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BRITISH LIBRARY

Brunel UNIVERSITY LONDON

cottage labs

euroCRIS Current Research Information Systems

UNIVERSITY OF EXETER

KING'S College LONDON

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CERIF

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

Brigitte Joerg PhD, euroCRIS, JeiBee Ltd.

euroCRIS
Current Research Information Systems

AGGREGATION VALIDATION VISUALISATION

euroCRIS Members Meeting, University of Porto – November 15, 2013

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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 22nd, 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

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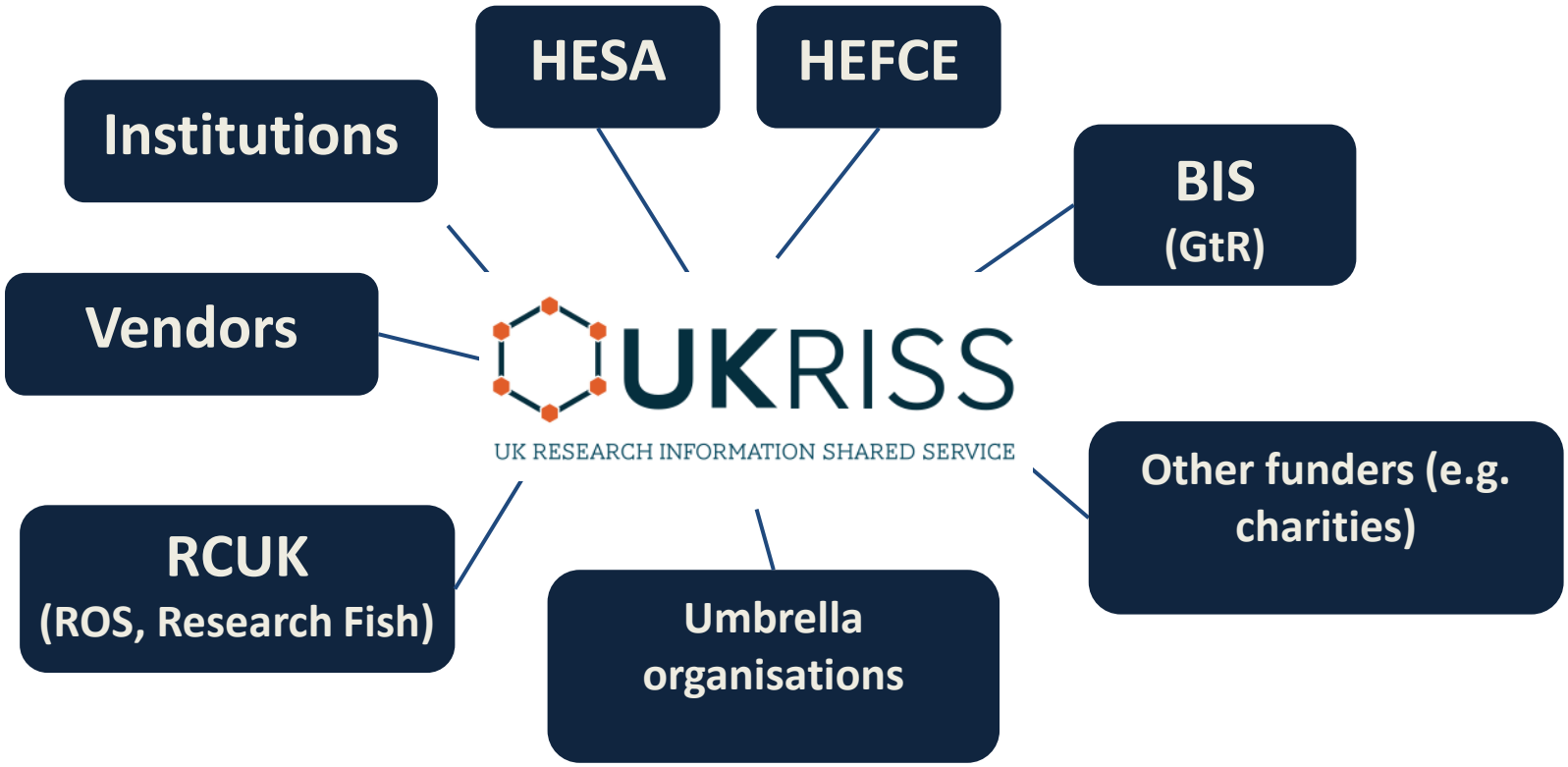
Requirements Study

- Based on 41 Interviews across the sector
- Final list of 231 requirements



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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

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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)

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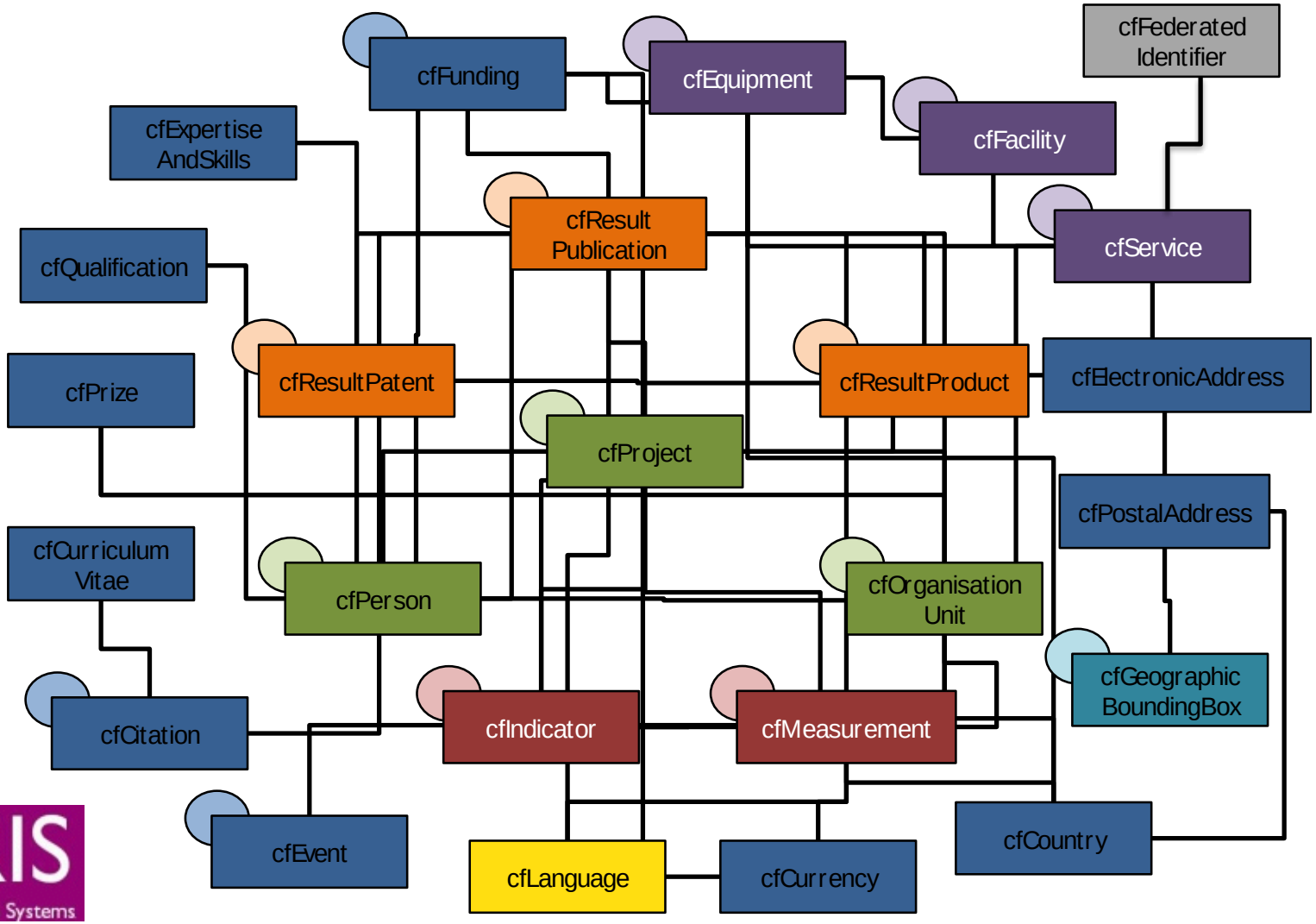
– CERIF –
Common European Research Information Model

CERIF

A Formal Metadata Model



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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

