(Enhancing Repository Infrastructure in Scotland)

'Repositories and Research pooling'

Open Repositories, Madrid,
July 7th 2010

Introduction/Background

- Research has never been so commercial, with pressures to compete for funding on all sides

- Issue raised following 2001 RAE – to spread dispersion of funding and to bring Scotland on par with 'golden triangle'

- Pools encourage collaboration and not competition.

- Started in 2004, >£400 Million invested across 13 pools.

My THE | Login | Register

THE Times Higher Education

PEARSON TEST OF ENGLISH | PTE Academic
Get ahead with PTE Academic!
Register today
PEARSON

HOME | CONTACT | COMMENT | CAREER | NEWS | BOOKS | RANKINGS
ADVERTISE

A collective ambition that builds up to a critical mass

12 June 2008

National research pools are winning Scotland an international reputation, writes Olga Wojtas

Mike Tyers was pursuing a distinguished research career in his native Canada last year. He was a professor at the University of Toronto and senior investigator at the Samuel Lunenfeld Research Institute, the strongest biomedical research centre in the country.

"Things were going very well. I had a lab of over 30 people," he said.

But he was lobbied by researchers in Scotland to apply for the directorship of the Scottish Universities Life Sciences Association (Sulsa). He is now living and working in Edinburgh, and he has not looked back.

Sulsa, a £78 million collaboration launched last August between the universities of Aberdeen, Dundee, Edinburgh, Glasgow, St Andrews and Strathclyde, is one of a growing number of Scotland's pioneering "research pools" - alliances conceived and part funded by the Scottish Funding Council to help create the critical mass of resources needed for Scotland's universities to carry out world-class research.

"Research pooling is a pretty novel concept with no precedent in North America," Professor Tyers said. "The spirit of co-operation has been fantastic, and you can't overestimate the value of that."

Professor Tyers, who now holds the C. H. Waddington chair of systems biology at the University of Edinburgh, said the creation of Sulsa had raised the profile of Scotland internationally "and we've had good success in recruiting top people".

Leaders from more than 20 disciplines came together at Edinburgh last month to assess the development of Scotland's growing number of research pools.

ERIS

Research pools

- Strategic collaborations in subject disciplines across institutions

- Funded by combination of Scottish Funding Council (SFC), member institutions and through industry

- No formal legal structure – autonomous units but managed by layers of committee

- Investments made in resourcing, graduate schools and in infrastructure

- Organised by 'themes' arranged to gain maximum impact

SULSA
Scottish Universities Life Sciences Alliance

SAGES

sire

sicsa*

ERIS

Why ERIS interest

- ERIS looking at issues of motivation surrounding repository usage

- ERIS also about facilitating collaboration

- Research pooling good case study for demonstrating value in cross institutional collaboration.

- Building of knowledge about and around research pooling.

- Looking at opportunities to assess subject vs. institutional approaches

ERIS
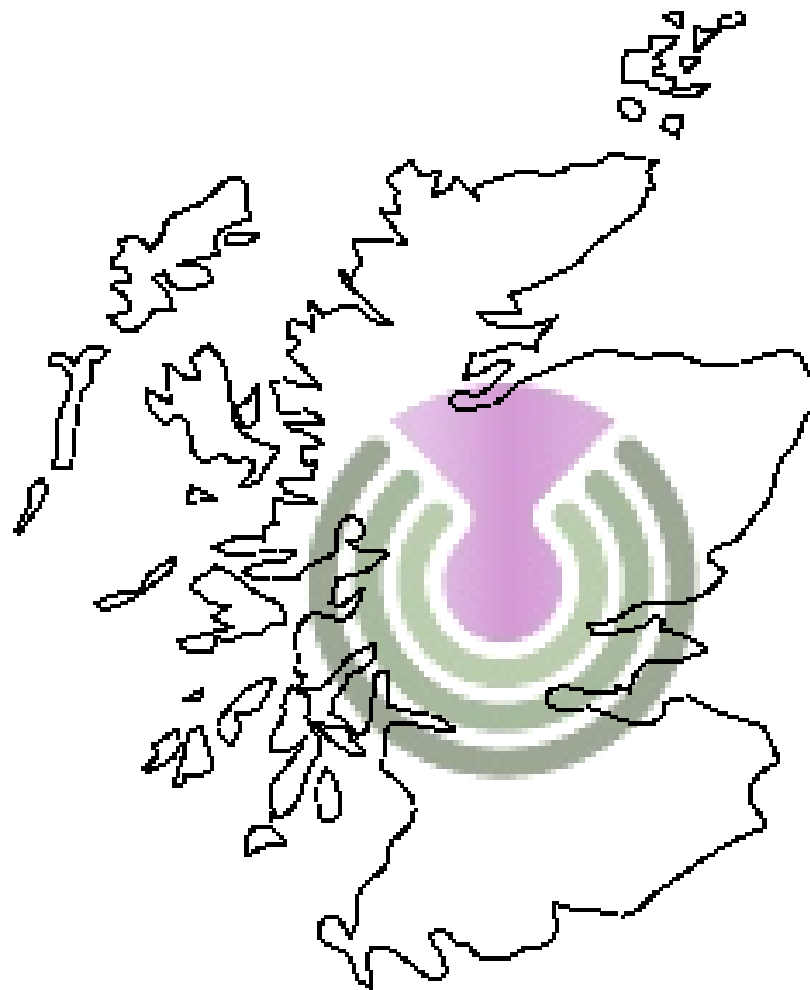
Plan of attack

- Arranged meetings (formal and informal) with research pool directors and administrators (Nov 09-May 10)

