The development of e-publishing within Swedish higher education started on a small scale during the 1990s and gathered momentum in 2000-2003. The initiatives were usually taken by university libraries but sometimes also by researchers. Universities made different choices in creating a publishing platform. A considerable number chose to participate in a consortium based on DiVA, a publishing platform developed at Uppsala university. Others implemented available Open Source software like ePrints and DSpace. Some preferred to create their own publishing software.

In 2003 the national SVEP project was launched by the National Library of Sweden to co-ordinate and scale up the development of e-publishing within higher education. The project provided start-up support for all interested higher education (HE) institutions including advice on choice of software platforms and implementation. Seminars were held in different parts of Sweden to share knowledge and
experiences in developing repositories and to present the results of the project. Recommendations were issued for metadata descriptions of e-publications, for publication databases and also for subject categories. The Association of Higher Education (SUHF) expressed formal support of the metadata recommendations for publication databases (local registers of academic publications) which cleared the way for a growing co-ordination between publication databases and freely available full-text material in repositories. A national search service for undergraduate theses was developed and put into operation at the LIBRIS website at the National Library. The service demonstrated that the Open Archives Initiative Protocol for Metadata Harvesting (OAI-PMH) could be used to harvest local repositories provided that they implemented a metadata model based on Dublin Core. ¹ [ref Open Access in Sweden + Russian translation]

The Open Access model was at first introduced in Sweden by librarians. In 2002, university leaders started to show an interest. In 2003, their association, the SUHF, issued a report favorable to Open Access. In the years that followed, several major institutions and organizations within the academic community expressed a general support for Open Access by signing the Berlin Declaration. Several institutions also signed the petition to the European Union; the Petition for guaranteed public access to publicly-funded research results. ² Signatories included the SUHF, the Swedish Research Council and the Royal Swedish Academy of Sciences.

In 2005, the Association of Higher Education (SUHF) Board recommended its members to:
• Introduce a policy that strongly recommends their researchers to deposit a copy of all their published articles in an Open Access digital repository
• Encourage researchers to publish their research articles in Open Access journals whenever a suitable journal exists and provide support to enable that to happen

Open Access policies have been implemented at some universities, notably at Lund and Stockholm universities.

**Forming the OpenAccess.se programme**

When the SVEP project was coming to an end in the autumn of 2005 the overall situation was clearly favorable to taking some new initiatives. The basic constituents of a national infrastructure for academic repositories were in operation. Significant stakeholders within the research sector had moved to a position of general support for Open Access.

The National Library of Sweden had, in addition to funding the SVEP project, also supported a major project at Lund University focusing on global developments in scholarly communication and more specifically the debate about Open Access, ScieCom. ³ The National Library also supported the development at Lund of the now internationally recognized service Directory of Open Access Journals, DOAJ. ⁴

The political basis for these activities was the mission of the National Library, which includes development and co-ordination of information provision to higher education and research. Promoting effective and wide access to information was seen as a part of that mission.

At this stage, the National Library wanted to achieve two closely related goals:
1. To create a platform for practical co-operation between research libraries and the major stakeholders in the research sector. Given that these now officially supported Open Access, would they also be willing to take some further steps towards making the vision happen? In the end it is up to the academic community to make decisions on how research should be disseminated. Libraries can offer tools and know-how.

2. To integrate the different lines of work concerning Open Access and e-publishing at universities into one national programme, joining development of new services with advocacy and studies of the changing landscape of scientific communication.

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² Petition for guaranteed public access to publicly-funded research results, http://www.ec-petition.eu/


Contacts were taken with the Association for Higher Education (SUHF), the Swedish Research Council and the Royal Swedish Academy of Sciences. This led to a solution where the National Library took on the main responsibility for the programme while the other partners were involved in the steering committee. Also the representative of the Academy became engaged on a part-time basis as a working member of the steering committee and was directly involved in the planning and running of the programme. A former University Rector was invited to become the chairman of the steering committee. University libraries were mainly represented by Chief Librarians from the universities most deeply involved in e-publishing and Open Access. The National Library also appointed the Heads of the departments most closely concerned by the issue at hand as members of the committee.

The Swedish Research Council was the only one of these bodies that had any funds for supporting R&D and it has subsequently in some cases co-funded important projects. After two years the Swedish Knowledge Foundation was engaged as a partner of the programme, contributing substantial general funding for projects with a special focus on creating access to digital learning resources. The total funding is around 3 – 400 000 Euros per year for the four years of the programme, 2006 to 2009.

