

Repository procurement and installation
During the second half of 2007 and 2008, each of the twelve WHELF members had to decide how to spend their hardware money. The range of choices made fell into four broad categories:
1. Purchase standalone hardware to run the repository. This was a common choice in small to medium sized institutions where each service typically runs on its own dedicated hardware. £4,000 was enough to buy a server with multiple processors and good amounts of memory and disk space.

2. Procure shared hardware that would be shared with other similar local projects. Two of the universities purchase hardware to share with their web platforms. As their web server platforms required similar web and database capabilities, they could purchase larger systems and split them between their web and repository systems.

3. Buy in to a share of a larger computing platform, typically a virtualized system. This type of system consists of a small number of high powered servers, each of which run several ‘virtual’ servers. These larger servers require more initial investment that can be hard for smaller institutions, but can offer cost and environmental savings in the longer term. The larger institutions favoured this solution.

4. Purchase a hosted solution. Two of the smaller institutions chose to draw on current relationships and host their repositories on hardware at a larger institution. One university decided to use their hardware allowance to instead buy a hosted solution from a commercial company, allowing them to also outsource the technical support and customisation of the repository.

Of the 12 repositories created, 10 use the DSpace platform, once uses the EPrints platform, and the twelfth is hosted by BEPress using the Digital Commons platform.

**The current position**

To date (end of 2008) all twelve repositories have now been created, and are in various stages of use. Some are just starting to have their first items deposited, while others now contain hundreds of items and are actively managed and developed by dedicated repository staff. Three universities have dedicated repository staff based in the library (or converged Information Services departments), eight are run by library staff as part of other jobs, and one is run by the research office in conjunction with the IT department.

Repository staff meet together every three months by videoconference to discuss their progress and to exchange ideas. In addition to this, for the past two years a dedicated repository stream has been run at the annual WHELF / HEWIT Gregynog colloquium in order for all the staff to meet together in person, give presentations about their repositories, and to hear a keynote speech. These meetings continue to foster the close working relationship that exists between library and IT staffing Wales.

The RSP has been active in visiting each institution several times per year, as and when the partners are requiring assistance. The visits have ranged from speaking at research management boards, through technical visits to install and customise repository software, to meeting with grass roots staff to share ideas.
and experiences. The RSP has facilitated the sharing and support culture within the Welsh repository community.

In additional to support from the repository community, repositories have received a welcome boost through the support of the institutions. There is now one university with a research deposit mandate to collect all of the written university research outputs, and there are several institutions (with more in the planning stages) with electronic thesis deposit mandates. The institutions continue to work with the British Library and the National Library of Wales to collectively move to storing theses electronically.

Other external drivers have helped with the population of the repositories. Several of the partners have imported their RAE data into their repositories, and many are starting to examine how the repositories can assist with the REF.

Much has changed within the repository world in Wales in the last two years, and this rate of change will most likely continue or increase over the next two.