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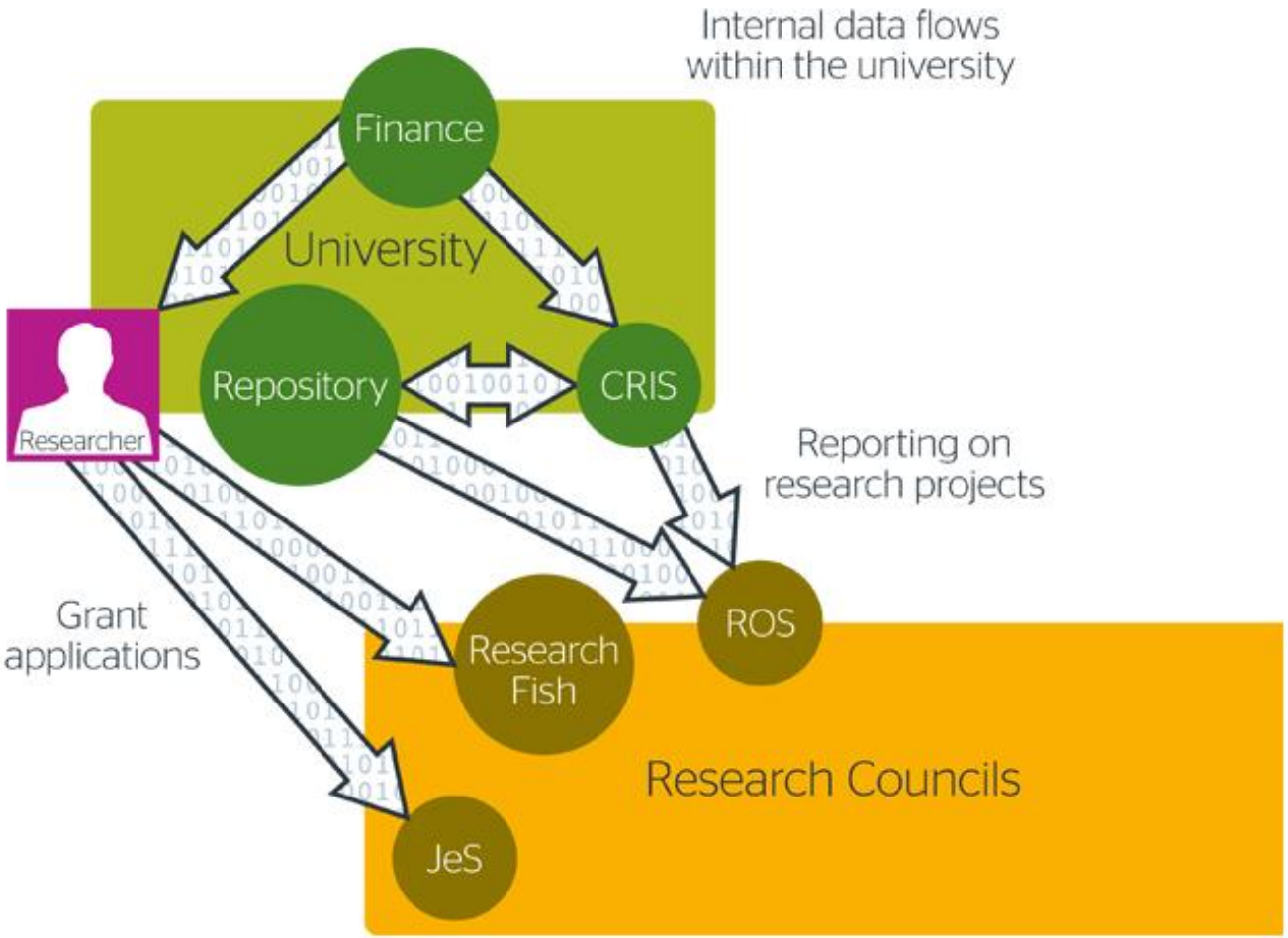
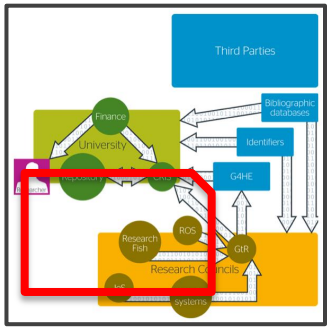
Towards a Core Information Reporting Model

„Institution submits report to funder“

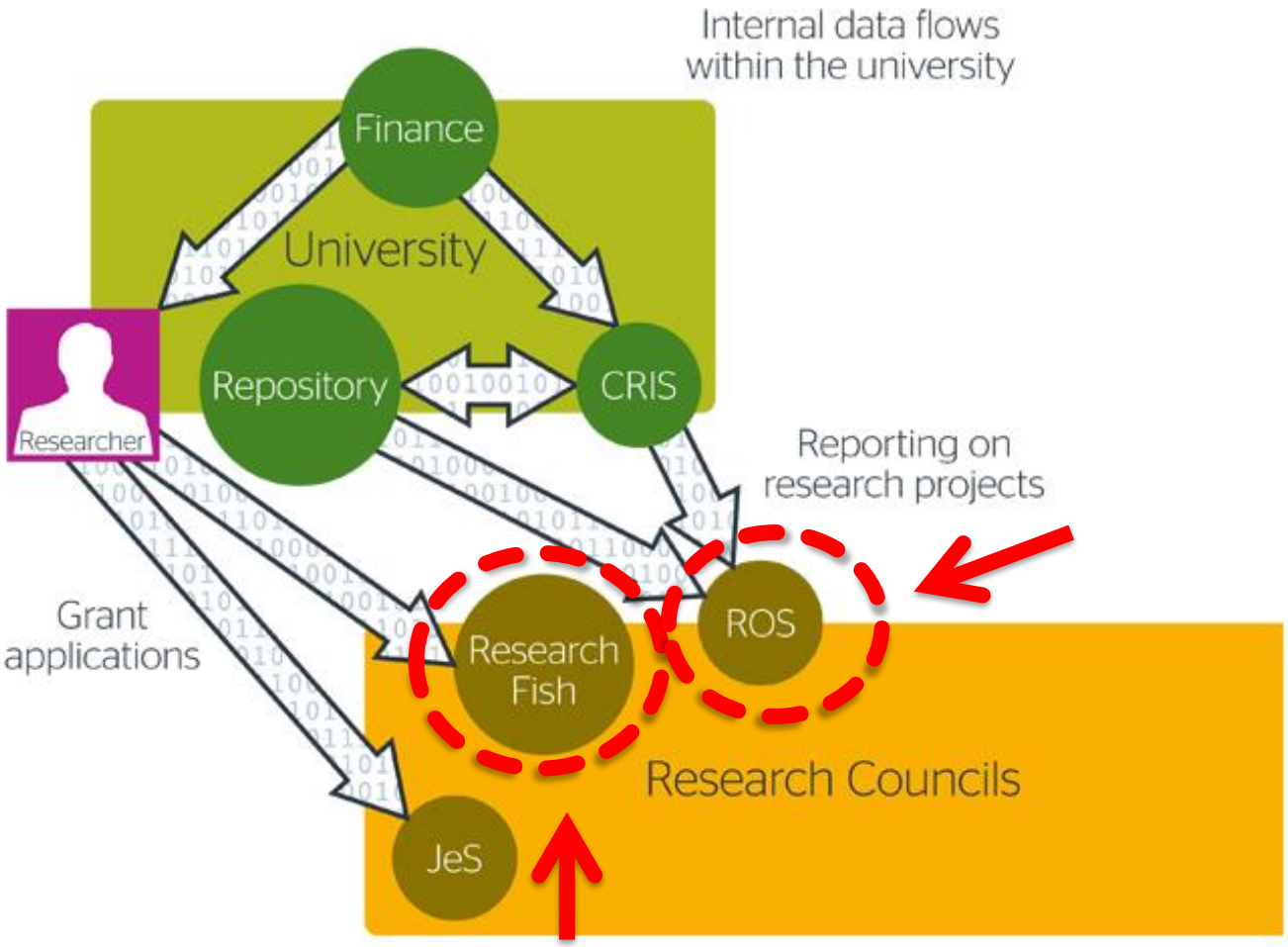
Data Flows between Universities and the UK Research Councils



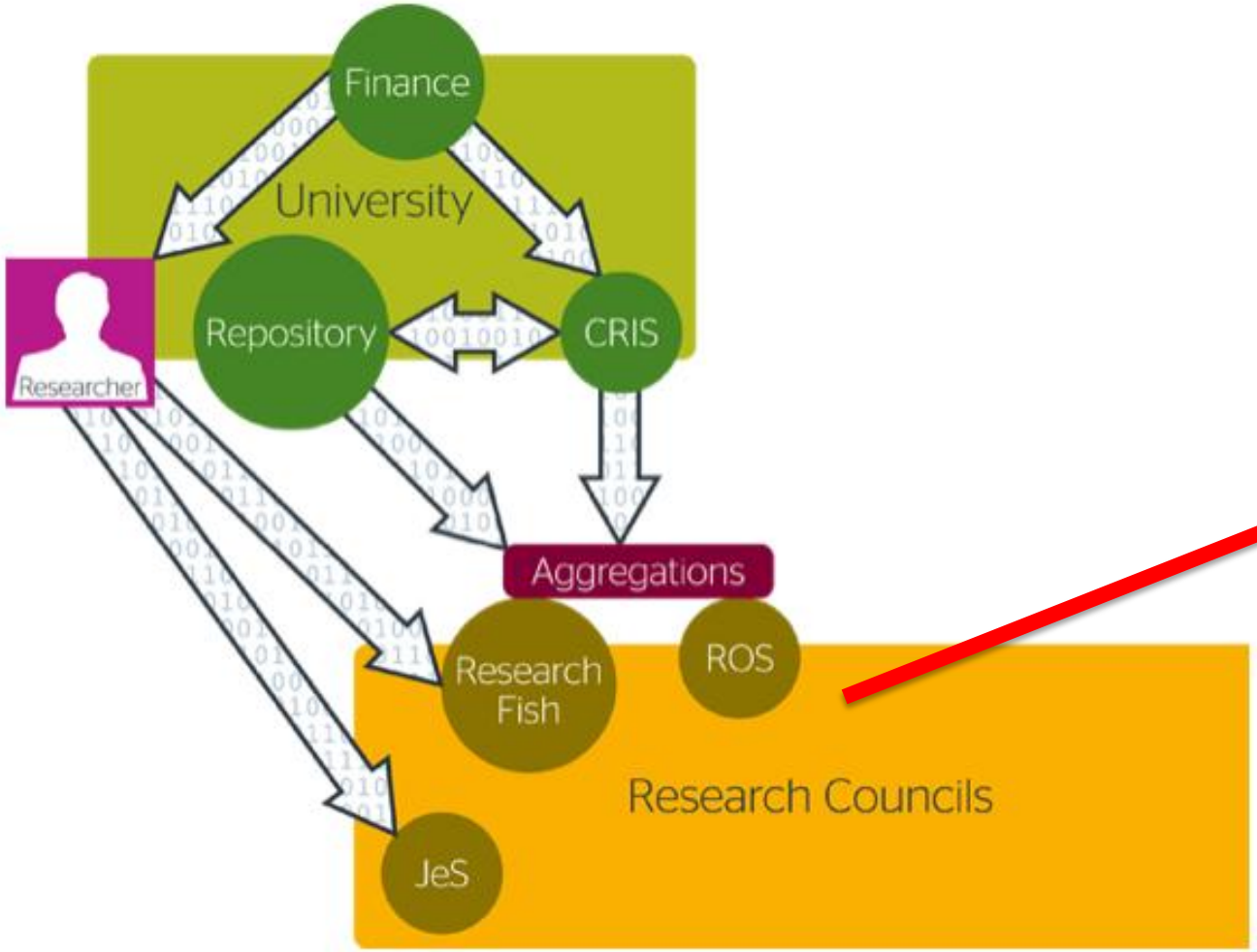


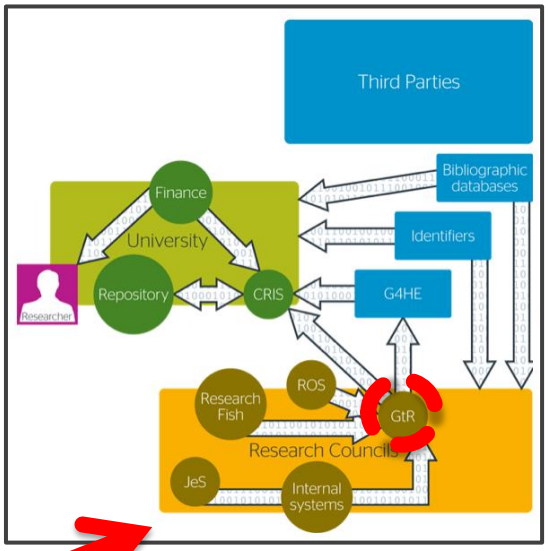
Source (Images) by Neil Jacobs (Jisc):
http://www.jisc.ac.uk/publications/generalpublications/2013/data-flow-between-universities-and-research-councils.aspx