The strategic goal of the programme is to promote maximum accessibility and visibility of works produced by researchers, teachers and students at Swedish universities and university colleges. For sake of clarity one can also add «by supporting e-publishing at Swedish higher education institutions». 1

With this goal as the starting point six objectives were formulated:

1. To promote co-ordination and development of standards and tools for electronic publishing at Swedish universities and university colleges;
2. To promote a rapid growth of the volume and diversity of material in academic repositories;
3. To promote access to and use of content in academic repositories and Open Access journals;
4. To develop quality standards for content and services in academic repositories;
5. To secure long-term access to digital publications and other material in academic repositories;
6. To support publishing in Open Access journals and the migration of Swedish scientific journals to an Open Access model.

A first general call for proposals was issued in spring 2006. The steering committee decided to put the highest priority on three of these objectives (2, 3 and 4), to promote growth of repositories, to promote access and use and to develop quality standards.

There was a general consensus within the steering committee that the priority number one was to achieve a critical mass of open content in institutional repositories, and foremost of self-archived scientific and scholarly articles. It was stressed that this goal should be seen from the perspective of added visibility for researchers. It was also pointed out that institutional repositories must provide enough value to the users in order to make them sustainable.

The response to the call led to the start of a number of new projects. The titles of some of these are mentioned here to give a general picture. More project information can be found at the English pages of the programme. 2

Open Access – tutorial for researchers
Support for Open Access publishing for researchers – establishing a journal information service
Research data in Open Access repositories and University archives
Self-archiving and decision support for researchers when publishing
Development of Linköping University Electronic Press Publication Service
Most of the new projects could be categorized as being most closely related to objective 2, but some also concerned objective 6. The programme also «inherited» a number of projects that was given funding from the National Library already in 2005. One of these projects concerned quality standards and another long-term access.

Unified access to and reporting of Swedish scientific publications

The programme also developed more targeted efforts to initiate projects in core areas. In 2006 a seminar was held to discuss the vision of offering access to the total Swedish research publishing output at one

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1 OpenAccess.se, English pages, http://www.kb.se/eng/openaccess/
place by harvesting the publication databases of HE institutions. The SVEP project developed metadata recommendations for publication databases, i.e. local databases at Higher Education institutions containing the bibliographic data for the total output of research publications. A follow-up project studied the development of these publication databases to investigate whether it would be feasible to create a national search service using metadata from these different databases. In phase 2 of the project a pilot of a national search service was developed. After listening to views from many different stakeholders a targeted call for proposals for a national search service was issued in 2007. This was a very specific call defining in detail what was expected from such a project. A consortium was formed that made a proposal and the project started in autumn 2007.

The project was based some underlying assumptions: A service that only give access to Swedish Open Access publications would have low user interest. A service that provides access to all Swedish research publications doesn’t exist today and would likely meet some user needs. Anyone who is looking for Swedish publications within some subject field would be helped. Such a service could also give basic data for evaluation of research and thus provide a complement to the skewed data from services like the ISI Web of Knowledge. If HE institutions knew that the data harvested to this service also could be used for purposes of evaluation they would have strong incentive to make data correct and comprehensive. On the local level there is a strong tendency to integrate Open Access repositories with publication databases mainly to give the researcher the opportunity to register his or her publications only once. Given a clear policy and support concerning legal matters it would be easy to register not only metadata but also upload the publication.

The project will develop a service that:
- Harvests metadata for all Swedish scientific publications from the publication databases of all Higher Education institutions;
- Makes the metadata accessible for searching by end users and for harvesting to other services; and
- Facilitates the use of the metadata for the reporting and analysis of the Swedish scientific publishing output.

The focus of the project will be to:
- Analyze the current national metadata format recommendations and develop a specification of requirements for the search service;
- Communicate with all institutions of Higher Education about participation in the service;
- Create promotional material and market the service; and
- Develop tools to use metadata from the search service as a basis for the reporting and analysis of Swedish scientific publishing output.

Based on the specification of requirements within the project, the LIBRIS Department within the National Library of Sweden will develop technical solutions for harvesting data and creating the search service that will be available as part of the LIBRIS national library system, both as a specific search service and as a part of the LIBRIS national union catalogue, WebSearch.

The project is led by Uppsala University Library in cooperation with Gothenburg University Library, Lund University Libraries and the LIBRIS Department at the National Library of Sweden.