- Became part of the pool administrators network group

- Reviewed pool documentation – proposals, reports, articles etc

- Initial observations point to 3 primary issues to address

- Established study to identify options and opportunities
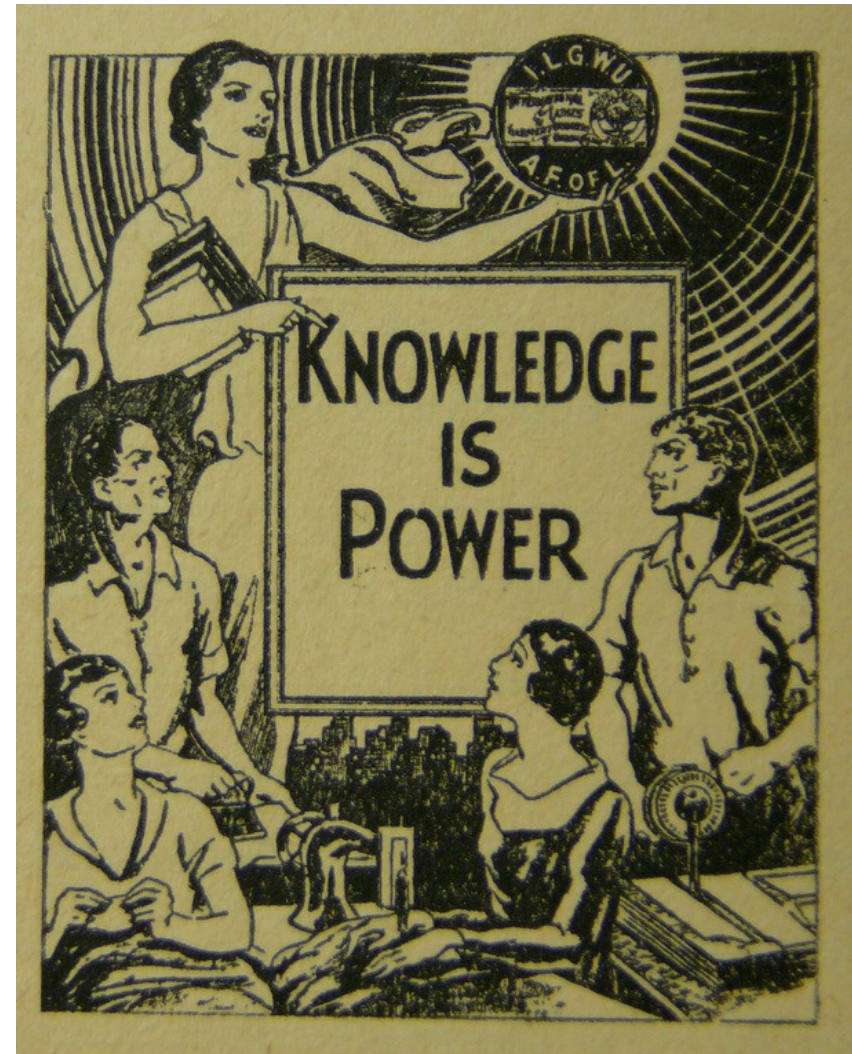
ERIS

RESEARCH POOL PRIMARY REQUIREMENTS

ERIS

Burden of administration

**Annual reporting for cross institutional research {painful}**

ERIS

Strategic Management

Do the pools have the comprehensive information they need to manage the opportunities and threats to modern research
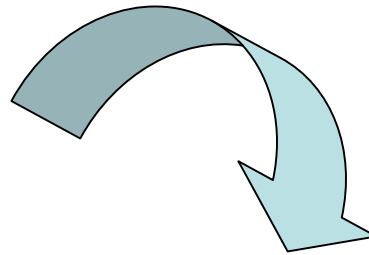

ERIS

Knowledge Transfer

Probably the most significant expectation on pools is in their ability to foster cross institutional and international collaborations through knowledge transfer
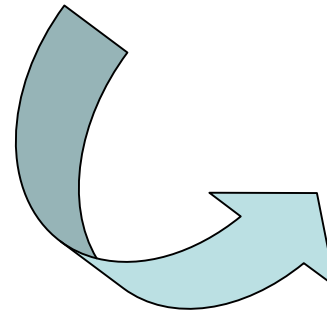

