Enterprise asset management
The case of research data

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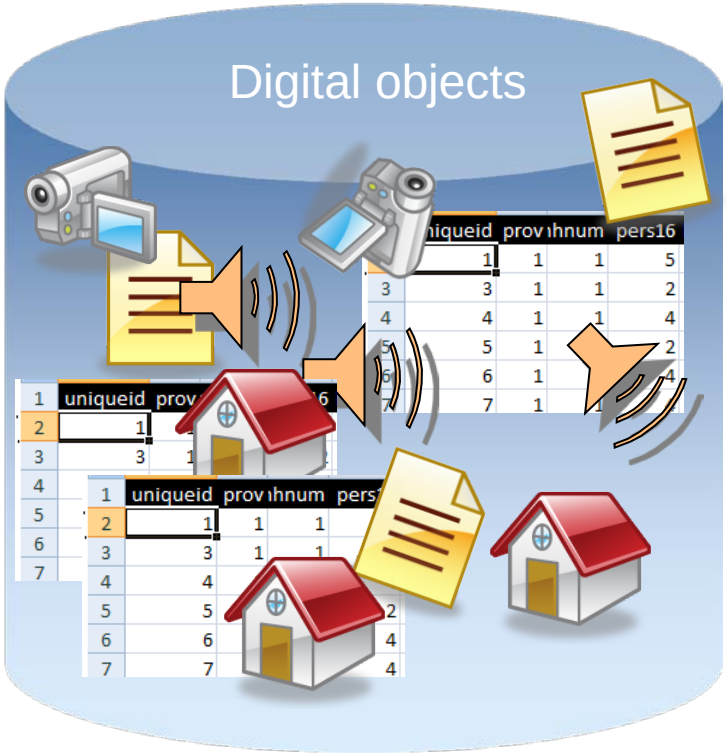
What is research data?

Collections of records or measurements used by researchers to undertake their research or provide an evidential record of their research

Based on http://www.beagrie.com/KRDS2_selectioncriteria.pdf



Why does data matter?

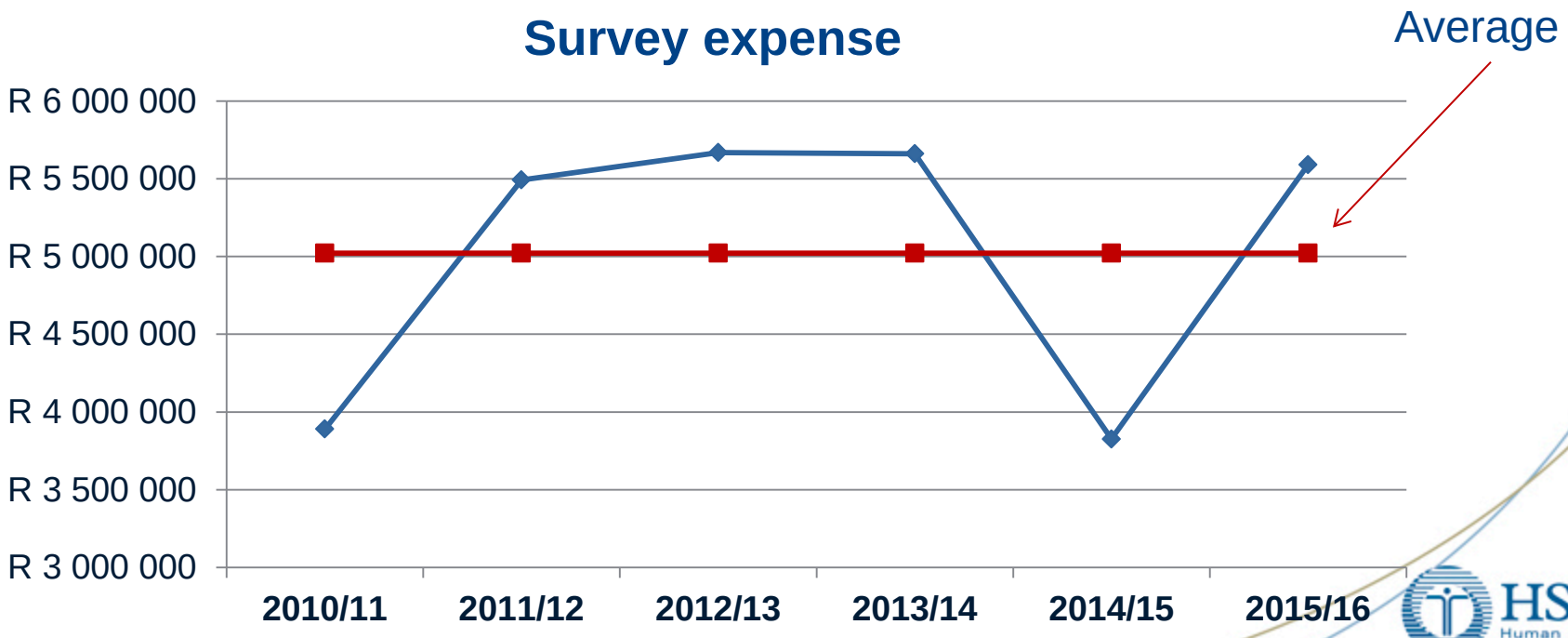
- Addresses significant questions for improvement of society
- Essential to the scientific process of theory development and evaluation
- A breeding ground for new ideas