Data Flows between Universities and the UK Research Councils

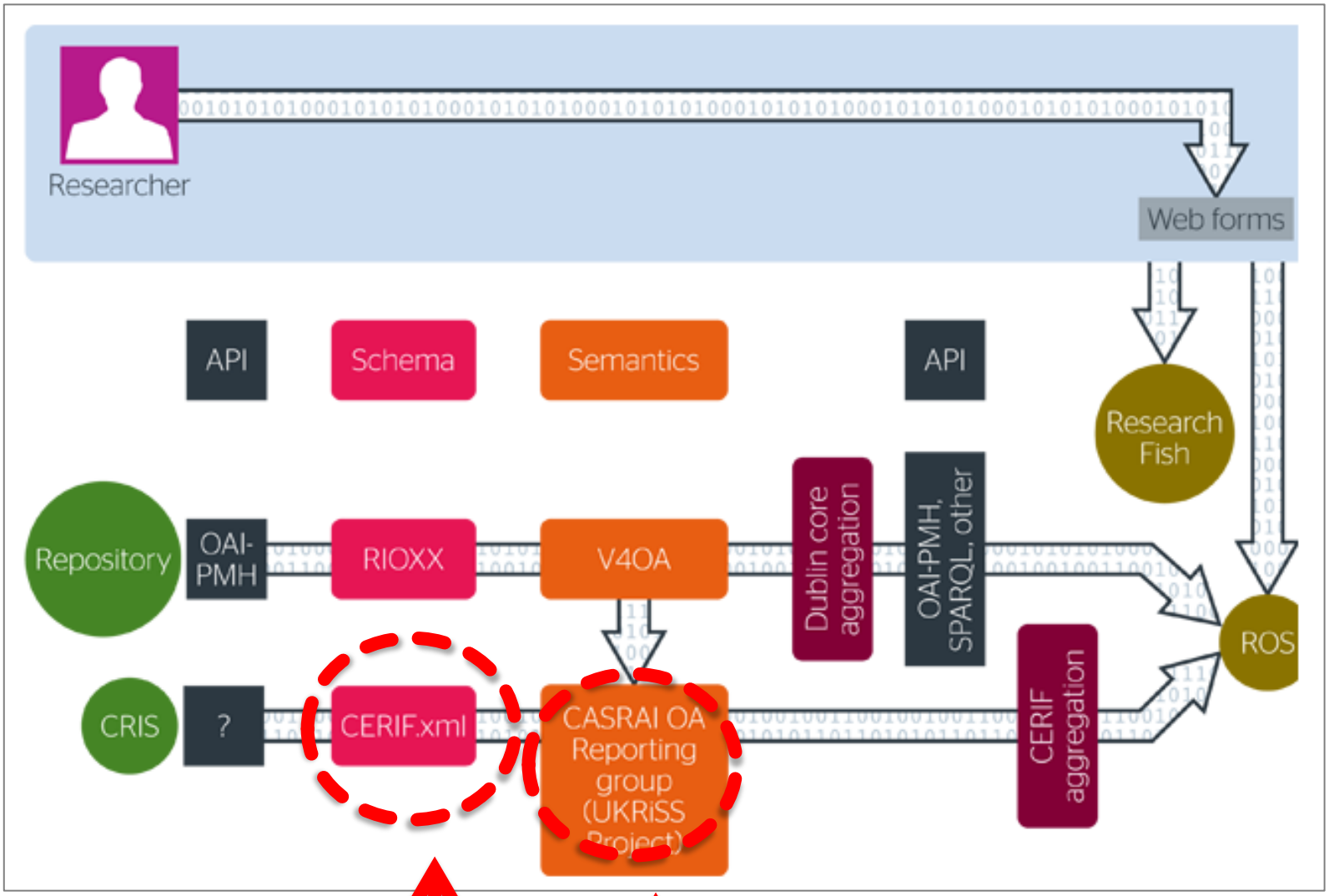


Data Flows between Universities and the UK Research Councils





Data Flows between Universities and the UK Research Councils



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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"

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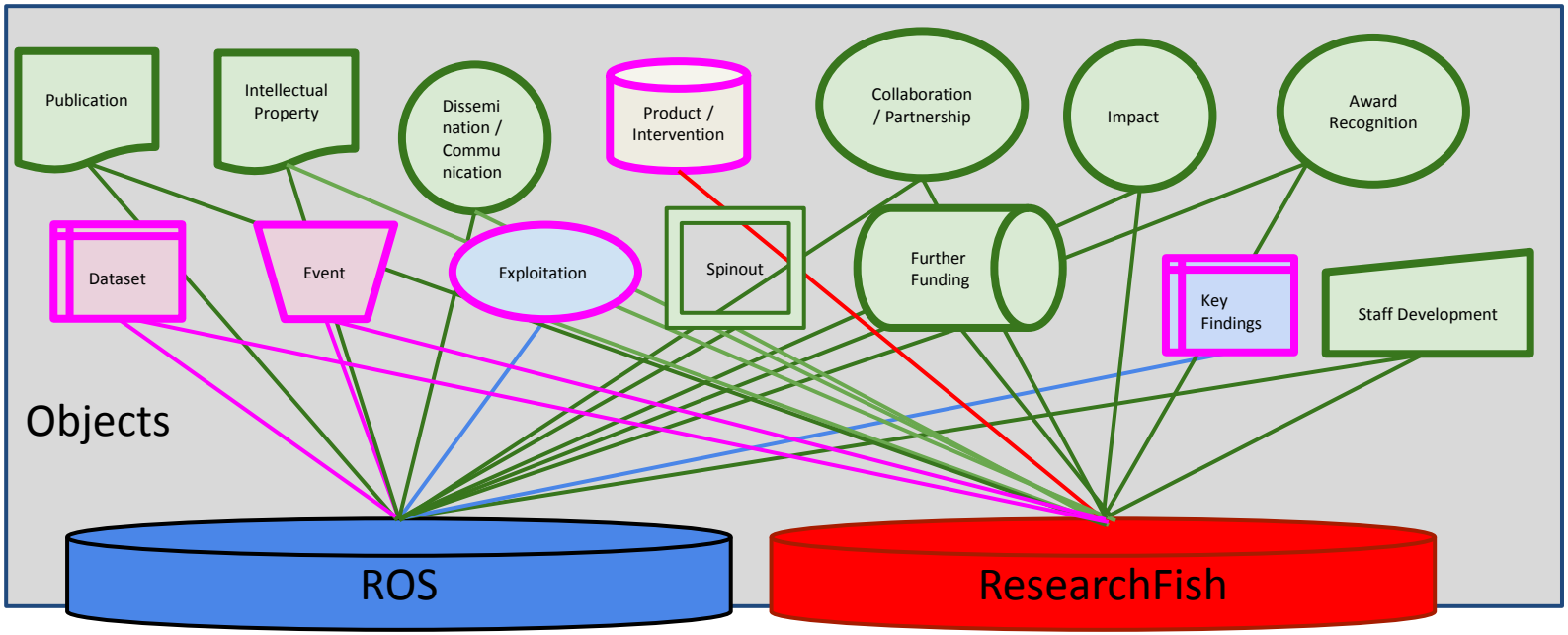
Results: Bottom-up Analysis (object-harmonisation)