ERIS
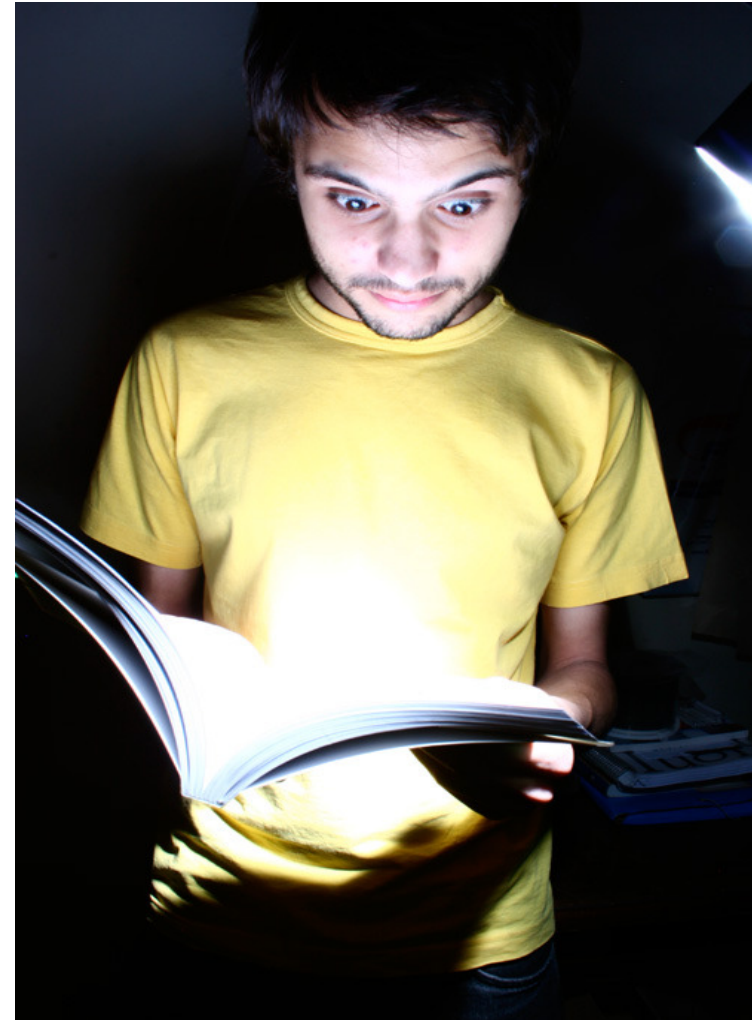
STUDY AND PROOF OF CONCEPT WORK

ERIS

Fairly typical study

- **Define needs**
- **Find out what pools would do with data**

- **Gap analysis**
- **Proof of concept system**

- **Investigate the business case**
- **Make recommendations to project**

ERIS

WHAT POOLS WANT

ERIS

Data Needs Identified

- **Required for;**

    - **Measure of quality and quantity (inc. impact narratives)**

    - **Providing evidence of collaboration**

    - **ROI from use of shared facilities and services**

    - **Data overview and customised reporting for strategic management**

    - **Facilitate collaboration (knowledge transfer) and interoperability**

ERIS

WHY THEY WANT IT

ERIS

Data Use

- **Examples of data use identified;**

  - **Joint research pool REF submissions**

  - **Make available for individual researchers**

  - **Aggregated for strategic research management and knowledge transfer**

  - **For reporting to SFC and anyone else (i.e. against funder mandates)**

  - **Use of data for text mining and analysis for capability mapping (Knowledge exchange)**

ERIS

WHAT WE NEED TO COLLATE, THAT WE DON'T HAVE IN IR

ERIS

Review against available data

- **Pretty clear that the IR do not have the detail and the volume of data that pools need.**

- **Require data from many cross institutional sources (HR, Finance, Research office, Expertise Databases etc)**

- **Bibliometrics data and advice**

- **The data that we do have is inconsistent across institutions – no control over deposit metadata**
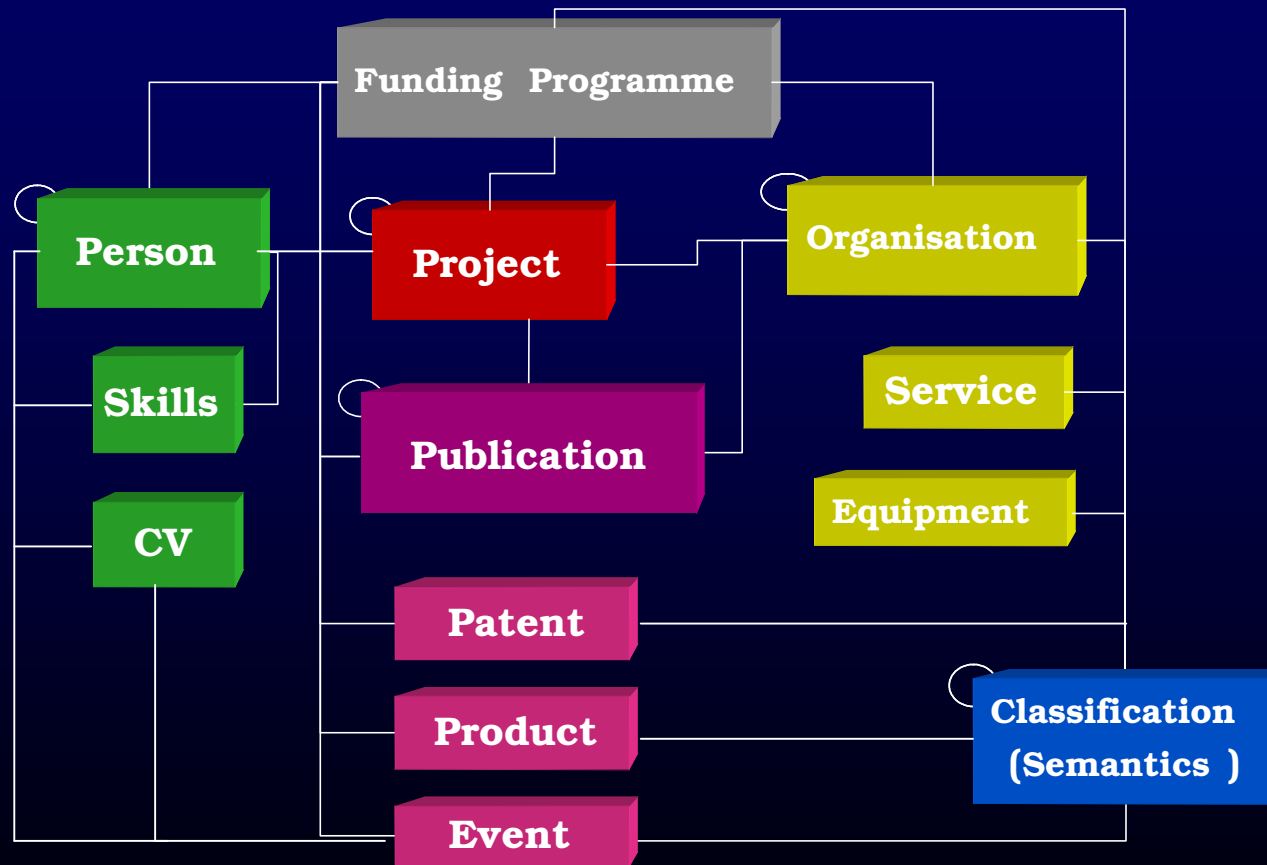
ERIS