http://muse.jhu.edu/journals/library_trends/v057/57.2.heidorn.html

Attributes of research data

- Digital
- Heterogeneous
- Contextual
- Transient
- Expensive
- Valuable

Jacobs, Thomas et al. 2008; Wong 2009; Witt 2008; Plale, McDonald et al. 2013; Salo 2010; Taylor 2013; Palmer 2008; Weber 2011



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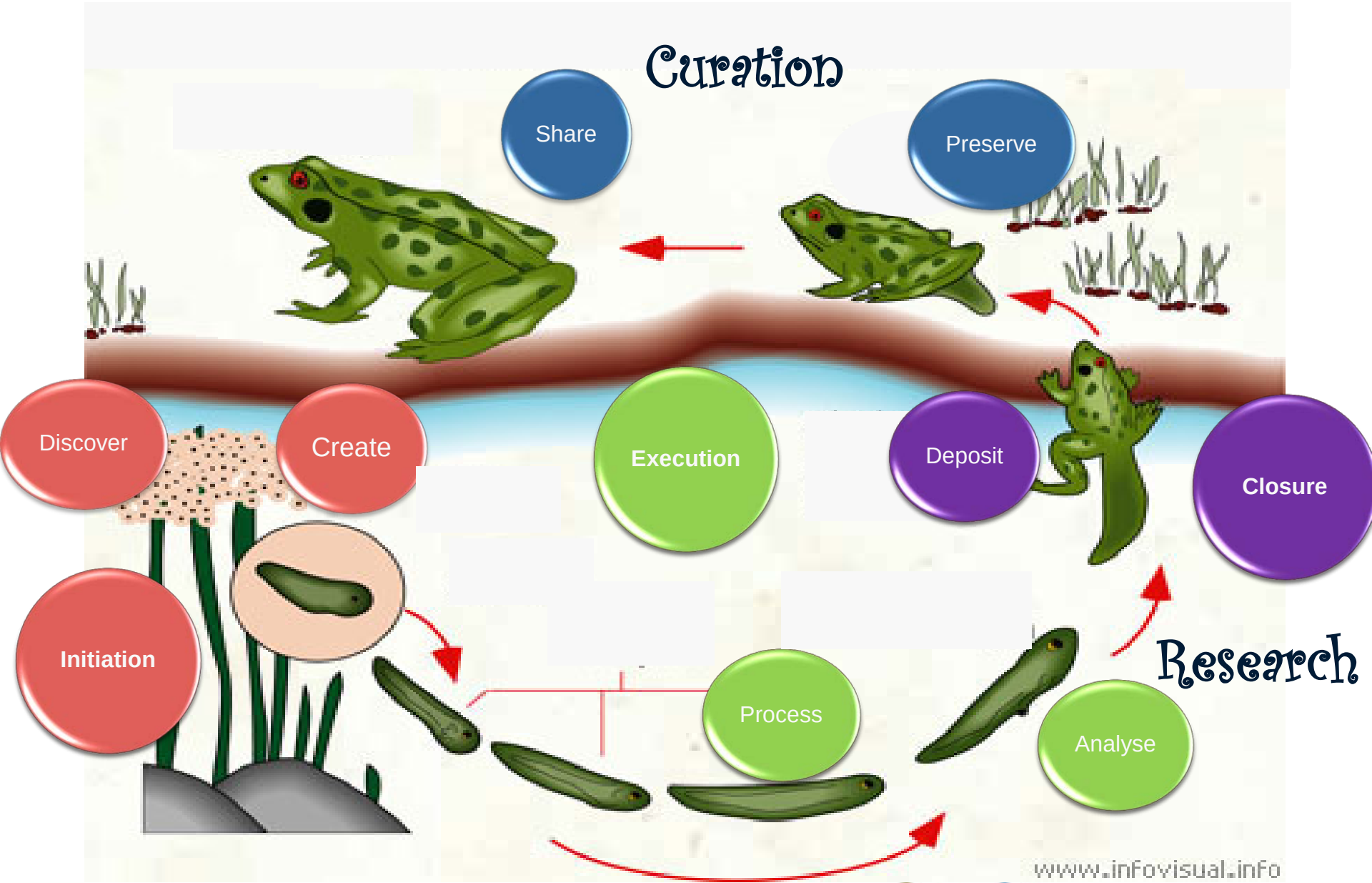
The life of data



