

## Background

Organisations that provide research funding are increasingly demanding that funding recipients make their research outputs and datasets publicly available under the Open Access initiative. At the University of London, we offered our customers a hosted publications repository service and a hosted data repository service that met various funder requirements. Both of these services are powered by [EPrints, a popular, open-source publications repository software](#). By using various plugins and third-party services, the EPrints software can also function as a data repository. The primary benefit of having both publications and data repositories powered by EPrints software is that certain core users – namely repository administrators and managers, institutional-affiliated researchers, and those depositing items – will be familiar with the backend system and reporting and workflow processes.

## Problem

Without any customisation, the default user interface of a data repository looks exactly like the default interface for a publications repository. This causes confusion with users who are expecting a different experience when visiting a data repository. For example, users of a data repository would expect to search by Data Creator and not by Author/Editor. In addition, the default, out-of-the-box interface is not user-friendly and does not meet modern web standards – specifically, it is not responsive and does not follow established accessibility guidelines.

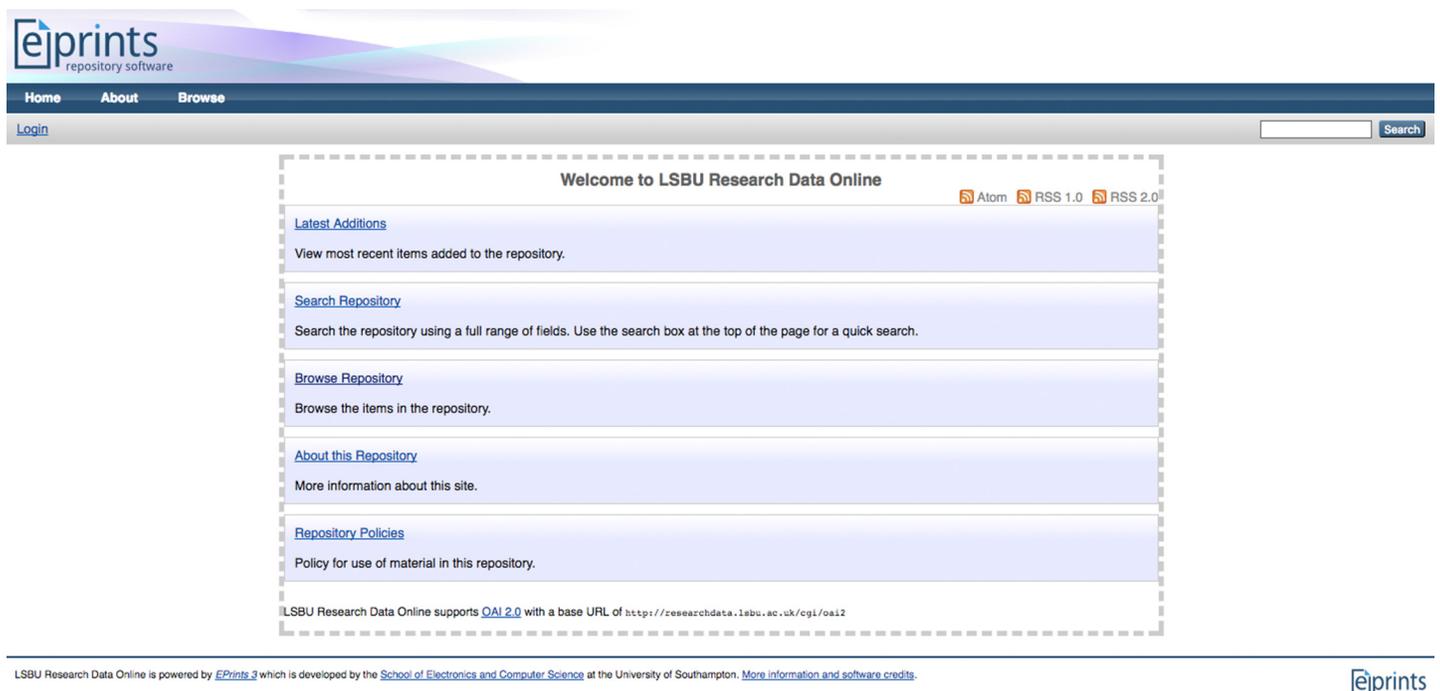


Figure 1: The default homepage of an EPrints-powered data repository

**Unlocking Thesis Data Phase 1 baseline survey data**

Grace, Stephen and Whitton, Michael and Gould, Sara and Kotarski, Rachael (2015) *Unlocking Thesis Data Phase 1 baseline survey data*. [Data Collection]

**Abstract**

Data from online survey carried out as a baseline for the Unlocking Thesis Data project, to determine current practices around handling theses in British universities. The data covers questions on technology platforms, who is responsible for depositing and publishing electronic theses, and current use of or plans for persistent identifiers (ORCID and DOI) relating to theses and any underlying data objects.

