

Leeds Linked Data: Case for support

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- This document is intended to raise awareness and support for developing the University of Leeds (UoL) linked data and is aimed specifically as a general introduction for the uninitiated and a steer in for the [Strategy Group](#) so they can take charge of the documentation for Leeds Linked Open Data (LOD) development.

Contents

- [1. Case for Support](#)
- [2. References](#)

1. Case for Support

The landscape in which higher-education institutions operate is fundamentally changing to being more data lead.

The ClimateGate scandal at UEA in 2009 has lead to researchers and the public demanding access to both publicly funded research data and the algorithms used to transform that data into information and knowledge [1]. Funding councils, such as EPSRC, are demanding that publications derived directly from funded research must be made available as openly accessible documents [2] [3]: it is likely that they will soon demand similar access to data, algorithms and other outputs from the research process.

Government, HEFCE, Universities UK and GuildHE have recognised that fee paying students will demand increased transparency and easy access to more information in order to make effective education and career decisions [4] [5]. Prospective students will increasingly demand to be able to query the course content at a modular level and assess the skills and knowledge they are to develop as part of a course. They want to see details of the facilities and staff likely to be involved in the educational delivery. They want to be inspired by our web content and visit us virtually as well as physically before choosing Leeds as a place to continue their education. They will want increasing amounts of interaction on open days and whilst choosing

their university and course. This will be done as much digitally and asynchronously as it is face to face and synchronously when they visit. They will want access to statistics about where graduates have gone on to, so they can weigh up the costs with the expected outcomes of different courses from different universities. They will want far more detail than is currently provided in HESA surveys [5].

In terms of impact we increasingly have to show our worth to society and government if we are to gain and maintain their support. For this we should try to keep a closer track of alumni and their achievements and also former staff that have platformed their careers with employment at our university. It is not just high flying academics we nurture and develop as staff. Across the boards we develop staff that arrived with some level of skill, knowledge and experience, and (although some may lose abilities and memory) most leave to work elsewhere with enhanced and more relevant skills, and a greater wealth of knowledge and experience gained as an employee. We can and do measure this, but we could generate better metrics for our university in terms of its churn of staff.

With regards our people, Leeds people, liaison and outreach is key for future collaboration in its many and various forms. Many alumni and former staff will move to positions ripe for collaboration and influencing decisions that can directly benefit Leeds. This may take the form of work placements for students and graduates, collaboration on research and educational provision projects, and in some cases direct funding from them and the organisations they work for. The better our information system and data are for keeping track of former staff and alumni the more potential we have in this respect and the more respect we will gain for doing it. All too often at present, when a research staff member leaves, their open web content is simply deleted and institutionally we lose track of them unless they develop or maintain a high profile.

Organisationally within Leeds and world wide, the university interacts with other universities, individuals, business and government at all levels. Mapping out this and our combined environmental impacts is also important. This is not just a matter for geography, but information about our environment and its socio-economics is key to improving these things. The university has links with other educational organisations and with myriad businesses that collaborate in a huge variety of ways. In the Faculty of Environment much research goes on that links people, organisations and their data. In all this we should have a local focus and this is being re-addressed with new flagship undergraduate modules in geography starting in 2011.

Our unified searchable map that shows all the places we study, what we study there, who we work with and what the environmental, educational, research, socio-economic and other human impacts are is at present a web site that is only suitable for human users. The information content of the various websites is not as detailed as it should be and the underlying data is structured in various ways making it hard to search across without first pulling it into a different format.

The more impact metrics we can generate, the better. Can we put estimated figures on how

many lives we have helped to save, what our contribution is to Gross Domestic Product, the breadth and depth of knowledge we have developed, and the variety and types of products we have contributed to? Arguably, we should lead the way and encourage the next generation academic impact metrics which will figure in the league tables of the future.

There is a very real danger of not being able to generate the metrics well enough to demonstrate impact and produce figures that reflect the real situation. It should be expected that we will only be able to report what our data allows us to report (evidence based reporting) and if we do not keep track of things with linked data sooner rather than later, then the job becomes harder and come the next review post REF 2013 then we will only have ourselves to blame. There are long lead in times to all this, it may be only in 10 years time after graduating that our alumni and former staff are having major impacts that we would like some credit for. Although it is getting easier to keep track and rediscover our former staff and students and map these in, not losing track of them in the first place and maintaining some level of dialogue should be preferred.

Organisationally, within the university, data, much of it which should become open linked data about our organisation and its operations and its people is developing well. By linking it we can more easily query across it to find expertise, services, facilities and equipment, but moreover the data and its linkage can act as a tool for making the organisation more efficient and more organised generally. Much of the current movement of data can be automated relieving staff from the task of pushing buttons to export or import data to the data processing technology they use. As a multi-stage implementation process, let us first link the data and provide the appropriate security and then gradually change to using the new linked data system that draws in all the data and store it within a Resource Description Framework [7].

In order to address some of these issues a consortium of individuals across the University of Leeds would like to see the development of Linked Data services that provide both controlled restricted and open access to a range of infrastructure, teaching and learning and research resources. Such a facility could be a key strategic-enabler on the university Strategy Map and aligns directly with the strategic vision in that it will both “create, advance and disseminate knowledge” and “make a major impact upon global society”. We have made a start with a presence on the web outlining our intentions [8] and are developing broad support across the university including the university Web Team, ISS and library. We have gone about this in a bottom up way and now seek support from the top.

2. References

1. BBC (2009-12) 'Show Your Working': What 'ClimateGate' means <http://news.bbc.co.uk/1/hi/8388485.stm>
2. EPSRC (2011) Policy on access to research outputs <http://www.epsrc.ac.uk/about/infoaccess/Pages/roaccess.aspx>
3. RCUK (2006-06) Research Councils UK' updated position statement on access to research outputs <http://www.rcuk.ac.uk/documents/documents/2006statement.pdf>
4. BIS (2011-06) Higher Education: Students at the Heart of the System. Presented

to Parliament by the Secretary of State for Business, Innovation and Skills [http://
discuss.bis.gov.uk/cloudfiles/11-944-WP-students-at-heart.pdf](http://discuss.bis.gov.uk/cloudfiles/11-944-WP-students-at-heart.pdf)

5. HEFCE (2011-06) Provision of information about higher education: Outcomes of consultation and next steps. Joint report from HEFCE, Universities UK and GuildHE Provision of information about higher education Outcomes of consultation and next steps http://www.hefce.ac.uk/pubs/hefce/2011/11_18/11_18_35454121.pdf
 - The document sets out how HE organisations “intend to improve the accessibility and usefulness of information about higher education courses, from September 2012. It also sets out how the National Student Survey will be developed, and what wider information should be made available by universities and colleges.”
6. HESA Destination of Leavers Survey from Higher Education Institutions (2009/10 destinations released 21 July 2011) http://www.hesa.ac.uk/index.php/component?option=com_pubs/task/show_pub_detail/pubid,1708/Itemid,286/
7. Wikipedia Resource Description Framework article http://en.wikipedia.org/wiki/Resource_Description_Framework
8. data.leeds.ac.uk/