A national research data management strategy for South African universities: the dilemma of collective action

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Outline

Scramble for Africa
National Integrated Cyberinfrastructure System (NICIS)
Dilemma of collaboration
Scramble for Africa

Data is the new oil
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IS THE NEW OIL
but do you have the resource to refine it?
Higher education in a democratic South Africa faced huge challenges - primarily the need to achieve greater equity, efficiency and effectiveness within institutions and across the system.
National Integrated Cyberinfrastructure System (NICIS)

First infrastructure grant
National Integrated Cyberinfrastructure System (NICIS)

CALLS FOR PROPOSALS FROM REGIONAL AND NATIONAL CONSORTIA
A regional Tier 2 data node and a national e-science teaching platform

ICT-based research or e-research is impacting a broad spectrum of disciplines across the natural, medical, human and social sciences and beyond, and changing the nature of research. The South African National Integrated Cyberinfrastructure System is an initiative supported by the Department of Science and Technology and implemented by the CSIR. Each call is for a self-organised, consortium of higher education institutions and qualified partners to submit proposals.

CALL 1: ESTABLISHMENT OF A REGIONAL TIER 2 DATA NODE
Proposals are invited from consortia of institutions (higher education, science councils, national facilities and the private sector) to establish and host a regional Tier 2 data node that will form part of the national tiered research data infrastructure. Key deliverables of the node will be the establishment of multi-institutional consortia with shared data infrastructures supporting multi-disciplinary data intensive research, accelerated human capital development and infrastructure capability building.
Cloud technology has the capacity to democratise RDM services. This not only empowers individual researchers, giving them real control over their data, but also allows distributed organisations to work together as one.

"The initiative is a first for Africa, and will be a real benefit to researchers on the continent," says Sakkie Janse van Rensburg, UCT’s executive director of Information Communication Technology Services (ICTS).

SOUTH AFRICAN DATA-INTENSIVE RESEARCH CLOUD (SADIRC)

Given the success of the ARC prototype, the next step is the expansion of the ARC to include a greater number of research institutes, including both universities and organisations such as SKA South Africa and the South African National Space Agency (SANSA). A memorandum of understanding was in development at time of writing, which will formally constitute SADIRC.

In time, it is hoped, SADIRC will expand to offer access to storage for massive data sets, as well as the tools and software to properly collaborate on, analyse and visualise the data – to all South African researchers, including those based at our most under-resourced institutions.

NATIONAL INTEGRATED CYBERINFRASTRUCTURE SYSTEM

The NICIS is a national initiative of South Africa’s Department of Science and Technology. The strategy defines different tiers of research infrastructure. Tier III provides institutional infrastructure, and tier II is regional – and, as is the case with ILIFU, involves the collaboration of several universities. Tier I refers to national-level infrastructure.
The dilemma of collaboration
DIRISA
Data Intensive Research Initiative of South Africa

Collaborators
- RDA
- CODATA
- WDS
- DCC
- EUDAT
- ANDS
- UK D_A
- Data.gov
National Non-Traditional Research Output Portal

Region or subject specific 'Data' Portals

Portals for each grant code

normalisation and mapping to Funded Grant Code and Institution using GRID, UberResearch and FundRef

- Funded Researcher Uploads
- Academic Publisher Datasets from e.g. SpringerNature, ACS, Wiley, etc.
- Migration or ingest of data from other Funded Repositories, or Institutional Data Repositories
- Migration or ingest of data from popular repositories e.g. Figshare, Dryad, Zenodo
Cloud technology has the capacity to democratise our research infrastructure needs, empowering individual researchers, giving them real control over their data, but also allowing distributed organisations to work together as one.
Meeting the needs of big data science

Further information: http://www.eeresearch.uct.ac.za/