WHAT WE ARE DOING

ERIS

Proof of concept

- **Original intention to develop virtual repositories based on IR data with simple flags in deposit IR.** (but impractical in reality)

- **Data required exists in many specialist databases and systems**

- **Represents considerable change in initial thinking**

- **CERIF emerged from investigations as contender for data model (backed up by the JISC EXRI[1] project findings)**

ERIS

# CERIF – Common European Research Information Format

- **CERIF is an EU Recommendation to Member States**

- **The European Commission (EC) has authorised euroCRIS to maintain and develop CERIF and its usage**

- **Developing as an emerging standard for CRIS/IR integration**

- **Describes research entities**
  - Project, Person, Organisation
  - Funding Programme, Service, Equipment,
  - Publication, Patent, Product, …

ERIS

Common European Research Information Format

Funding Programme

Person

Skills

CV

Project

Publication

Patent

Product

Event

Organisation

Service

Equipment

Classification (Semantics)

ERIS

Proof of concept

- **Contacted via CRISPool Project[1] (based out of St Andrews, Scotland)**
- **Aim to demonstrate value of CRIS based data aggregation in CERIF for Research pool (SUPA)**
- **Matched perfectly to the ERIS thinking**
- **Difference is that CRISPool is implementing Atria's PURE CRIS as basis of aggregation**
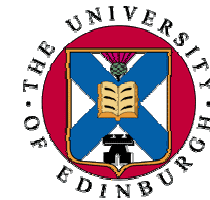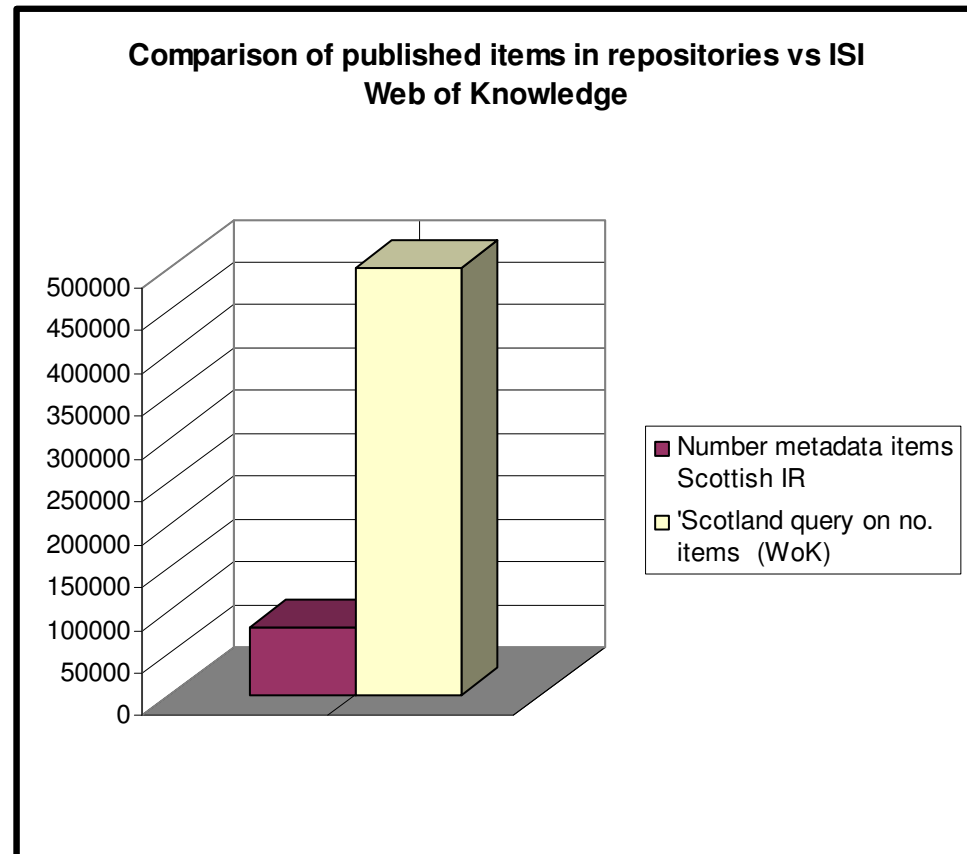
1. CRISPool website: http://www.crispool.org

OTHER ACTIVITIES IN PROGRESS AND TO DO

ERIS

Building a 'critical mass'

IR contain only a small fraction of content required by the pools (Scottish content available in IR circa. 80K items from all years, against circa. 500K (from ISI) – vast majority not full text**)**

Comparison of published items in repositories vs ISI Web of Knowledge

- Number metadata items Scottish IR
- 'Scotland query on no. items (WoK)

ERIS

Building a 'critical mass'

- **Working with pools to build body of relevant content, aggregated from variety of sources (i,e. Economics/Repec with SIRE)**

- **Research pools are likely to be successful in motivating members to deposit and co-ordinate deposit due to the cross disciplinary benefits**

- **Recommend SHEDL type negotiations with data suppliers for access to records for retro-loading into IR systems**