Management of research data

Requirements as a research product / deliverable

- Legislative
- Funders
- Responsible conduct of research
  - Ethical
  - Best practice
- Intellectual property
- Sharing
  - Discovery
  - Re-use
- Preservation

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What is an asset?

An asset is

- a resource controlled by an entity
- as a result of past events
- from which future economic benefits are expected to flow to the entity

IASB, International Accounting Standards Board Framework 49(a)

Assets must fulfil the criteria for *recognition* before they are included in the balance sheet of an entity.

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What is an asset (II)?

Controlled by an entity

- e.g. owned or leased – the ability and legal right to derive future benefit

Past events

- Procured or produced (also: discovered or donated)

Future economic benefits

- Potential to contribute to the cash flow of the entity:
  - Used on its own or in combination with other assets to produce goods or render services to customers
  - Exchanged for other assets
  - Used to pay for a liability
  - Distributed to the owner(s) of the entity

cf. Berry et al. pages 26-27

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Types of assets

Current assets

- Intended for sale or consumption in normal operating cycle

Non-current assets

- Not acquired for the main purpose of resale
- Expected to have a life span of more than 12 months

Some assets with relatively low value or short life span – treated as expenses

Types of assets

Tangible assets

- Property, plant and equipment

Financial assets

- Cash, bonds, securities

Intangible assets

- IP, brands, knowledge, goodwill

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Intangible assets

"Assets which are used in the operation of the business but which have no physical substance and are non-current"

https://www.connectedgear.com/introducing-our-new-asset-management-service/

Three criteria to be recognised as asset:

- Identifiable
- Control
- Future economic benefit

Research data: An intangible institutional asset?

Challenges:

- To assign a reasonable value if not procured
- To derive future economic (financial or non-financial) benefit

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Research data: An institutional asset?

Research data – currently treated as an expense item

Requirement	Response
Asset	
• Ownership / control	?
• Past activities	✓
• Future benefit	?
Intangible asset on balance sheet	
• Identifiable / separable	?
Value attached	
• Initial value	?
• Revaluation / depreciation	?

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Research data: An institutional asset?

Managed and curated data – to be treated as an asset?

Requirement	Response
Asset	
• Ownership / control	✓
• Past activities	✓
• Future benefit	✓
Intangible asset on balance sheet	
• Identifiable / separable	✓
Value attached	
• Initial value	?
• Revaluation / depreciation	?