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



Vocabu-laries

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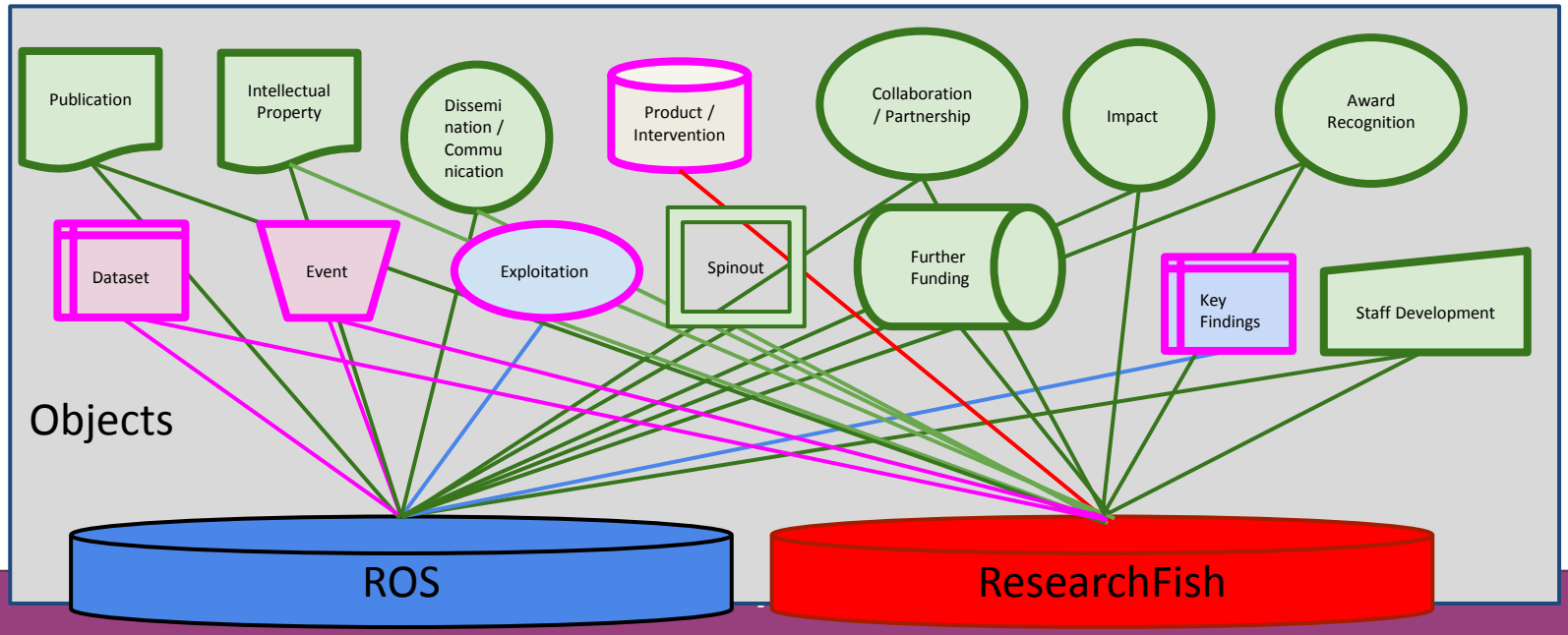
Results: Bottom-up Analysis (field-harmonisation)

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).



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UKRISS Modeling Approach

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

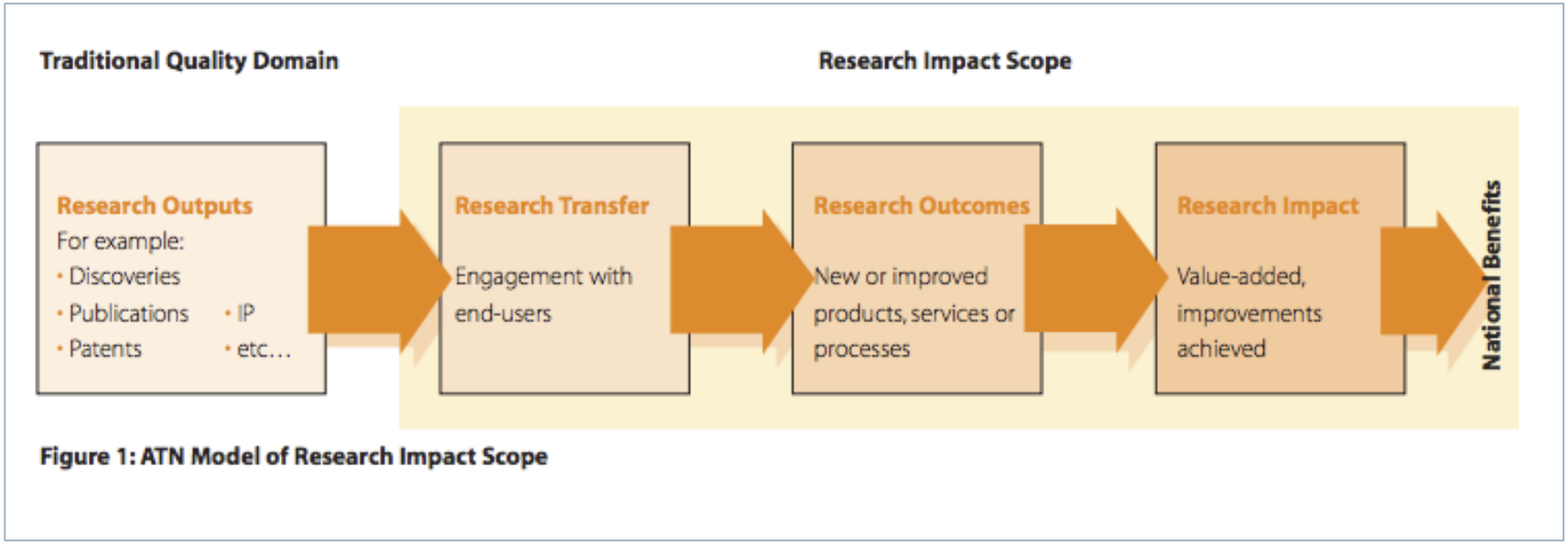

Figure 1: ATN Model of Research Impact Scope

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

*http://www.atn.edu.au/docs/Research%20Global%20-%20Measuring%20the%20impact%20of%20research.pdf

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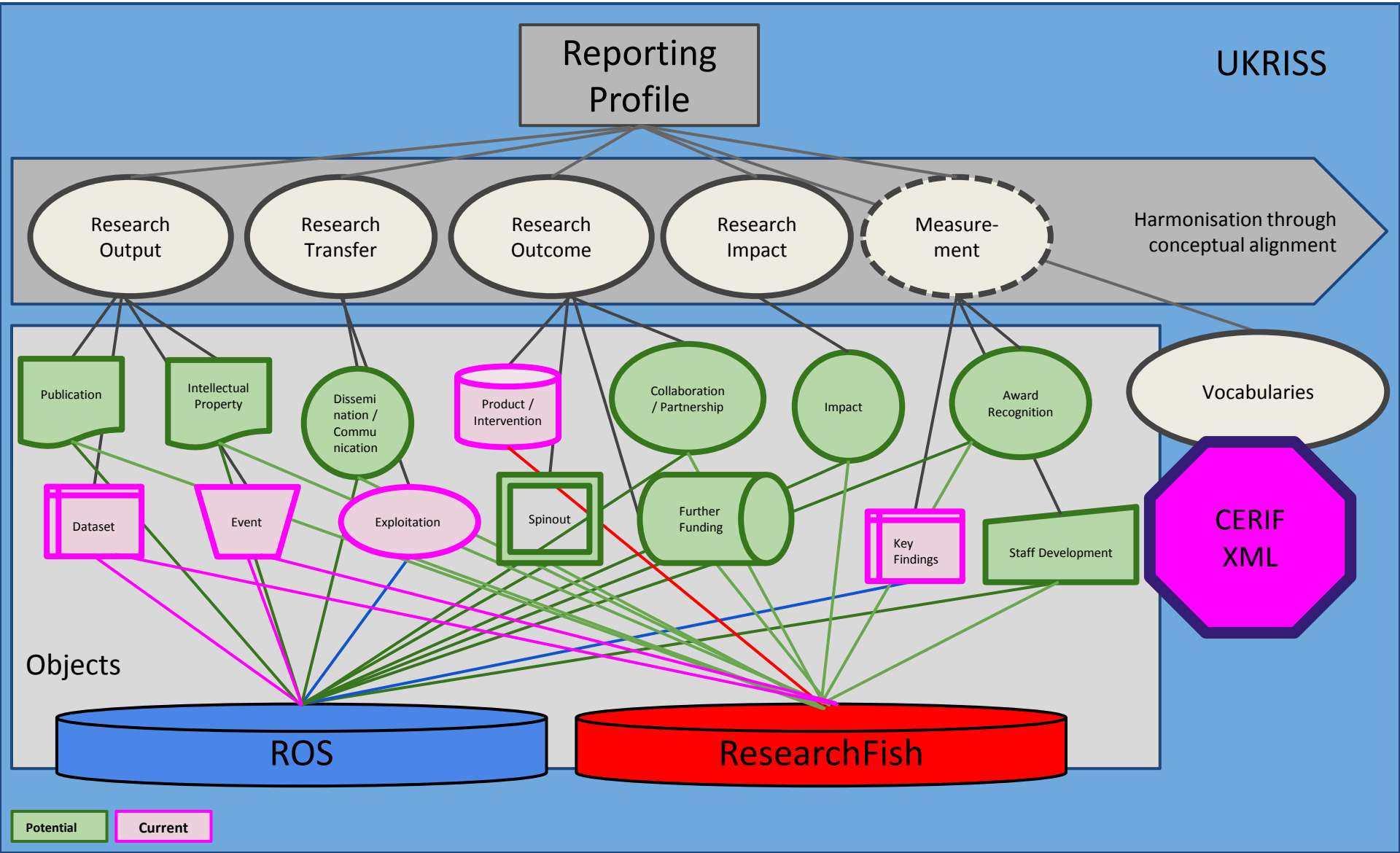
UKRISS Core Information Model