- **Collaborate with deposit broker systems such as the Open Access Repository Junction to improve access to subject/publisher data.**

ERIS

BENCHMARKING

ERIS

Benchmark against similar projects

- **Benchmark against examples of linked OA-IR and CRIS such as FRIS (Flanders), SICRIS (Slovenia), NARCIS (NL), Frida (Norway)**

HOW POOLS ARE CONTRIBUTING TO THINKING

ERIS

Validation against review criteria

- Provide the means to identify the sum total of output for a pool

- Ensuring content is accessible and visible through standard search engines such as Google

- Provide the ability to relate outputs to funding programmes/projects

- Record evidence of impact against published materials and projects

- Provide administration of the aggregation data by pool to allow fractional management of RP personnel and outputs

- Identify compliance of deposited outputs against funding programme mandates

ERIS

Validation against review criteria

- To provide information on the success of collaboration efforts, brought on and facilitated by the pools (intra and extra pool)

- Establish definition of approaches for the measurement of quantity and quality of outputs by research pool members

- Facilitate knowledge/expertise management based on information gained through examining research outputs

- Identify the impact of capital investment in resources (other than human) for example due to improved facilities and services brought about through pool investment.

ERIS

Comparing approaches

Taking the research pool lead, disciplinary led operations support centralised IR management

