UKRISS Core Information Reporting Profile, Harmonisation, CERIF, euroCRIS, CASRAI

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The Project

• **Duration**
  - 16 month: March 2012 – June 2013
  - -> **Extension** until December 2013

• **Funding**
  - JISC – Research Information Management Programme

• **Structure**
  - **Phase 1:** Requirements and Recommendations
  - Feasibility Study November 22\textsuperscript{nd}, publicly released January 2013
  - **Phase 2:** Proof-of-Concept, Sustainability

• **Partners**
  - King’s College London (lead), British Library, Brunel University, Cottage Labs, Exeter University, euroCRIS, University of Edinburgh (unfunded)
Objectives

• Explore feasibility and proof-of-concept delivery of a national shared service for reporting of research information

• Increase the flow of research information around the sector whilst reducing the burden of research reporting on individual researchers and institutions
Requirements Study

- Based on 41 Interviews across the sector
- Final list of 231 requirements
Feasibility Study Key Findings

• **Fragmented reporting landscape**
  – Lack of alignment of information requests to institutions

• **Burden on institutions (PIs and administrators)**
  – Duplication and lack of automation

• **Data quality and reporting compliance issues**

• **Limited reuse of research information**
  – Limits strategic planning and business intelligence
Background

• CERIF
  • Standard for representation of research information
• JISC EXRI-UK report (2009)
  • Recommended adoption of CERIF across UK HE sector
• JISC report (2010) – Business case for CERIF
  • Reduction in complexity and administrative effort
• JISC report (2012) – Adoption of CERIF in UK HEIs
  • 51 UK institutions have a CERIF-compliant CRIS (30%)
• Outputs systems
  • ROS - Research Outputs System (RCUK), Research Fish, Gateway to Research (BIS)
• JISC projects
  • (IRIOS 1&2, RMAS, CERIF in Action, Readiness for REF, MICE, DESCRIBE, BRUCE)
• International perspective
• HESA Information Landscape Report (2012)
– CERIF –

Common European Research Information Model

A Formal Metadata Model
Phase 2 Objectives

• **Focus**
  • Data modelling (feasibility study recommendation 1)

• **Phase 2 goals**
  • Investigate harmonisation of research outcomes reporting
    • Reporting fields and vocabularies
    • CERIF mappings
    • Understand relationship to institutional data
  • Practical demonstrators and tools
  • Business case for harmonisation
  • Sustainability
    • Inputs to harmonisation and standardisation
    • Dissemination and stakeholder engagement
Towards a Core Information Reporting Model

„Institution submits report to funder“
Data Flows between Universities and the UK Research Councils

Source (Images) by Neil Jacobs (Jisc):
Data Flows between Universities and the UK Research Councils
Data Flows between Universities and the UK Research Councils
Data Flows between Universities and the UK Research Councils
UKRISS Modeling Approach

1. **Bottom-Up Analysis**
   a. ROS (ROS) objects and fields
   b. ResearchFish (RF) objects and fields

1. **Consulting Best Practices**
   a. MICE; REF; DESCRIBE; CRISPool, etc.
   b. **Essential:** “Theory-building and logic-modelling is essential to establish causal inference in evaluation.”
      (Final Project Report „DESCRIBE“:
      http://www.exeter.ac.uk/media/universityofexeter/research/inspiringresearch/describeproject/pdfs/2013_06_04_DESCRIBE_Final_Report_FINAL.pdf)

1. **Top-Down Use-Case driven Modeling**
   a. “institution submits report to funder”
Results: Bottom-up Analysis (object-harmonisation)

Current Harmonisation
- Objects (e.g. Publication; IP; Partnerships, etc.)
- via e.g. Mappings to UKRISS Model

Potential Harmonisation
- Objects (e.g. Dataset; Event; Exploitation; Key Findings; Product/Intervention)
- via e.g. Extension assigning Objects to the UKRISS Model
Results: Bottom-up Analysis (field-harmonisation)

Current Harmonisation
- Semantic Similarity such as e.g.
  - RF: “Provide a short name/title for this output.”
  - ROS: “Series Title”

Potential Harmonisation
- Semantic Similarity through extensions such as e.g.
  - Mapping to UKRISS:Output Types (via ROS/RF Mappings)
  - Extensions such as UKRISS IDs (e.g. OrgID; ORCID, etc).
UKRISS Modeling Approach