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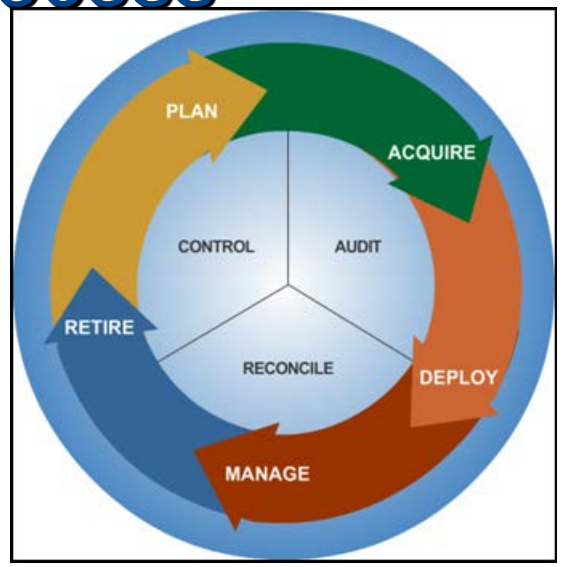
Asset management process



Plan:

- Needs assessment, budget, design

Acquire:

- Procure or produce

Deploy and use:

- Allocate to business units and ensure return on investment
- Inventory management and controls

Manage and maintain:

- Maintain, support, upgrade, revalue / depreciate, report

Retire:

- Plan for disposal, renewal, replacement

(Figure from https://www.connectedgear.com/introducing-our-new-asset-management-service/)

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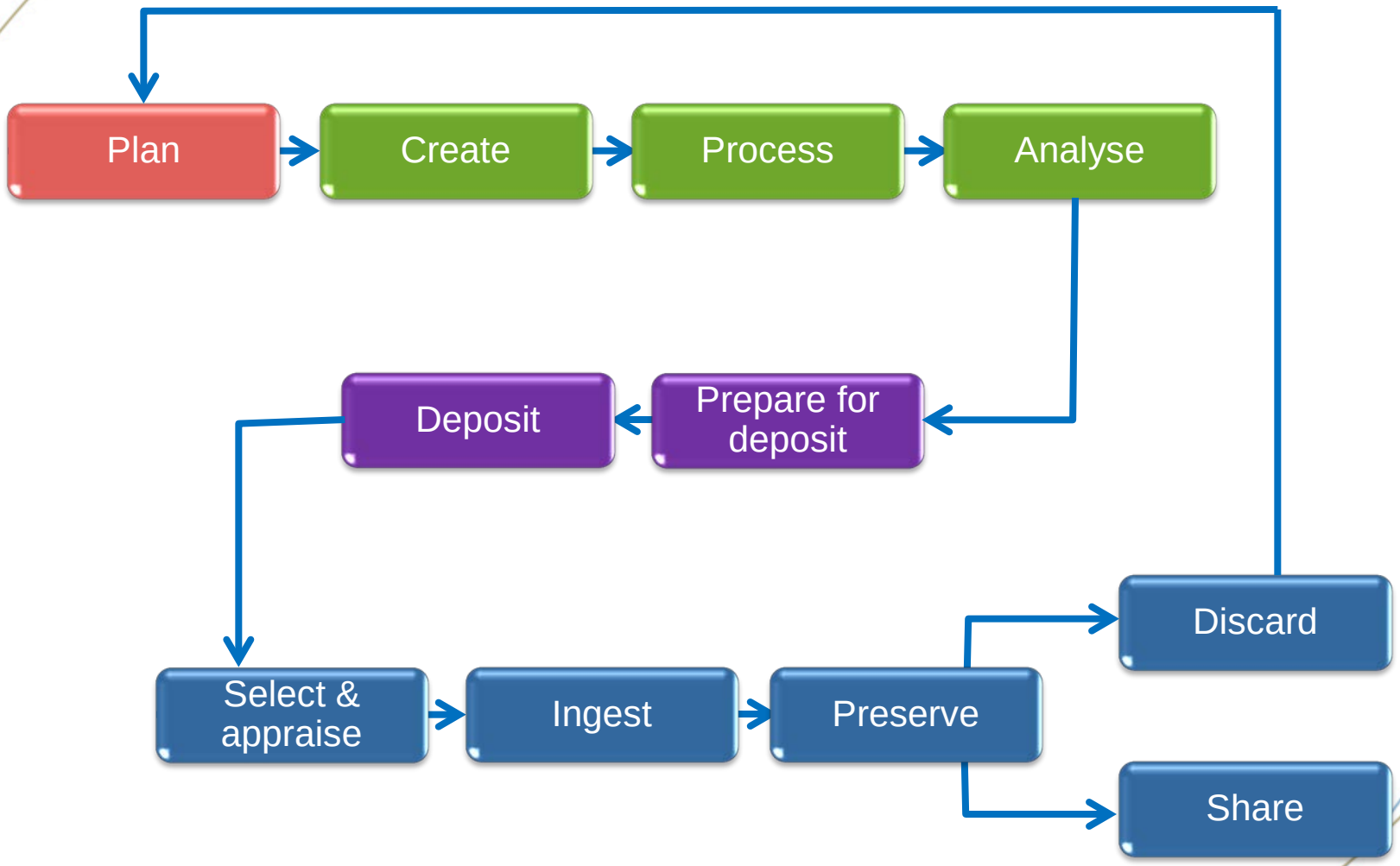
Life cycle of data