Institutions

Disciplines
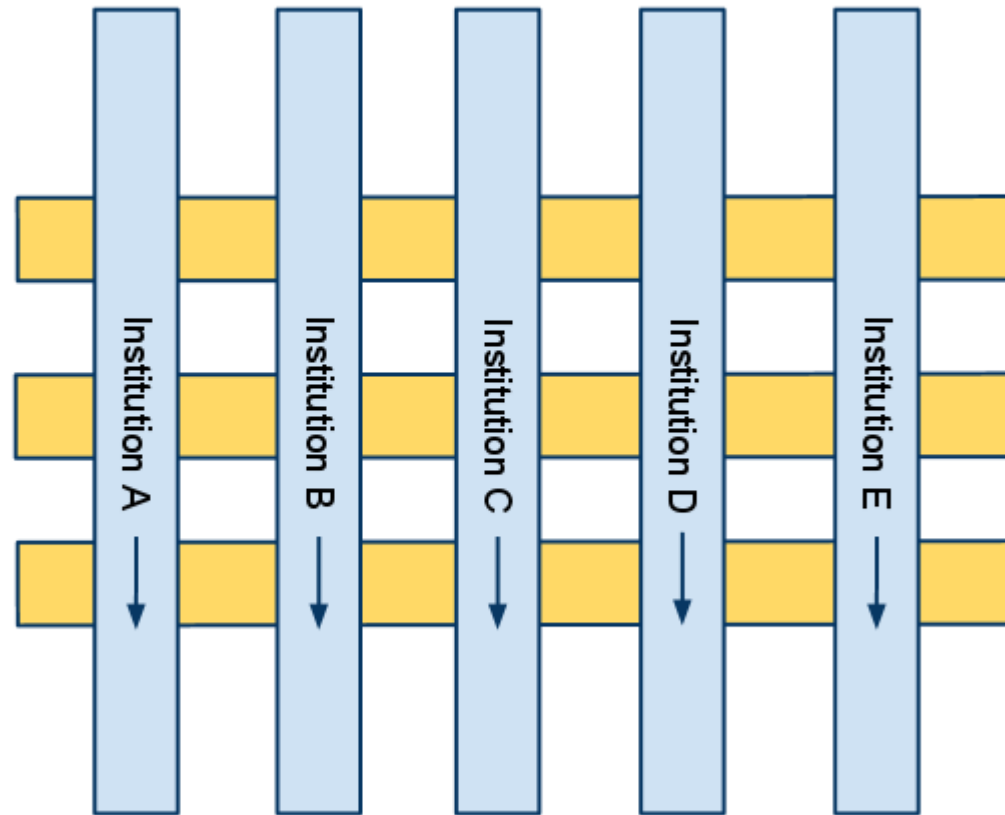
Discipline A →

Discipline B →

Discipline C →

ERIS
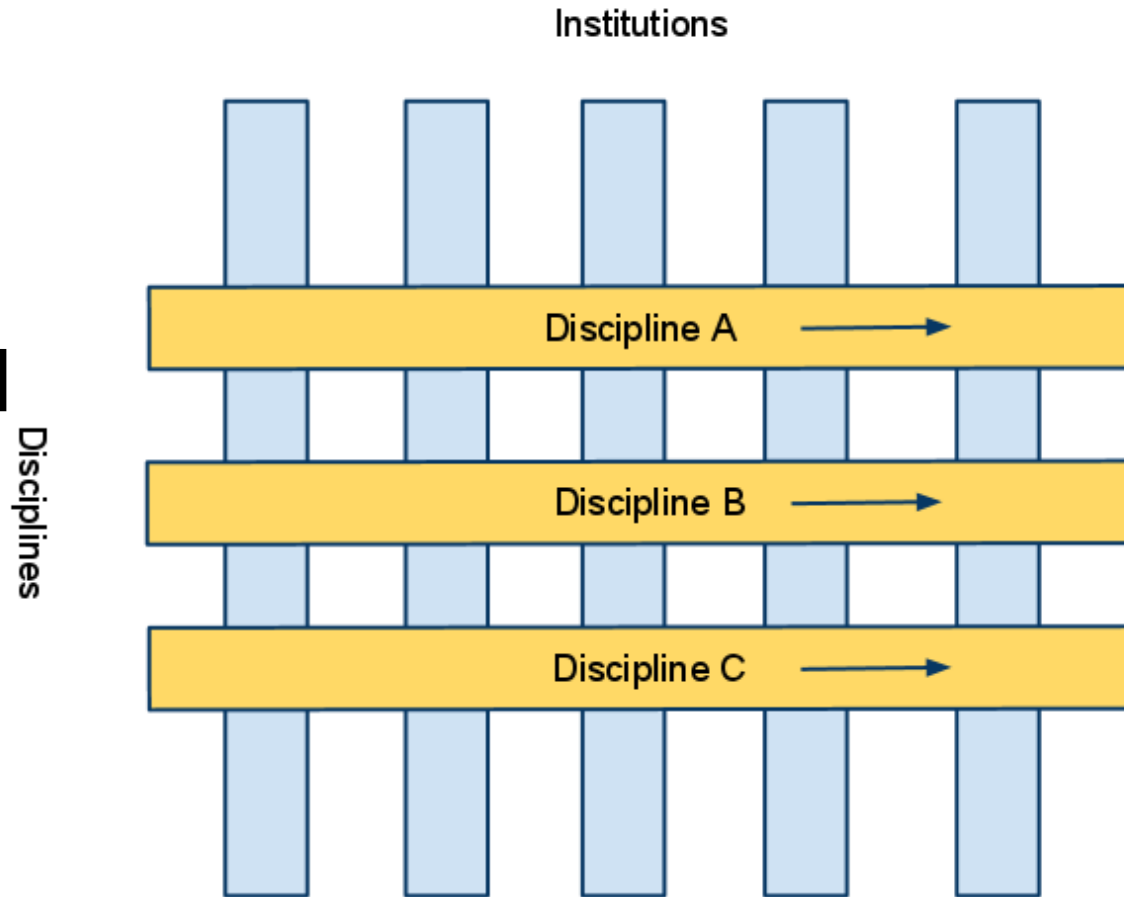
Comparing approaches

Whilst the status quo (distributed ops) provide significant challenges in co-ordination and normalisation of approaches

ERIS

Growth of research artefacts?

Little concept of quite how much impact inclusion of research outputs other than published materials will have
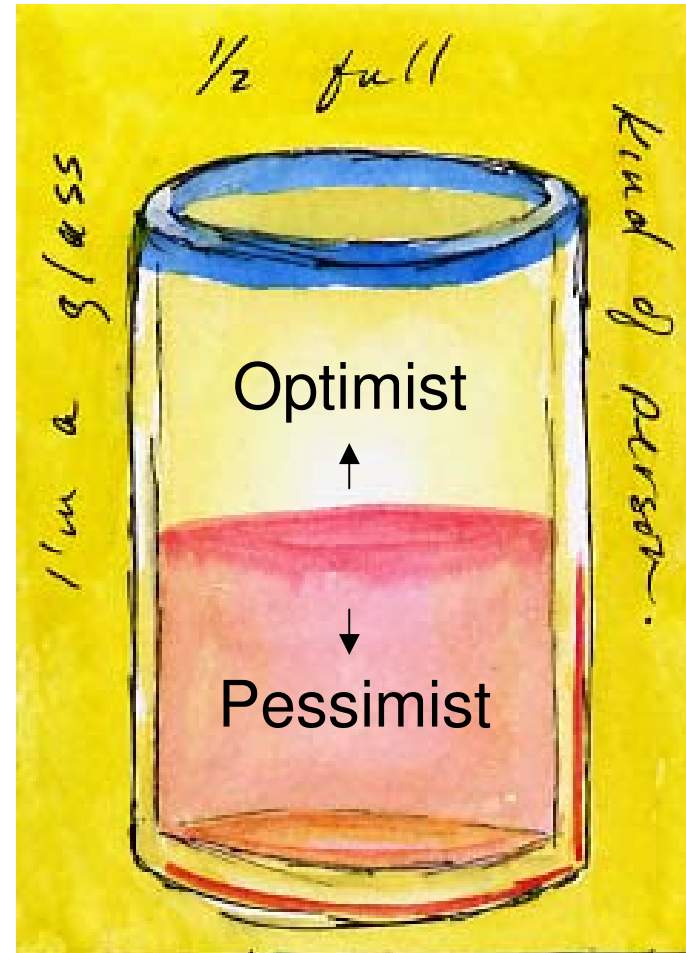
ERIS

How much would it all cost

Separate ERIS study option being included, looking into likely cost of implementing subject based approach vs. institutionally approach and potential impacts
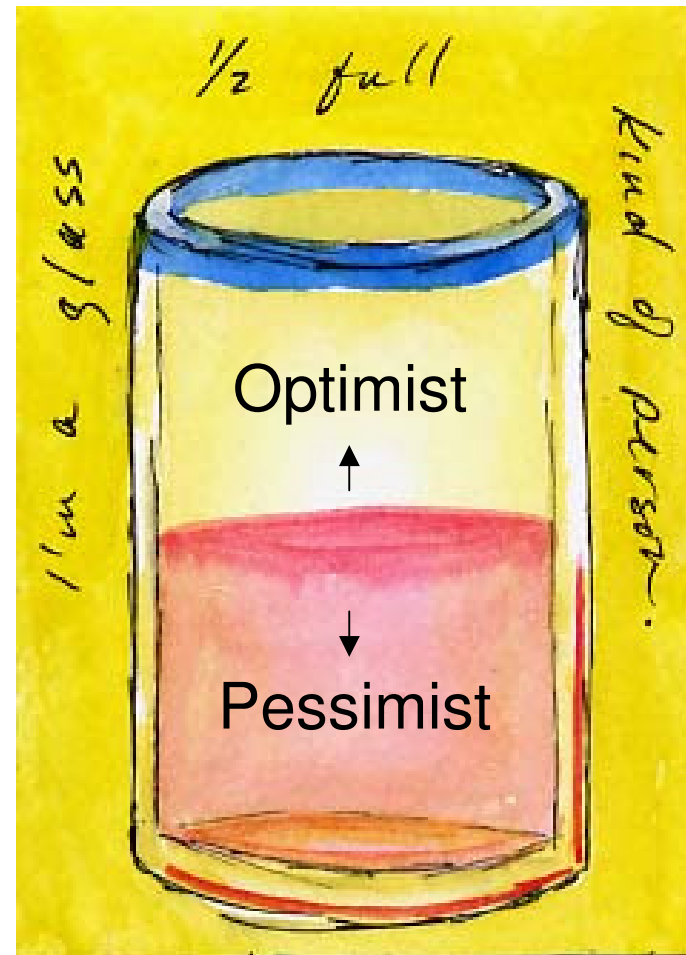