Following Best Practice - Recommend a higher level overarching Reporting Model as introduced in e.g.: “Measuring the Impact of Research” (2007)*

ATN = Australian Technology Network of Universities, which includes Curtin University of Technology, University of South Australia, RMIT University, University of Technology, Sydney and Queensland University of Technology

UKRISS Core Information Model

Objects:
- ROS
- ResearchFish
- UKRISS

Vocabularies:
- CERIF
- XML

Harmonisation through conceptual alignment

CERIF Entities:
- Reporting Profile
- Objects
- Vocabularies

UKRISS Core Information Model

- Research Output
- Research Transfer
- Research Outcome
- Research Impact
- Measurement

Objects:
- Publication
- Intellectual Property
- Dissemination / Communication
- Product / Intervention
- Collaboration / Partnership
- Impact
- Award Recognition
- Staff Development
- Key Findings
- Further Funding
- Event
- Exploitation
- Spinout
- Dataset
- Product / Intervention
- Dissemination / Communication
- Collaboration / Partnership
- Impact
- Award Recognition
- Staff Development
- Key Findings
- Further Funding

Potential

Current
CERIFy e.g. Publication (UKRISS Output)

-**cf OrgUnit**
-**Institution**
-**Sector**
-**Stakeholder**

-**cf Class**
-**Journal Article**

-**UKRISS:Output Description**
-**Measurement period**

-**cf Measurement**
-**Description Number of outputs (cf Count)**

-**Service ROS / RF**
-**Date of data currency**
-**Date measurement was created**

Reference to ongoing Mapping/Work in **Snowball Metrics:**
Anna Clements, St. Andrews
Lisa Colledge, Elsevier
Brigitte Jörg, euroCRIS

http://www.snowballmetrics.com
Publication Counts in ROS

Denominator

cfOrgUnitId="..."
cfFedId="..."

ukriss:Institution
cerif:Funder
ukriss:Publisher

cfResPubl_OrgUnit

inst:report
cerif:funder
publ:publisher

cfResPubl

ros:Journal Article
ros:Chapter
ros:Book
ros:Journal

Report-Record

cfResPublId="..."
cfFedId="..."
cfTitle="..."
cfDescr="..."
cfResPublDate="..."
cfVol="..."
cfIssue="..."
cfEdition="..."
cfStartPage="..."
cfEndPage="..."
...
ROS Output Reporting Records
Staff Development in RF/ROS (by Institution)

Harmonised UKRISS Vocabularies (CERIF Schemes)

Following REF
Similar to HEBCIS

www.eurocris.org
Staff Development in ROS/RF

Following REF Similar to HEBCIS
Staff Development in ROS/RF
Staff Development in ROS/RF
Spin-Off-Activity HEBCIS (by Institution)
UKRISS at ReConnect13 (Ottawa)

Research Information Standards
Machine Anatomy in UK and Germany

Annual CASRAI International Conference
Ottawa, October 16-18, 2013

Mathias Riechert, Institute for Research Information and Quality Assurance (IFQ), Berlin, GER
Brigitte Jörg, euroCRIS, EU / CASRAI, INT
UKRISS at ReConnect13 (Ottawa)

- Publication ✓
- Intellectual Property
- Product/Intervention
- Spin-Out
- Collaboration/Partnership
- Further Funding ✓
- Staff Development ✓
- Dissemination/Communication
- Exploitation
- Award / Recognition ✓
- Key Findings
- Impact
- Dataset
- Event
- Underlying Vocabularies have not been considered here.

✓ = UK – GERMANY)
Overlap
Remaining Work

• Further Model Verification via Data
• Complete Formal CERIF Mapping (XML)
  – ROS
  – RF
  – (HEBCIS)
• Definition of Vocabulary Boundaries
• Final Report End of December
Summary - Conclusion

• Need for Harmonisation is obvious
  – National
  – International

• UKRISS Main Destination of Results
  – CASRAI UK Working Group on Contributions and OA Reporting

• Long-term Governance Model needs to be discussed

• Business Case / Efficiency
  – Re-Usability demonstrated
  – Standardized Interchange possible
  – Harmonisation (Alignment) required incrementally

• Need: Agreed Requirements (agreed questions)!!