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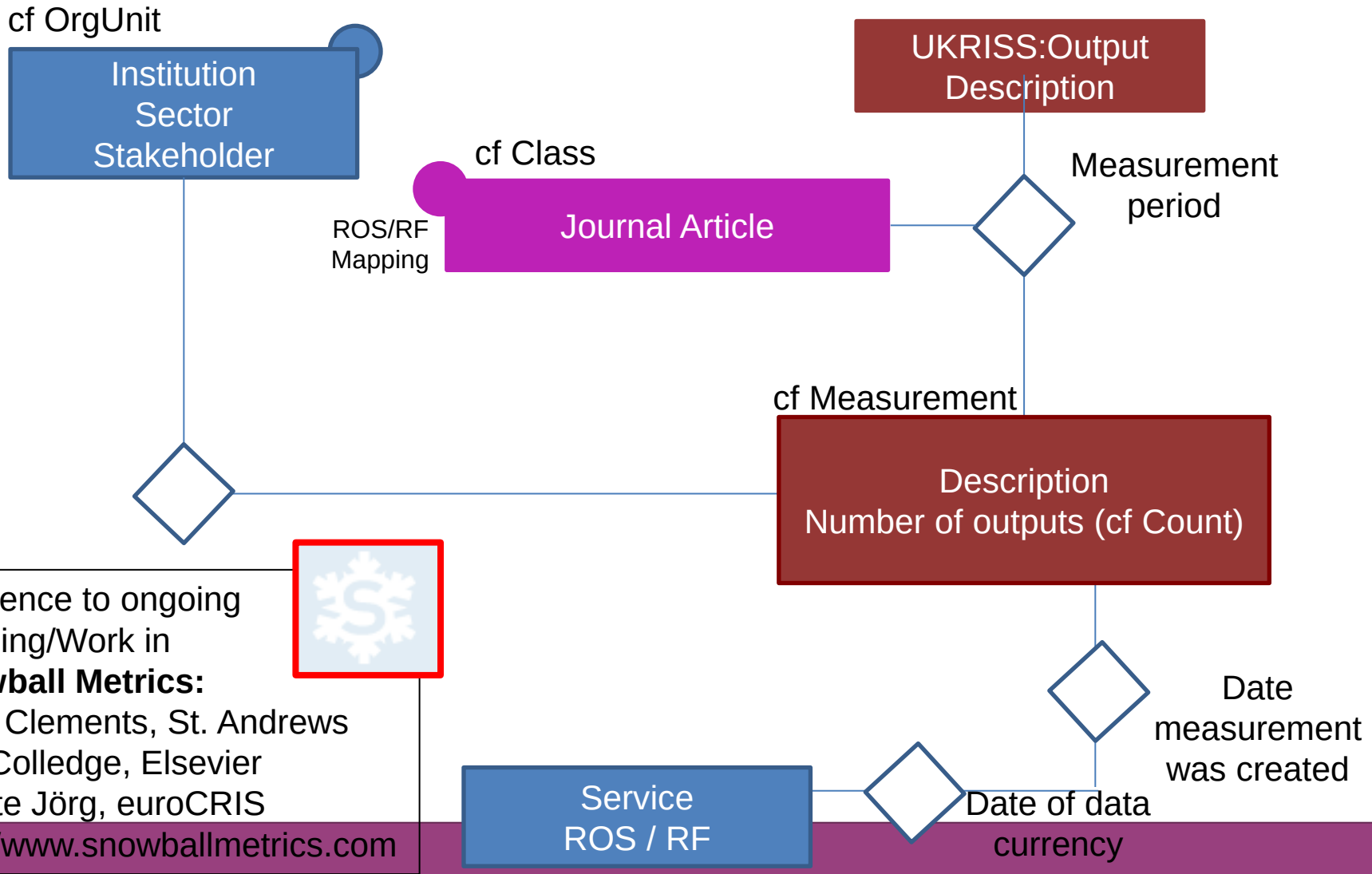
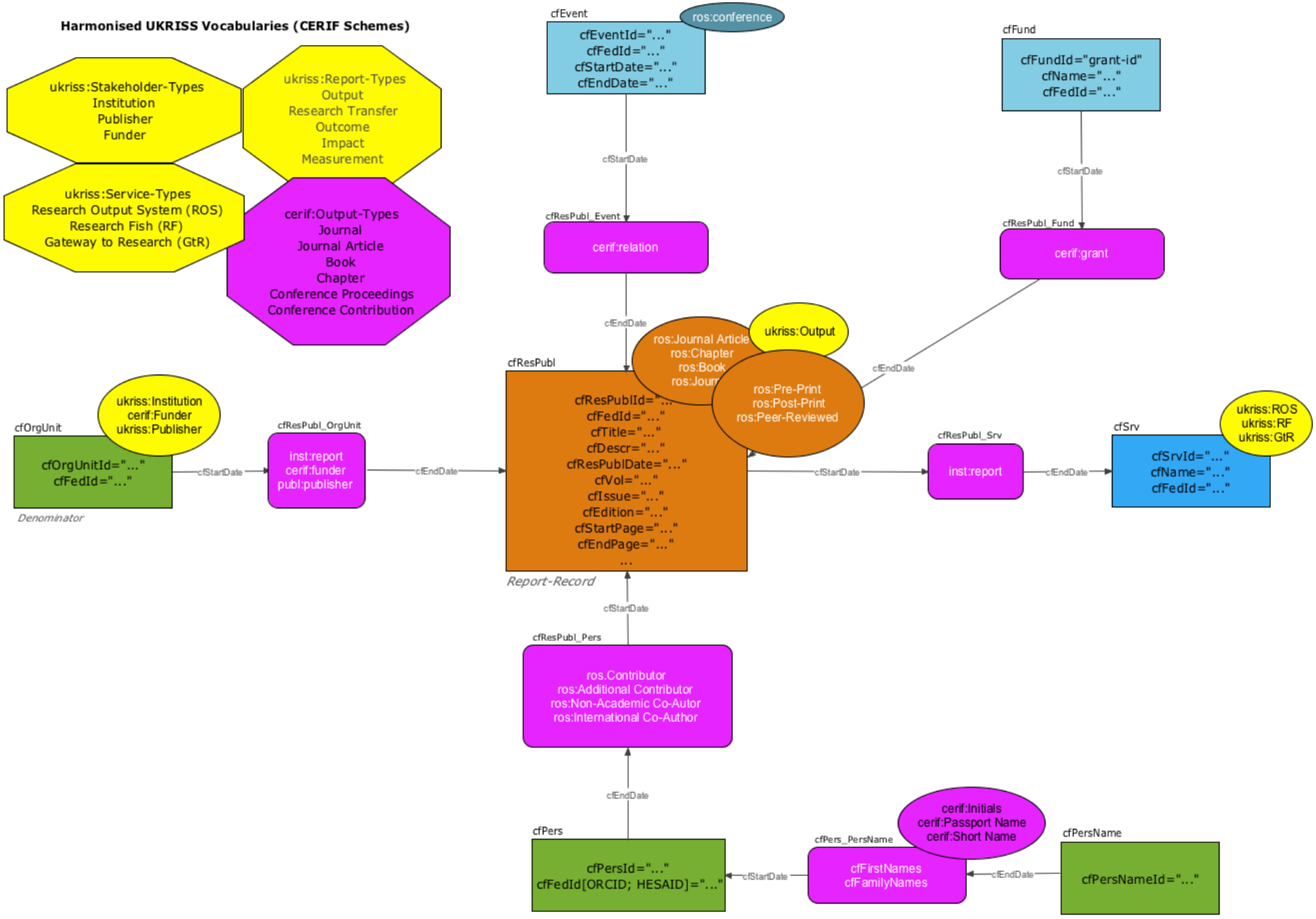
CERIFy e.g. Publication (UKRISS Output)

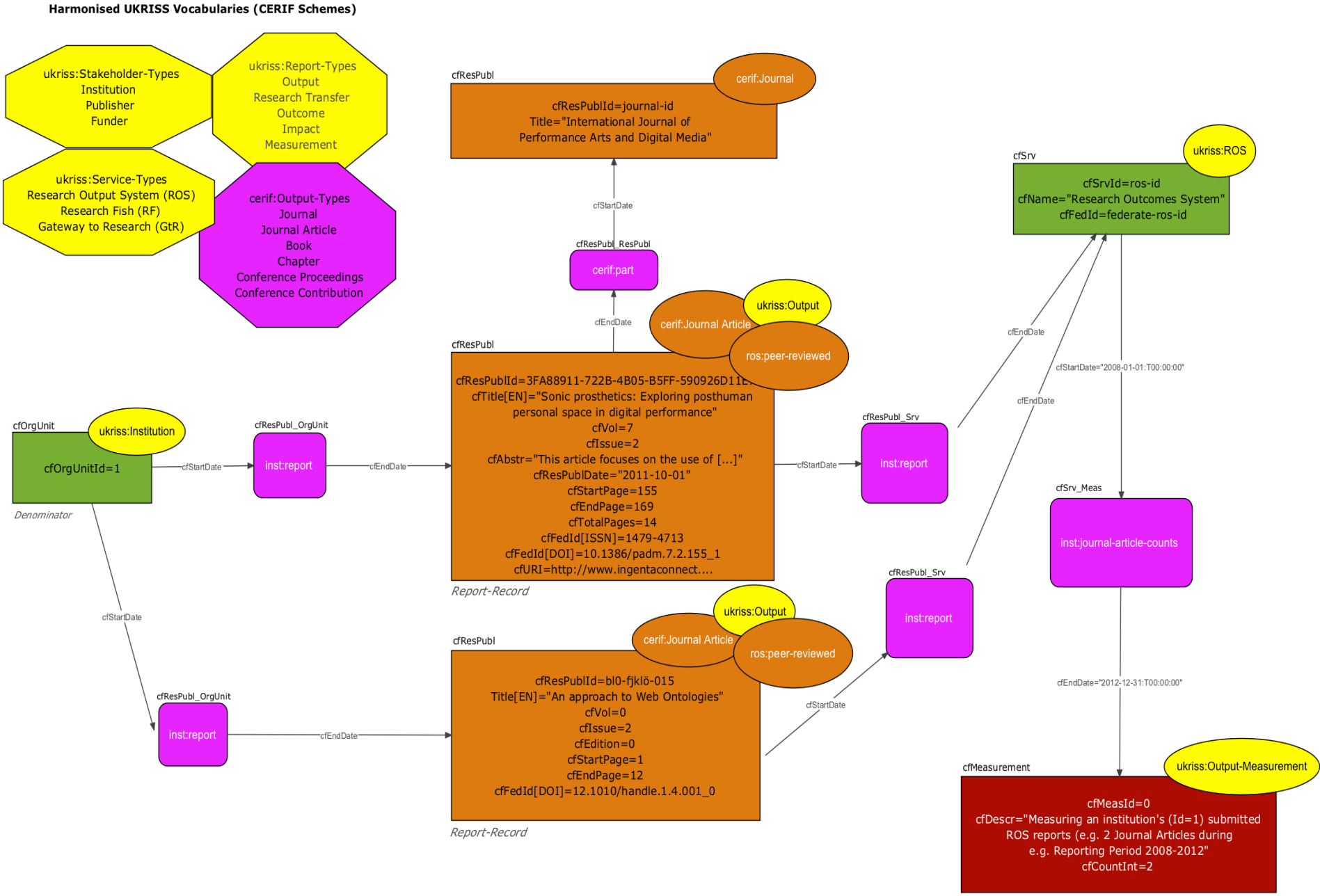


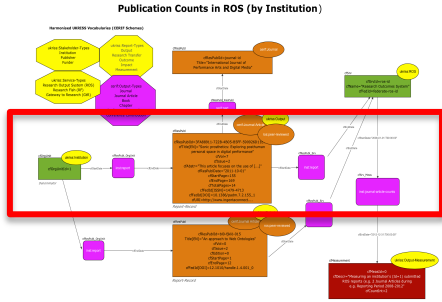
Reference to ongoing Mapping/Work in **Snowball Metrics:**
Anna Clements, St. Andrews
Lisa Colledge, Elsevier
Brigitte Jörg, euroCRIS
http://www.snowballmetrics.com