ERIS

OBSERVATIONS

ERIS

....motivation

For researchers, subject repositories are more useful than institutional ones
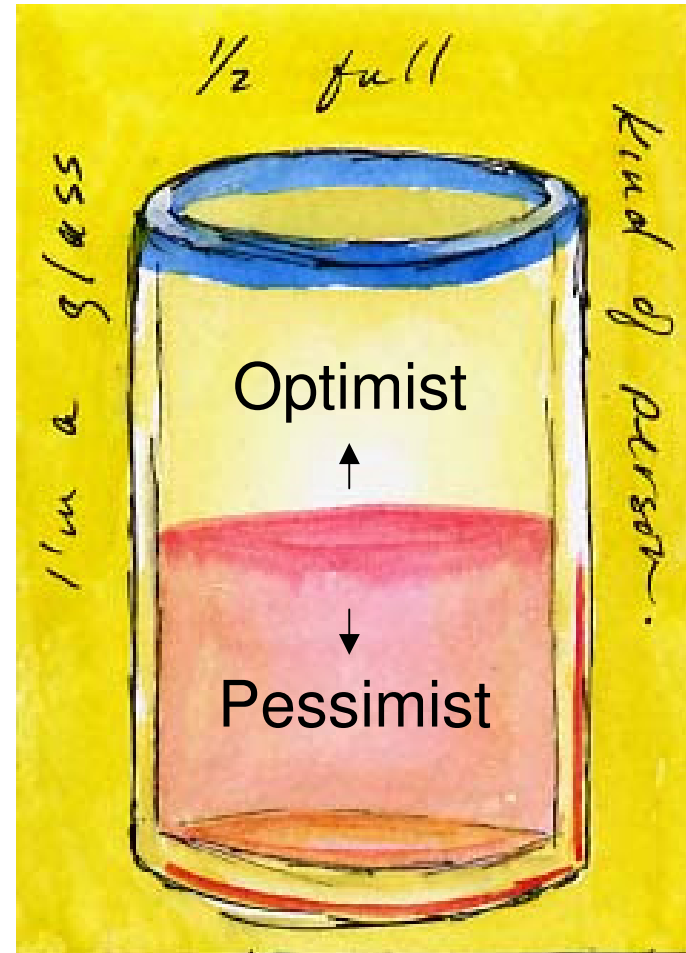

ERIS

....motivation

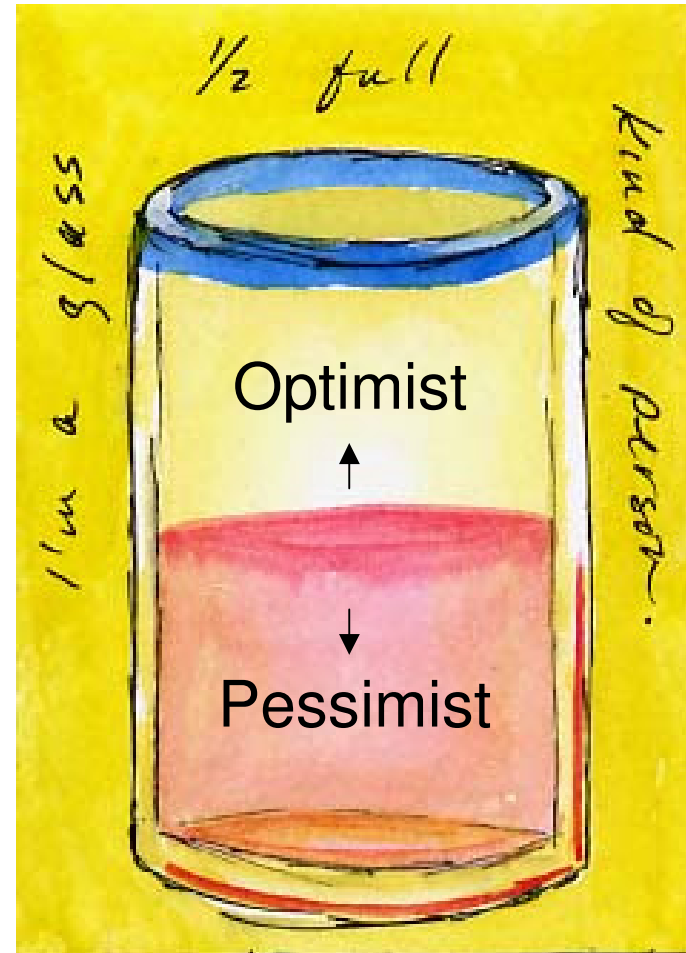**For researchers, research management an easier pill to swallow than repository engagement**

...demand led

The demand for services appears to exist, and appears not have supply that is effective or 'fit for use'

…joint CRIS/IR

Unlikely that these services can be met with institutional repository content, and CRIS/IR integration seems to be the clear next step


ERIS

…primary data/grey literature

Research curation is the new black and gaining traction.

