Integrating DSpace in a Multinational Context: Challenges and Reflections

Strand, Kyle

Background

Sharing and accessing knowledge is possible in ways that were not available even in the recent past. These methods make the exchange of ideas, experiences, and knowledge efficient, relatively inexpensive, and simple. A number of international standards have been developed and agreed upon by academic institutions, research enterprises, governments, and others which increase the ease of knowledge exchange through interoperability of systems and consistency in the presentation of expected features and data. With an internet connection and a few clicks of a computer's mouse, a vast array of knowledge is instantly accessible.

The Inter-American Development Bank (IDB), established to accelerate economic and social development in Latin America and the Caribbean, is committed to ensuring its knowledge products are accessible and visible for Bank employees, constituents of borrowing and non-borrowing member countries, partners and other practitioners in the region and the public at large. Due to the nature of the IDB, access to and the sharing of knowledge are critical for the success of its development mission. It is of the utmost importance to the institution, its mission, and its role in the region that the knowledge produced by the Bank be easily accessible and visible for all in the development community and beyond.

To date, success in the dissemination of the Bank's experiences, studies, publications and other knowledge in electronic format has been mixed. Several limitations contribute to this problem, including: information silos; the absence of a single, consolidated access point for access to Bank knowledge products; insufficient and inconsistently applied metadata for the proper description and visibility of knowledge products; non-integrated vocabularies resulting in inconsistent classification; and the absence of a formalized governance structure for ensuring the systematic capturing of Bank produced knowledge in a consistent and consolidated manner.

The Bank continues to strengthen its strategy for the implementation of international standards and good practices for the processing, storage and dissemination of knowledge produced[1] by the Bank to facilitate access to quality and pertinent knowledge in a timely manner. One of the fundamental pieces of this strategy is the Institutional Knowledge Repository (IKR), coordinated by the Knowledge Management Division of the Bank. Among the aspects of the Repository Project are:

(a) the development of a common controlled vocabulary to assist in the consistent classification and identification of knowledge products, and a corresponding governance structure to ensure continued relevance;

(b) the implementation / adoption of a metadata schema compliant with international standards to facilitate classification, retrieval, and exchange;

(c) the implementation of a repository platform able to interact with current Bank tools and external knowledge sources which will consolidate access, and provide additional context and meaning to Bank knowledge products;

(d) enhancing the institution's search capabilities, both internally and for external parties, through the implementation of a new engine with clustering capabilities; and
(e) the development and application of standard practices for the classification and dissemination of Bank knowledge products, supported by the incorporation of a governance structure to ensure coherence and consistency.

DSpace at the IDB

This proposal focuses on the repository platform component, (c), mentioned above. After a thorough analysis of various commercial, open-source, and hosted repository platforms by an inter-departmental working group, the Bank has chosen D-Space as the software it will utilize, and has been working with @mire to configure and customize the platform to meet our institution specific requirements.

There have been a number of integration challenges faced while incorporating DSpace into the Bank's envorniment, which will be the principal focus of the User Group. Below follow brief descriptions of some of the larger challenges:

- One of the principal challenges arises from our need to use DSpace in a less than conventional way. The platform will be sitting on top of our institutional document management system, where all of the actual items will be stored. In this set-up, DSpace provides all of the metadata related to an item when a user browses or searches, and negotiates both storage and retrieval of the item in the DMS.

- Another challenge relates to the fact that external users will not interact with the DSpace user interface. Internally, Bank users will interact directly with the XML user interface, but external users will interact with a cold fusion template that renders a surrogate page with data it pulls from DSpace.

- The Bank has four official languages - Spanish, Portuguese, French, and English. Allowing users to not only view the platform in multiple languages, but also to input metadata in one or more languages for each item – including selecting fields from a multi-lingual controlled vocabulary – has been a challenge.

- In terms of search, we are opting to implement an embedded search using Vivisimo's Velocity, the enterprise search engine of the Bank.

- To ensure the consistency of term application and the quality of metadata, a faceted controlled vocabulary is being introduced by which users uploading content will encounter controlled options for many of the metadata fields.

- Automatic authentication for internal users is being provided via SiteMinder SSO integration.

- Both formal Bank publications and informal discussion papers, presentations, and other documents are housed in DSpace necessitating the integration of multi-level permissions restrictions and well-defined collections.

- Decentralizing the identification, ingest, and review process of the work flow while centralizing the approval step.

Many lessons learned have arisen during this process, a number of which may be beneficial to other organizations. An in-depth exploration of these challenges, and the outcomes, will be the content for the User Group.

[1] As a component of this project, the Bank has developed a precise definition of Knowledge Products (KPs) which is a small, yet significant, subset of the formal and informal documents produced by and circulated within the institution.