Describing ROS Output Reporting Records in CERIF

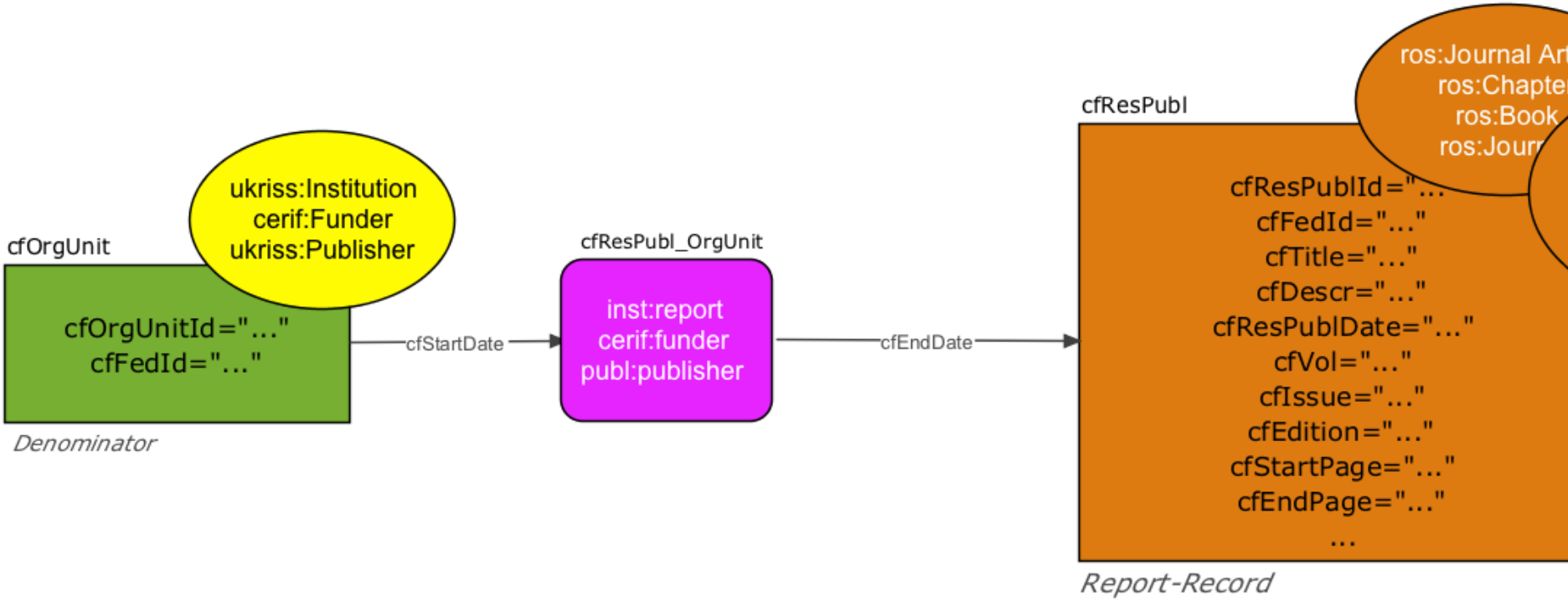


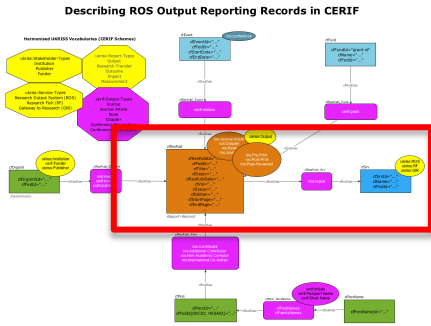
Publication Counts in ROS (by Institution)



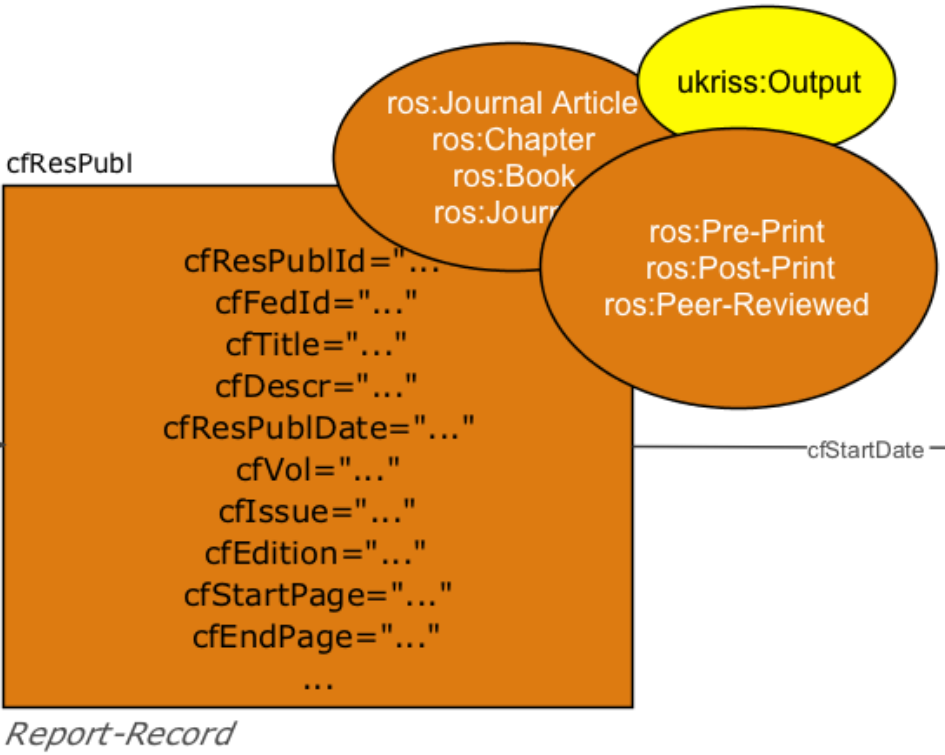


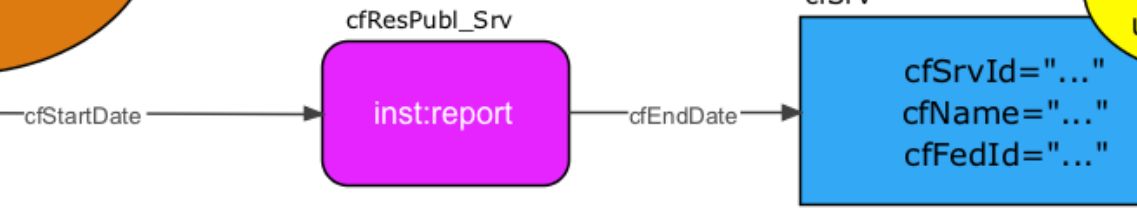
Publication Counts in ROS



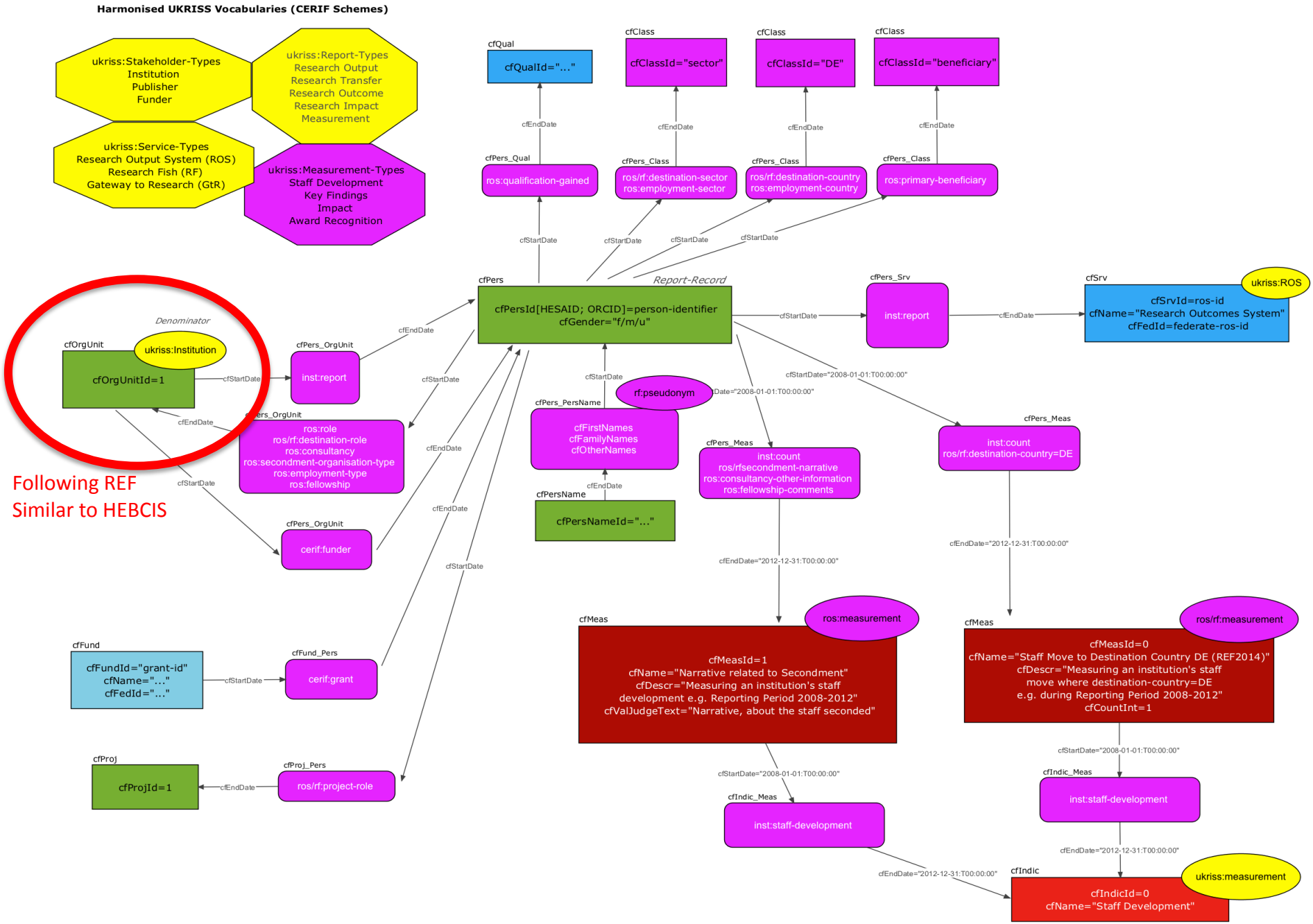


ROS Output Reporting Records





Staff Development in RF/ROS (by Institution)