Expect an explosion of research objects from a variety of sources in a variety of formats. CRIS (systems at least) are not scaleable in this respect

ERIS
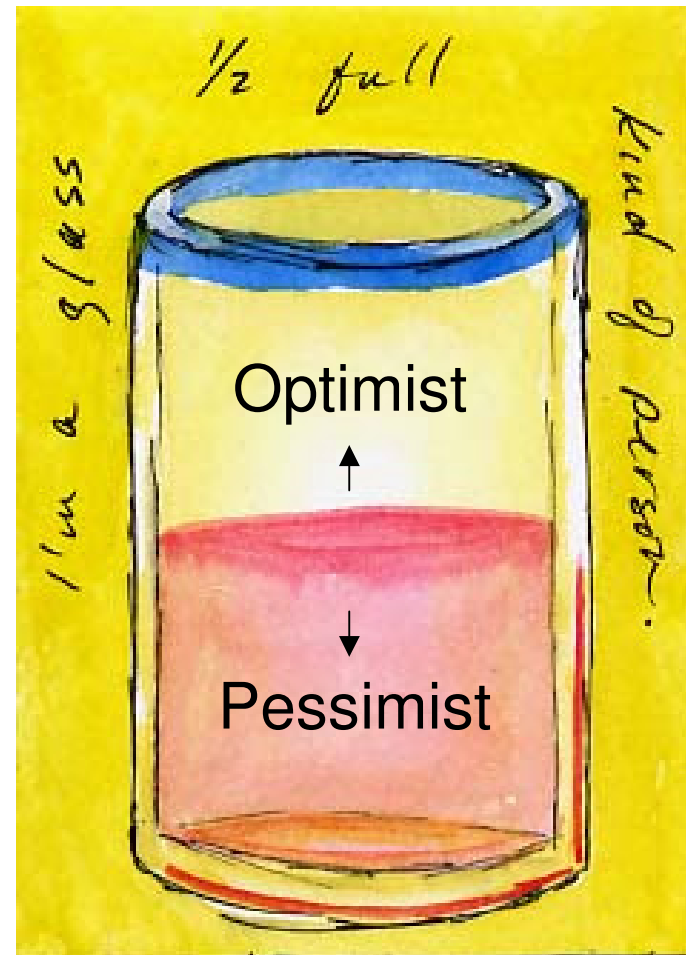
...messy politics

We know one size does not fit all.

The disciplinary approach both helps (the researcher) and pools but is potentially a problem for the institution.

ERIS
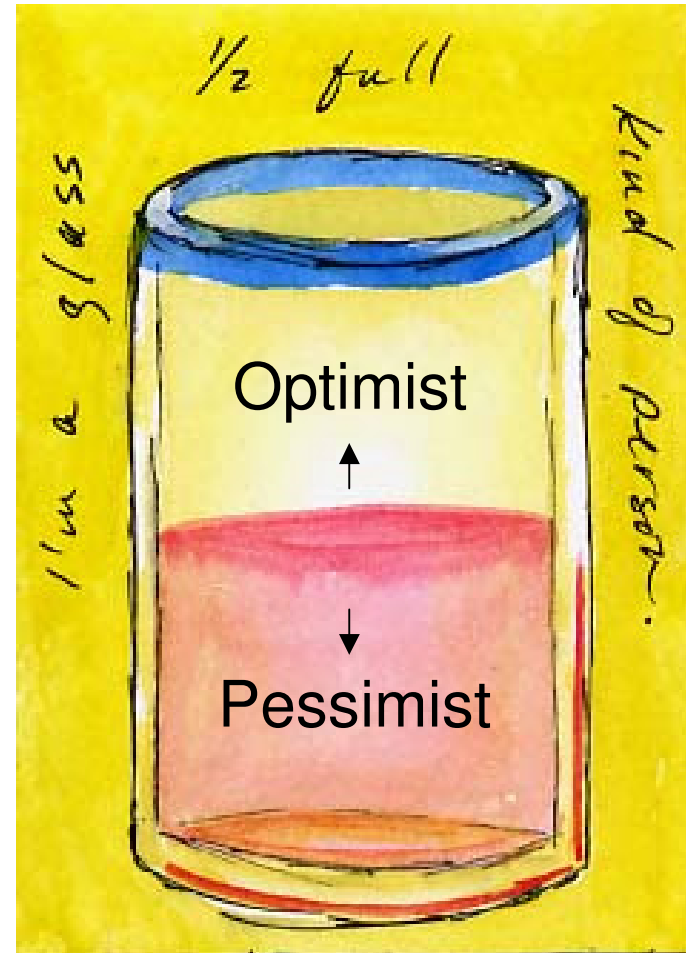
...futures

What does the future hold for research pooling?

NEXT STEPS

ERIS

Next steps

- **Extend work to include other pools and validate the proof of concept and proposed approaches for existing pool participants**
- **Report and present findings and business case to pools, SCURL and to SFC as part of strategic recommendations**
- **Work with content producers and aggregations to improve the institutional record of research**
- **Engage with the Scottish Funding Councils in relation to long term support of research pooling**
- **Investigate national political support for subject vs. institutional approaches**

ERIS

QUESTIONS ?

Website: http://eris.scurl.ac.uk
Mail: James.toon@ed.ac.uk
Tel: 0131 651 3850
Twitter id: @jamestoon