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# **An investigation into the extent to which South African repositories comply with international trust standards**

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# Study background

**The purpose of this research was to develop a South African digital repository trust assessment model as a hands-on tool that South African organisations can use to assess their institutional repositories.**

## **Research questions**

- What will a trust model look like that has been developed based on international trust standards?
- To what extent do South African research data repositories comply with the developed model in terms of trustiness?
- How should and/or how could this model be developed for South Africa as a developing country to make the striving for trustiness more feasible?



# Institutional Repository (IR) vs. Trusted Digital Repository

- An institutional repository is a digital research archive consisting of accessible collections of scholarly work that represent the intellectual capital of an institution.
- An institution utilises a repository to manage the digital scholarship their communities produce, to maximise access to research outputs both before and after publication (Bentley & Oladiram, 2014).
- **A trusted digital repository is one whose mission is to provide reliable, long-term access to managed digital resources to its designated community, now and in the future.**
- **A trusted digital repository should have practices, policies and performance that can be audited and measured (Dobratz et al., 2007)**



# International trust standards

For a Institutional Repository to be regarded as a trusted digital repository it has to comply with International Trust Standards.

- These standards provide an overarching **compliance framework**
  - Auditable checks
  - Authentication & integrity of data
  - Managing IR with approved structures
- IR trust assessment can be done in terms of the following **international standards**
  - Trustworthy Repositories Audit & Certification (TRAC)
  - The International Organization for Standardization (ISO) 16363
  - The 'Deutsches Institut für Normung' (DIN) 31644



# Types of trust accreditation

- **Basic certification:** Granted to repositories which obtain Data Seal of Approval (DSA) certification. It comprises 16 criteria that may be self-assessed or peer reviewed.
- **Extended certification:** Granted to Basic certification repositories which perform a structured, externally reviewed and publicly available self-audit based on ISO 16363 or DIN 31644.
- **Formal certification:** Granted in addition to Basic certification. Obtain full external audit and certification based on ISO 16363 or equivalent DIN 31644.



# Research methodology

- The research was a qualitative study which used a case study design and a structured interview schedule as the data collection instrument.
- Face-to-face interviews with a small purposively selected digital repository managers from South African institutions.
- A case study research design was used in order to specifically focus on the IR of the different institutions.
- Non-probability sampling technique was used – specifically purposive sampling.