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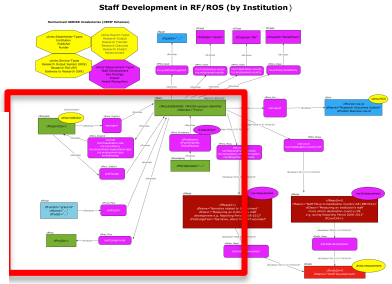
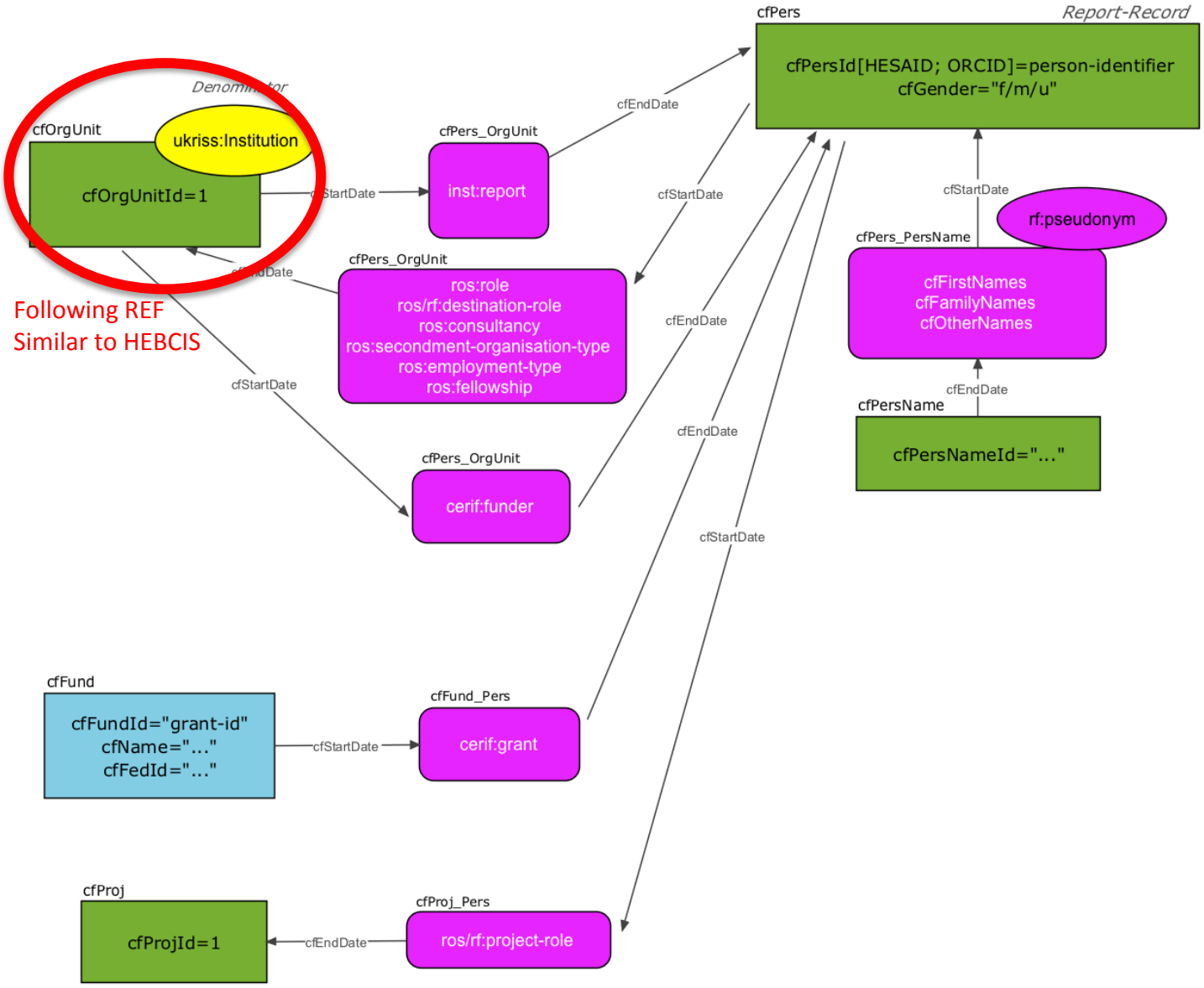
Staff Development in ROS/RF





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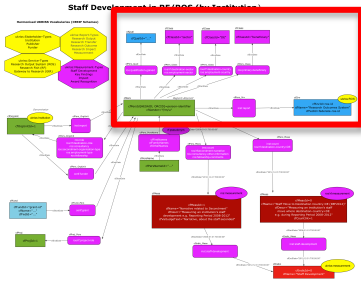
Staff Development in ROS/RF



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cfClass
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cfClass
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cfEndDate
cfEndDate
cfEndDate
cfEndDate

cfPers_Qual
ros:qualification-gained

cfPers_Class
ros/rf:destination-sector
ros:employment-sector

cfPers_Class
ros/rf:destination-country
ros:employment-country

cfPers_Class
ros:primary-beneficiary

cfStartDate
cfStartDate
cfStartDate
cfStartDate

cfPers
Report-Record
cfPersId[HESAID; ORCID]=person-identifier
cfGender="f/m/u"

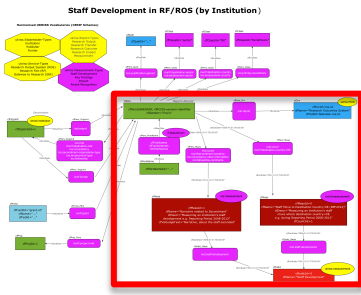
cfStartDate

cfPers_Srv
inst:report

cfEndDate

cfSrv
cfS
cfName="Rese
cfFedId

Staff Development in ROS/RF



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cfGender="f/m/u"

cfStartDate → cfPers_Srv: inst:report → cfEndDate → cfSrv: cfName="Re cfFe

cfStartDate
rf:pseudonym
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cfFirstNames
cfFamilyNames
cfOtherNames
cfEndDate
cfPersName
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ros:fellowship-comments