Copyright in a new publishing environment

The copyright issues in scientific communication play a crucial role in the transition towards an Open Access model for scientific publishing. The project aims at providing all academic users with practical, updated and user friendly information about copyright related to scientific communication. The project will:
- survey legal practices at Swedish institutions of higher education;
- report on interesting cases of legal practices from foreign institutions of higher education; and
- describe relations between author and institution, researcher and publisher, and law and contract.

The project will use several channels of communication; a new website, a manual with a focus on practical situations, courses and seminars.
Aiding scientific journals towards Open Access publishing

A third major project was the by-product of a call for proposal in the Nordic programme Nordbib that also supports Open Access developments. Here the OpenAccess. se chose to provide funding for the Swedish participants in the project. The project supports the transition of scientific Nordic journals to Open Access mode, either by supporting the transition of existing journals or the creation of new ones. The purpose is to provide information and tools for those university based organisations that serve as publishers for these Open Access journals, including university libraries, university (electronic) presses, and others like them. The aims of the project are:

- Analysis of key issues when scientific journals consider and execute a transition to Open Access publishing, and presentation of such analyses and the ensuing recommendations in written and electronic media;
- Improvements in the computational infrastructure for operating a journal in Open Access mode, and analysis of its ramifications;
- Creation of a network of stakeholders in Open Access publishing in the Nordic Countries; and
- Strengthening Nordic university libraries and other university units in their publishing.

Call for proposals 2007 and other activities

In the general call for proposals in 2007 the focus was still on the same objectives as in 2006, but there was some expansion of the themes. One suggested new area of work was to develop new methods and models to provide access to digital learning resources within institutional repositories.

Several of the approved proposals focused on different aspects of the problem of getting a critical mass of content in repositories. These projects are concerned with information and advice to researchers, surveying researchers views on self-archiving and creating user-friendly services that support self-archiving. One projects studies citation patterns in Open Access journals, another how Open Access could affect information provision within private companies. Three projects occupy themselves with expanding the range of content in institutional repositories, with research data and digital learning resources. One project will create a Best Practices Guide to Open Access Journals Publishing.

The programme organized a two-day workshop called Meetingplace Open Access. The target audience were those who where actively involved in developing e-publishing within HE institutions in Sweden. Those who were responsible for projects within the OpenAccess. se were asked to give presentations; however the meeting was open to others who wanted to present ideas. It was a very successful event and there will be a follow-up in the autumn of 2008.

When CERN was looking for Swedish participation in the SCOAP3 initiative the invitation came to the OpenAccess. se. A solution was found involving the Swedish BIBSAM Consortium for licensing e-resources and the Swedish High Energy Physics community.

Conclusions

It is too early, and also complex, to judge whether the programme had any lasting effects on the growth of repositories and OA journals and on the attitude towards Open Access. One can perhaps claim that it is one out of several forces influencing a promising development. The number of repositories has risen steadily. Virtually all universities (13) and major university colleges (13) have one or more institutional repositories. The volume of content is growing quickly as can be seen from statistics from the Registry of Open Access Repositories. Dissertations and undergraduate theses still dominate, but there are growing numbers of reports, conference papers, postprints etc. There are no solid statistics about the growth of Swedish OA journals but one can note as a positive fact that we now have the first Swedish commercial OA journal publisher.

There is political support for Open Access from some major bodies within the research sector. However, Open Access has not yet been given serious attention in Swedish official research policy.

Where is the new generation of researchers who are «born on the web»? Now we wait for new initiatives, experiments in scientific communication, initiated by young researchers.

1 SCOAP³ - Sponsoring Consortium for Open Access Publishing in Particle Physics
Are there any general points that can be made based on the experience of OpenAccess.se?
1. It is important and feasible to form a working co-operation between research libraries and the bodies of the research sector to promote Open Access.
2. Promoting Open Access includes a broad variety of actions, ranging from development of services to advocacy and analytical studies of the changing landscape of scientific communication. It is a strength if they can be co-ordinated within one organizational framework.
3. National libraries can and should play a role in promoting Open Access. The National Library of Sweden combines the mission of a «traditional» national library with that of a national research library authority. Promoting Open Access essentially concerns the accessibility of Swedish research publications and thus fits very well with other tasks of national libraries, such as maintaining national bibliographic services, receiving legal deposit of and providing long-term access to digital documents.