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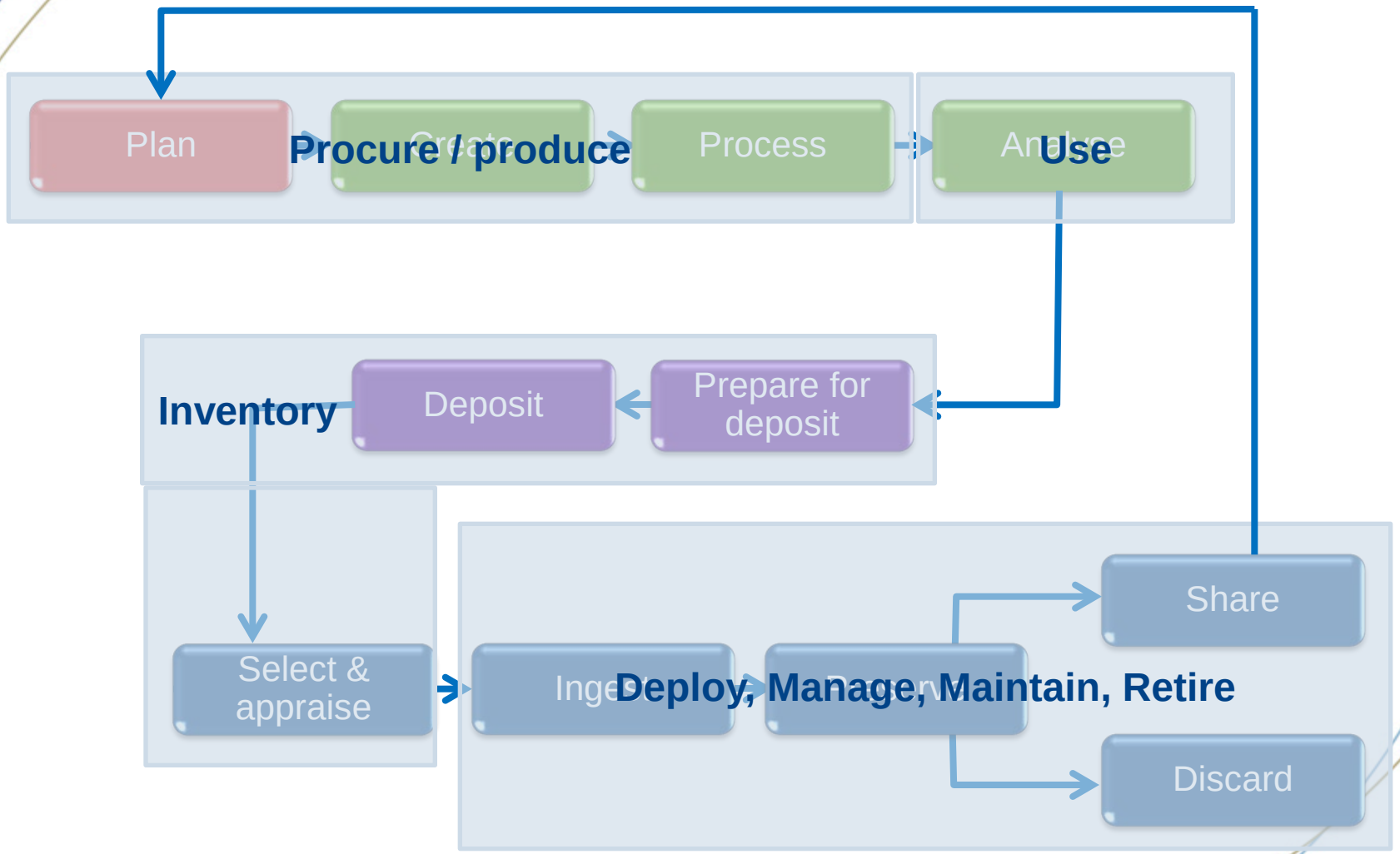
Life cycle of data as an institutional asset