International trust  
standards

Trust model

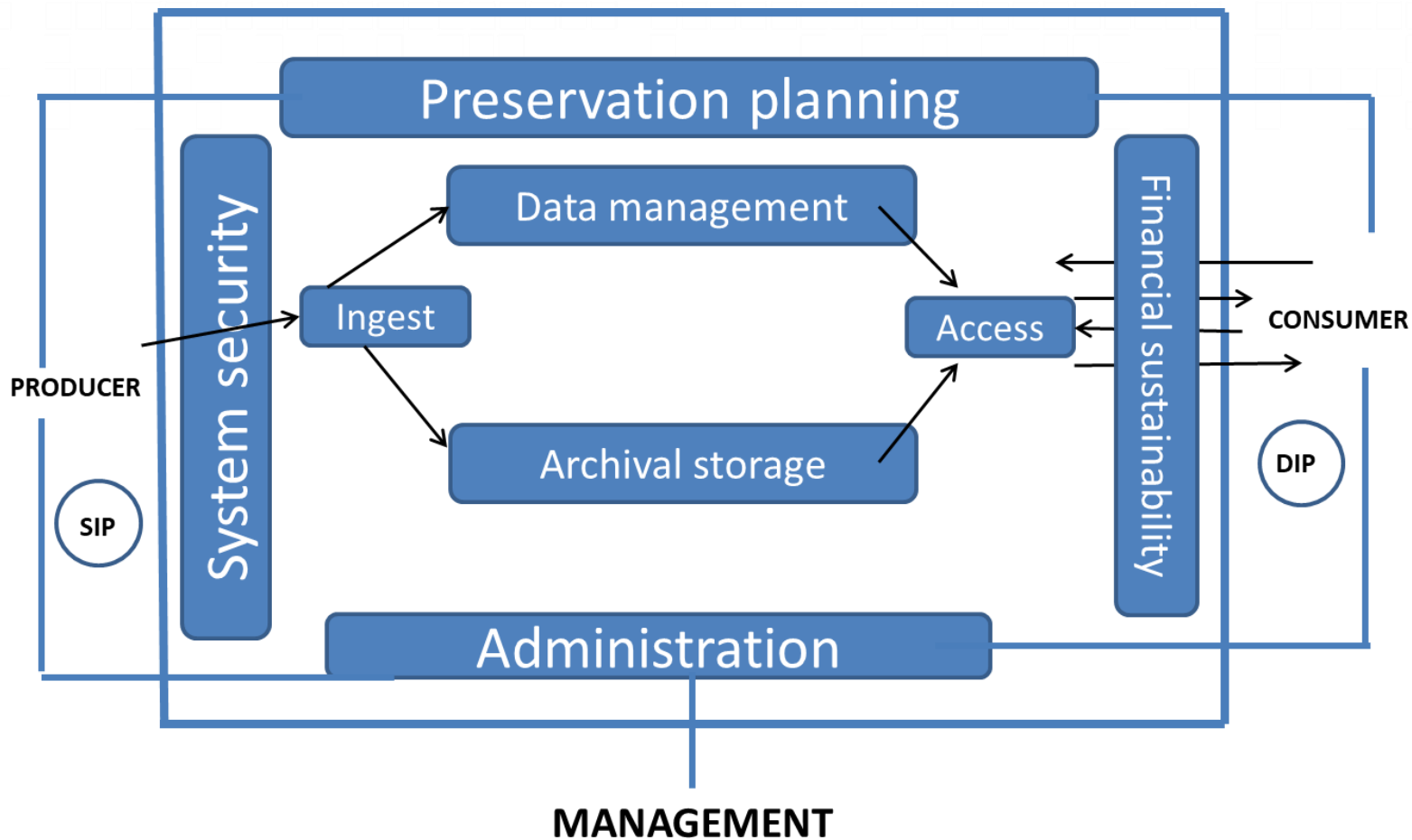
Assessment against  
trust criteria

Findings &  
recommendations





# The model





# Findings

- **Admin coordination infrastructure**



- Comply with the criteria to a large extent
- Shortfalls caused by institutional structures and processes

- **Ingest capability infrastructure**



- Adequate tools and processes to manage the ingest processes
- Compliance requirements are being met

- **Data management infrastructure**



- Comply with the criteria on a medium to full extent
- Shortfalls caused by not having skills to manage research data

- **Metadata management infrastructure**



- Full compliance with criteria
- Areas to improve on include checking interpretability on a regular basis



# Findings (Cont.)

- **Access capability infrastructure**



- Comply with the criteria to a large extent
- Policies are in place for the disseminating digital objects

- **Preservation capability infrastructure**



- Compliance requirements are met minimally
- A common shortfall is not having preservation strategies.

- **Financial sustainability infrastructure**



- Compliance requirements are met minimally.
- A common challenge is the absence of a fiscal programme to sustain the repository.

- **System security sustainability infrastructure**



- Comply with the criteria on a medium to full extent.
- Shortfalls caused by risk assessments not being conducted regularly and having no security protection measures.



# Conclusion

## **The South African digital repositories studied**

- Do not fully comply with the assessment standard.
- Comply with international repository assessment standards at a certain level.
- May not be ready for full accreditation, but may be closer to the target than what was previously anticipated. It is possible for South African repositories to meet the international standard requirements for trustiness.



# Recommendations

- The four participating repositories should at least attempt to do a formal evaluation of their trust status.
- In order for South Africa's IRs to fully comply with international trust standards, the following goals need to be achieved:
  - South African digital repositories need to review the processes in place that inform sustainability.
  - The financial and human resources elements of digital repositories need improvement from an organizational perspective.
  - Training in the use of international repository assessment standards should be introduced.
  - Digital repositories could conduct feasibility studies based on the criteria of the Open Archival Information System (OAIS) Reference based model.
  - Similar assessments can be conducted at intervals to determine the level of digital repositories working towards compliance of international repository assessment standards.



# References

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