INTERNATIONAL STANDARDS SETTING: RESEARCH INFORMATION

PRESENTATION TO OECD NESTI BUREAU ADVISORY GROUP MEETING

11TH SEPTEMBER 2017

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Some slides courtesy Ed Simons, President euroCRIS and David Baker, Executive Director, CASRAI
AGENDA

1. Why standards needed in research information management
2. CASRAI
3. euroCRIS & CERIF
4. Opportunities & Challenges – general and UK
THE PROBLEM

Put simply, HEIs (and the researchers they represent) need to provide an increasing complexity and amount of information about their research inputs, process and outcomes to their funders.

Funders and governments need this information to drive innovation, accelerate knowledge transfer and justify investment.

HEIs are measured by national and global rankings which make use of metrics and methods which can lack transparency and legitimacy.
INTEROPERABILITY OF RESEARCH INFORMATION IS ESSENTIAL

• To reduce burden and so improve information quality and availability; “enter once: reuse many”
• To allow comparisons of "apples to apples"
• For transparency and legitimacy
THE THREE PILLARS OF INTEROPERABILITY

1. Agreed definitions of what is being exchanged
2. Persistent Identifiers for disambiguation for people, organisations, projects, outputs
3. Common exchange format to simplify implementation and avoid vendor lock-in

ALL SHOULD BE OPENLY AVAILABLE, SUPPLIER-AGNOSTIC AND HAVE A TRANSPARENT SUSTAINABLE INCLUSIVE GOVERNANCE MODEL.
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CASRAI : HOW IT WORKS

- Non profit membership organisation : HEIs, research funders, non profit association partners, solution-provider partners
- Canadian, UK and EU Chapters : Chapter Steering Committee Chair reports to CASRAI Board
- https://casrai.org/about & https://forum.casrai.org/
- Annual work cycles:
  - Open Call -> Working Groups -> Open Review -> Dictionary (may require >1 cycle)
    - http://casrai.org/opencall17
    - https://forum.casrai.org/t/2017-standards-open-review-now-closed/378
CASRAI : STANDARDS IN ACTION

• Academic CV – full and abridged versions [templates/controlled vocabularies]
  • http://dictionary.casrai.org/CV__Full_Academic ORCID, ScienCV, Canada, Portugal; EU planning updates

• Contributor Terms [classification]
  • http://dictionary.casrai.org/Contributor_Roles known as CRediT


• Peer Review [templates/controlled vocabularies]
  • https://members.orcid.org/api/workflow/peer-review ORCID, many Publishers unofficially
CASRAI : WORK IN PROGRESS

- IRIDIUM – research data glossary [CA-led]
- IMPACT – template/controlled vocabularies [UK-led]
- OPEN ACCESS – glossary [UK-led]
- CAREER LEVELS – classification [UK-led includes HESA]
- NOTICE OF AWARD – template/controlled vocabularies [UK-led]
- RESEARCH CLASSIFICATION – classification [EU-led]
- RESEARCH DATA MANAGEMENT PLAN – template/s, controlled vocabularies [CA-led]

Keep up to date and get involved at https://forum.casrai.org/
EUROCRIS & CERIF : OVERVIEW

• euroCRIS is a non profit membership organisation: HEIs & other research organisations, research funders, non profit association partners, solution-provider partners

• With over 240 institutional and personal members in 45 countries (mainly Europe, but also North and South America, ANZ, Japan and Middle East)

• euroCRIS looks after CERIF – the Common European Research Information Format (CERIF); an open standard data model for storing and exchanging research information

• Work done by Task Groups and Strategic Partnerships

• Next event: Strategic Membership Meeting, Bratislava, November 20-21

http://www.eurocris.org/activities/membership-meetings/bratislava-strategic-membership-meeting-november-2017
CERIF

CRIS: Multifunctional Information Resources
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**FUNCTIONALITY OF CRIS**

- **Researchers**: Finding possible collaborations, CV generation, profiling of research
- **Decision Makers**: Performance, strategic decisions, priorities, cross-country comparisons
- **Project Managers**: Overview of ongoing activities
- **Publishers**: Finding reviewers
- **Teaching Staff**: Integration of relevant information into lectures and training
- **General Public**: Information and education, interest
- **SMEs**: Finding information for participation in projects, partnerships, usage of results
- **Media**: Distribution and communication
- **Intermediaries / Brokers**: Finding research results of potential market or innovative value
- **Research Organizations**: Integration and interoperability, strategic management, profiling
- **Funding Organizations**: Distribution of programs, evaluation of results, finding reviewers
FUNCTIONALITY OF CRIS
ADOPTION OF CRIS (OR RIM) SYSTEMS

• National Systems, include
  • Norway, Netherlands, Portugal, Sweden, Slovakia, Czech Republic, Slovenia

• Research Organisations, include
  • UK > 50% (and > 90% in terms of research publications) – mainly commercial Pure, Symplectic Elements or Converis
  • Italy > 60 use dSpace-CRIS based IRIS system from CINECA
  • NL recently moved to commercial systems, mainly Pure; Denmark all use Pure
  • Increasingly US, ANZ organisations are adopting RIM/CRIS

• UPCOMING International survey organised by OCLC and euroCRIS on RIM adoption
CERIF COMPLIANCE

- Some systems are fully compliant e.g. PTCRIS in Portugal and SK CRIS in Slovakia, others have implemented CERIF-XML for interoperating between systems e.g. Pure, dSpace-CRIS
- euroCRIS strategic partners e.g. OpenAire and ORCID are implementing CERIF
- Jisc (in UK) are CERIFying their Research Data Shared Service
- Netherlands P-O-P project exchange national funders NWO/KNAW & HEIs using CERIF-XML
- Germany is mapping their Research Core Dataset to CERIF
- Snowball Metrics working with both CASRAI and euroCRIS
OPPORTUNITIES/CHALLENGES

- Standards/interoperability seen as a ‘technical or IT problem’ not a business problem
  - Need leadership from the right senior managers – they need to know cost of not doing this
- Hits individual HEIs and their researchers hardest BUT it is a sector-wide problem
  - Need governments to understand total cost of lack of interoperability across entire sector rather than separate siloed stakeholder ‘solutions’
- Membership-based non profit organisations are expertise-rich BUT cash/time poor
  - Vendors & Funders are key – need to implement according to Science Europe Principles
  - ORCID is a fine example of this working - it has been/is being resourced
OPPORTUNITIES/CHALLENGES - UK

• **Researchfish**: commercial company
  Annual collection of research outputs and outcomes from RCUK & Health Charity funded research; no open standards (yet!) but question set is freely available and is an ongoing and successful interoperability pilot and working group involving HEIs and funders.

• **HESA**: sector-owned
  Annual collections of student, staff, financial, business interaction, dest. leavers, estates data; research information includes research income, research students, knowledge engagement and transfer activities.

• **REF**: public funding bodies (HEFCE, SFC, HEFCW & DELNI)
  Research assessment exercise held every 7 years – tied to QR money (£1.6 billion) and reputation via league tables; VERY important to HEIs. Data on researchers, publications/outputs, impact & environment

• High-level Research Information Management Co-ordination Group with members from JISC, RCUK/UKRI, HEFCE, ARMA, HESA, WELLCOME – open standards key element CASRAI, euroCRIS/CERIF, ORCID
THANK YOU

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