	Item title	Item URI
<b>Repository link:</b>	Unlocking Thesis Data Phase 1 survey of UK Higher Education Institutions	<a href="http://w01.lsbupr.da.ulcc.ac.uk/id/eprint/102">http://w01.lsbupr.da.ulcc.ac.uk/id/eprint/102</a>

**Uncontrolled Keywords:** persistent identifiers; electronic theses; DOI; ORCID

**Divisions:** [Services > Academic Related Resources > Library and Learning Resources](#)

**Depositing User:** [Stephen Grace](#)

**Date:** 29 Jul 2015 15:34

**Deposited:**

**Last Modified:** 29 Jul 2015 15:35

	Creators	ID	ORCID
<b>Creators:</b>	Grace, Stephen	graces5@lsbu.ac.uk	0000-0001-8874-2671
	Whitton, Michael	UNSPECIFIED	UNSPECIFIED
	Gould, Sara	UNSPECIFIED	UNSPECIFIED
	Kotarski, Rachael	UNSPECIFIED	UNSPECIFIED

**URI:** <http://researchdata.lsbu.ac.uk/id/eprint/2>

[Additional details](#)

**Files**

**Data**

[UTD baseline survey 2015.xlsx](#)

Stats go here?

**Actions (Log-in required)**

[Edit Item](#)

Figure 2: The default data record (item) page of an EPrints-powered data repository

## Research Findings

Recognising the increasing importance of data repositories and the interest from the University of London's existing and potential customer base, I undertook a brief user research project. To better understand the needs of users of data repositories, I conducted one-on-one interviews and participatory design sessions with users and reviewed the features offered by existing data repository solutions provided by competitors. Due to time and budget limitations, I focused on generating actionable insights and recommendations that could be deployed quickly and easily and would have an immediate impact on the overall user experience. Some of these needs and insights included:

- Increasing the visibility of the search bar on the homepage
- Allowing users to search for datasets by school/department/faculty
- Creating a school/department landing page with associated datasets and statistics
- Improving the overall responsiveness of the platform by using a library like Bootstrap or Foundation
- Updating search terms and labels to bring more in line with data repository terminology
- Updating input fields in the workflow to meet [DataCite's metadata standards](#)
- Improving the layout for the data record (item) page

## Proposed Solution

As expected, many of the needs/insights related to the interface as many users found it "out-dated", "clunky", and "ugly". Thus, I created various wireframes to demonstrate how an enhanced interface could resolve many of the needs and pain points encountered by users. When making the wireframes, I ensured that they were designed based on the technical limitations imposed by the EPrints software. For example, most of the HTML and CSS files are generated by the server, which limits what can be changed and enhanced with a new interface design. The wireframes are available online at <http://8u3vew.axshare.com> (password: dataset).

## **Implementation**

After engaging with users and soliciting feedback on the first iteration of the wireframes, I made further changes to the wireframes to incorporate specific needs identified by users. For example, many data repository managers and administrators wanted the citation style to include a digital object identifier (DOI), a unique alphanumeric string that provides a permanent, persistent web link.

After the updated wireframes had been reviewed by users, I developed the interface using Perl, the EPrints API, HTML, CSS, and JavaScript. As expected, there were some challenges due to technical limitations with EPrints. For example, some button elements are not responsive as they are generated by server-side code that developers cannot modify or override. While extensive JavaScript could override some of the button styles, various code quirks (e.g. improperly reused and nested CSS ids and classes) resulted in unintended layout and style consequences with other, non-button elements.

The first customer to get the enhanced interface was London South Bank University. To access their data repository, please visit <http://w01.lsbudrtest.da.ulcc.ac.uk>. You can also find a sample dataset at <http://w01.lsbudrtest.da.ulcc.ac.uk/4/>.

Birkbeck also implemented the enhanced interface and made some additional changes due to its specific requirements (e.g. a navigation menu on an individual dataset record page). To access their data repository, please visit <http://researchdata.bbk.ac.uk/> and to view a sample dataset record, please visit <http://researchdata.bbk.ac.uk/2/>.