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Research data: A national asset?

Refer to principles outlined in the 2007 “Government-Wide Immovable Asset Management Act”

Assets assigned to “custodians” with a view to:-

Government Gazette

REPUBLIC OF SOUTH AFRICA

Vol. 509 Cape Town 27 November 2007 No. 30520

THE PRESIDENCY

No. 1124 27 November 2007

It is hereby notified that the President has assented to the following Act, which is hereby published for general information:–

No. 19 of 2007: Government Immovable Asset Management Act, 2007.

(a) provide a uniform immovable asset management framework to promote accountability and transparency within government;

(b) ensure effective immovable asset management within government;

(c) ensure coordination of the use of immovable assets with service delivery objects of a national or provincial department and the efficient utilisation of immovable assets;

(d) optimise the cost of service delivery by—

(i) ensuring accountability for capital and recurrent works;

(ii) the acquisition, reuse and disposal of an immovable asset;

(iii) the maintenance of existing immovable assets;

(iv) protecting the environment and the cultural and historic heritage; and

(v) improving health and safety in the working environment.

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Example of data as a national asset

The records for Census 2001 show the approximate division of actual expenditure among the different processes as follows:

- Planning and operations (including the enumeration) – R535 million
- GIS and mapping (including demarcation) – R131 million
- Processing – R120 million
- Dissemination – R126 million
- Administration and support – R160 million

Fanoe 2011

Census 2001 Total expenditure

R 1 072 000 000

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Example of data as a national asset

For Census 1996:
“On the advice of the National Treasury, it was decided to attach a price to the census publications and digital products so that product generation would be self-funding.” (Fanoe 2011: 87)

For Census 2001:
“The census products were to be made available free-of-charge. It was felt that although ‘selling’ the 1996 Census products had helped in their financing, it had limited the distribution and consequently the benefits of census data.” (Fanoe 2011: 88)

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Research data an institutional asset Implications

- Management is compulsory
- Dedicated resources, established standard processes, infrastructure
  - Cater for complexity
  - All data, or just selected data?
- Allocation of funding for proper management across entire lifecycle
- Integration with the research process
  - Not hamper research process
- New forms of data: Discoverability, interoperability, re-use … to derive maximum future value from earlier investments

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Conclusions

- Data is integral to the work of research organisations.
- To realise its benefits for the organisation, the research community and society at large, it has to be managed properly and optimally used.
- Should it be managed as a institutional asset?

- Possible?
- Desirable?
- Problematic?

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Thank you!

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