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inst:staff-development

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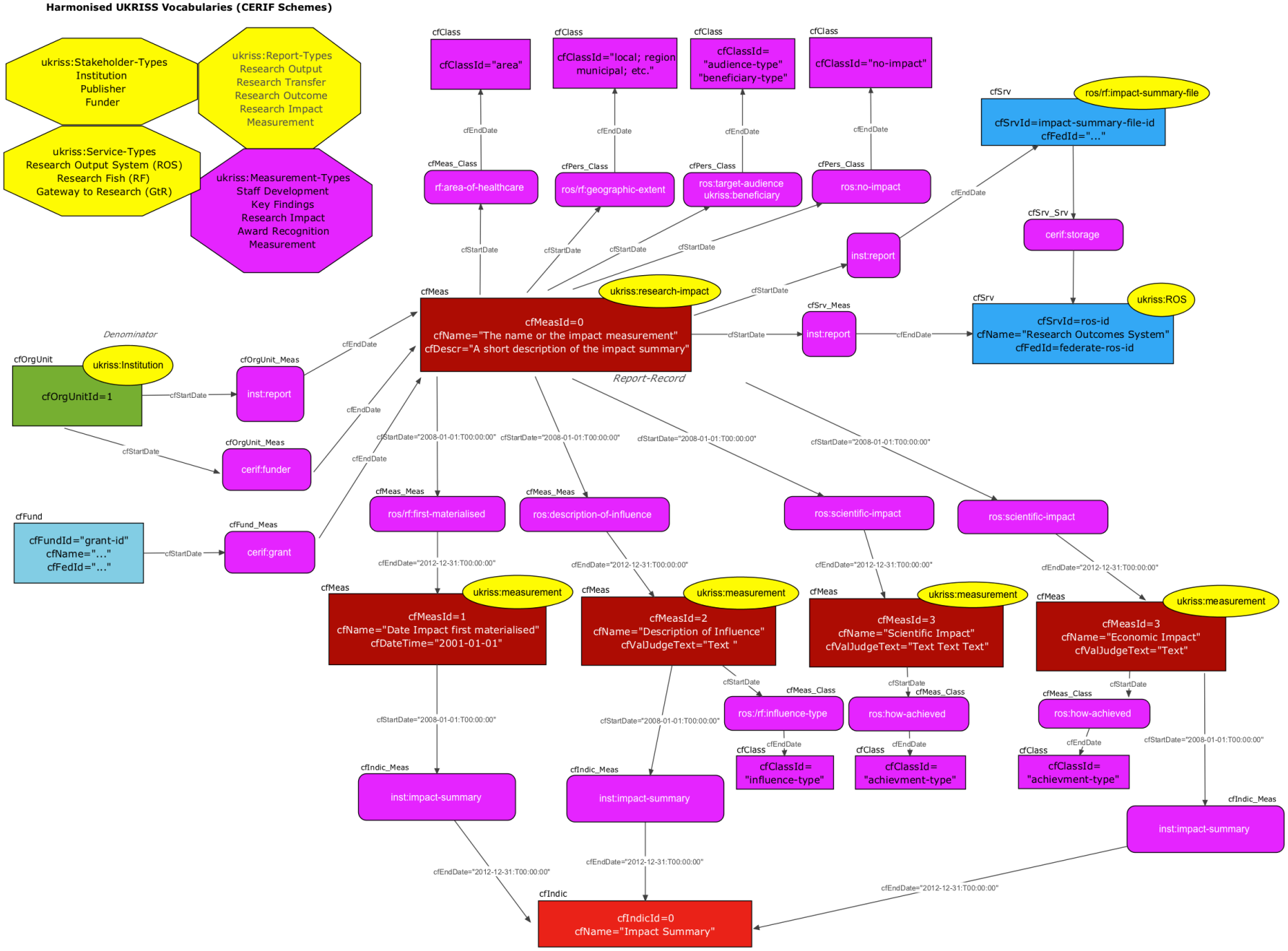
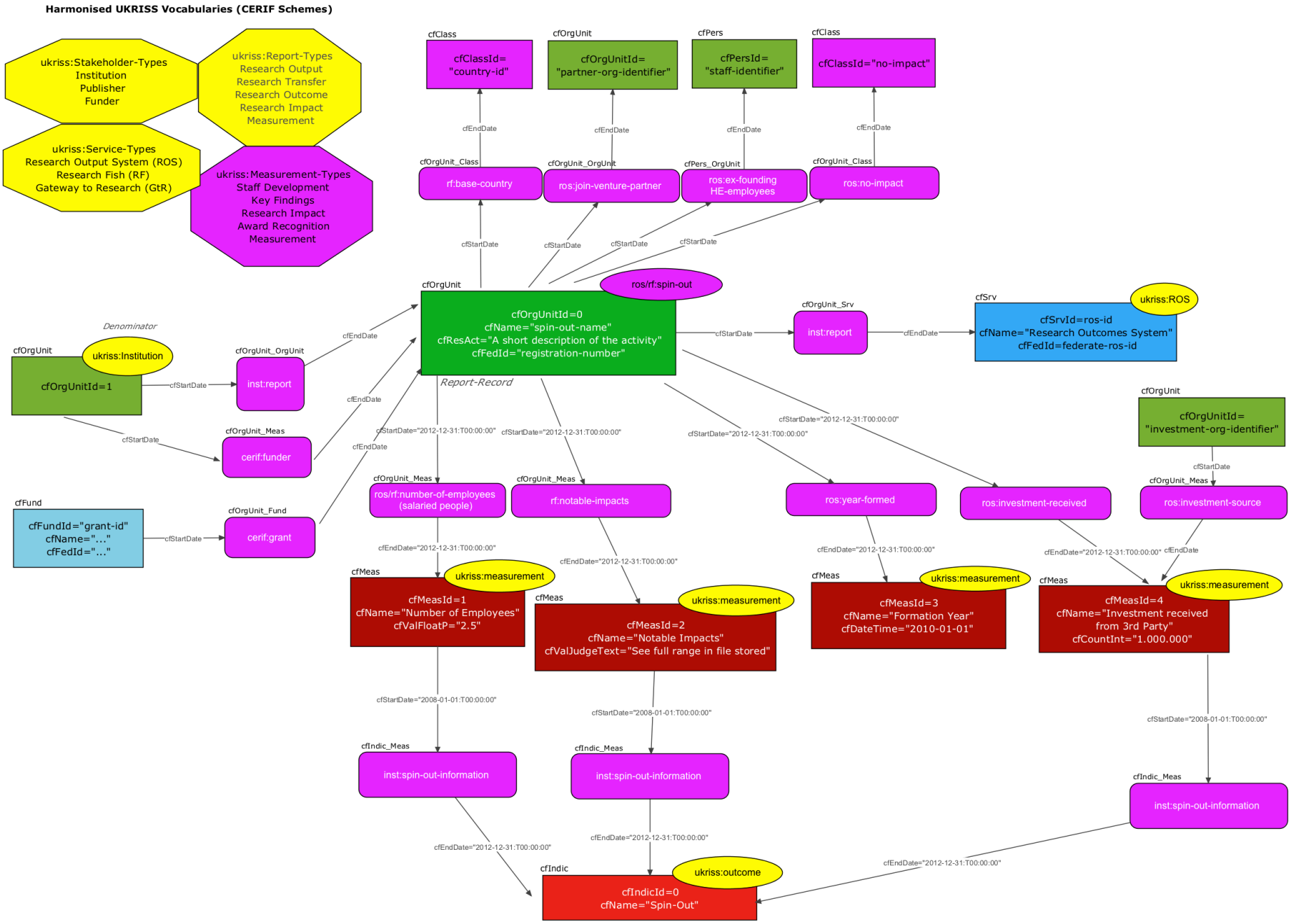
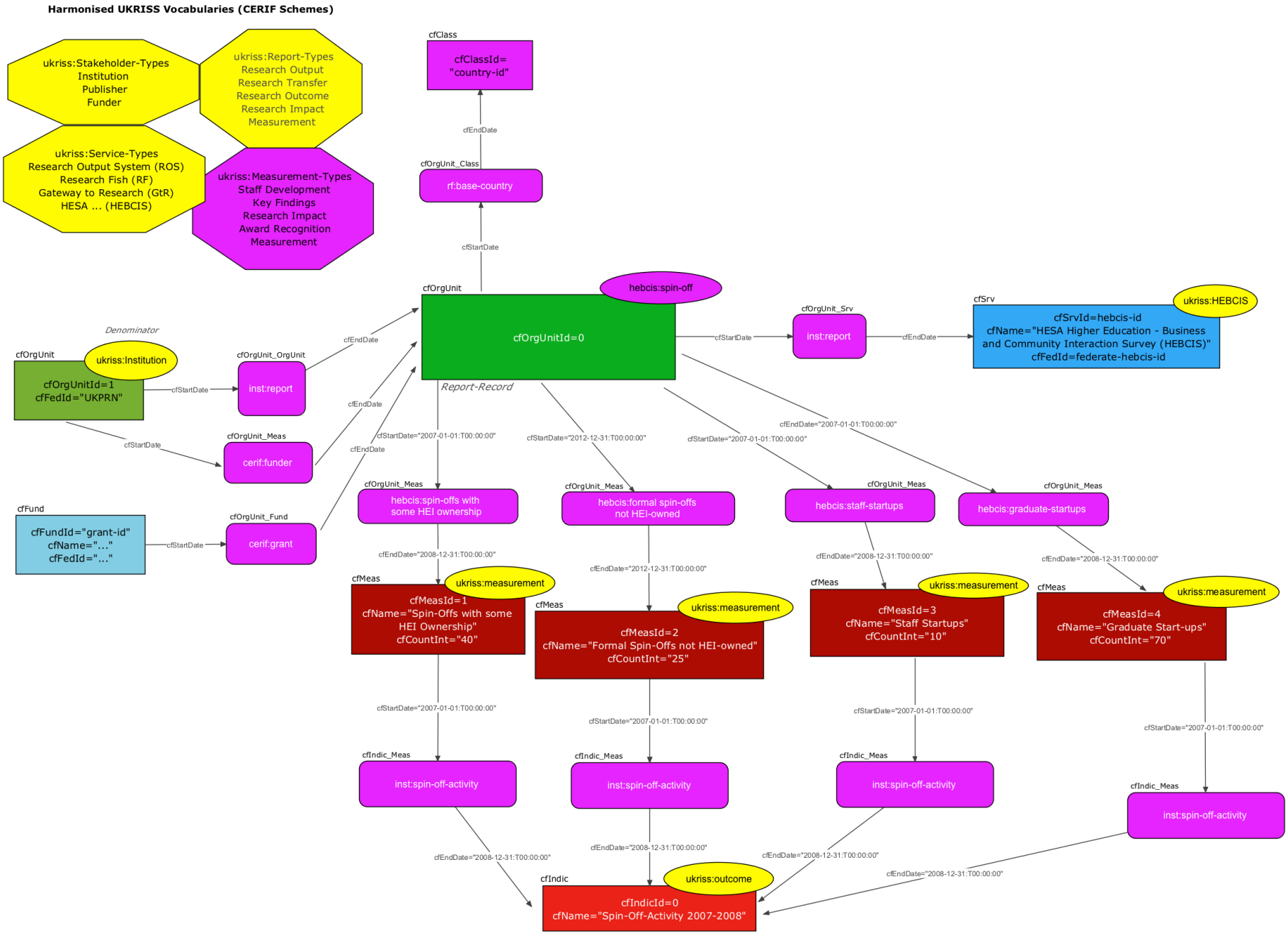
Impact in RF/ROS (by Institution)



Spin-Out RF/ROS (by Institution)



Spin-Off-Activity HEBCIS (by Institution)



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UKRISS at ReConnect13 (Ottawa)

Joint Presentation!
See also slides by
Mathias Riechert, IFQ

iFQ
Institut für Forschungsinformation und Qualitätssicherung

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

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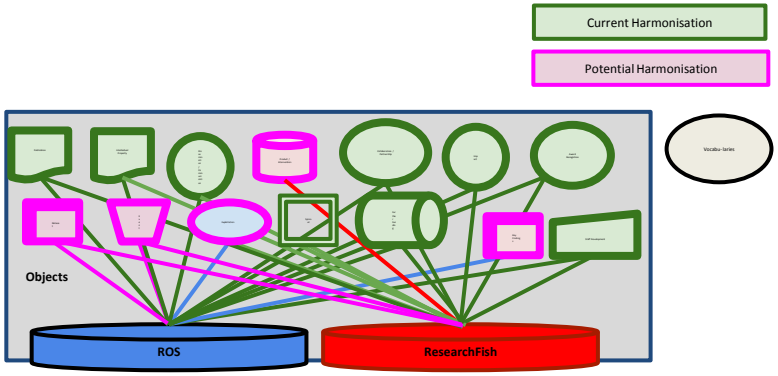
UKRISS at ReConnect13 (Ottawa)

- 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 incrementially
- **Need: Agreed Requirements (agreed questions)!!**