Data Audit Framework

Developing an audit methodology suited to research data assets

Sarah Jones, Seamus Ross, Raivo Ruusalepp

Data Audit Framework Launch
British Academy, London
1st October 2008

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Data Audit Framework

The problem

How can organisations realise the value of their research data assets when it is unclear:

- what data is held;
- where it is located;
- and how it is being managed?

Data Audit Framework

A recommendation

"JISC should develop a Data Audit Framework to enable all universities and colleges to carry out an audit of departmental data collections, awareness, policies and practice for data curation and preservation"

Liz Lyon, Dealing with Data: Roles, Rights, Responsibilities and Relationships, (2007)

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Expected benefits

Broadly speaking, auditing data brings three main benefits :

- prioritisation of resources (efficiency savings)
- ability to manage risks associated with data loss and irretrievability;
- realising the value of data through improved access and reuse

Development questions

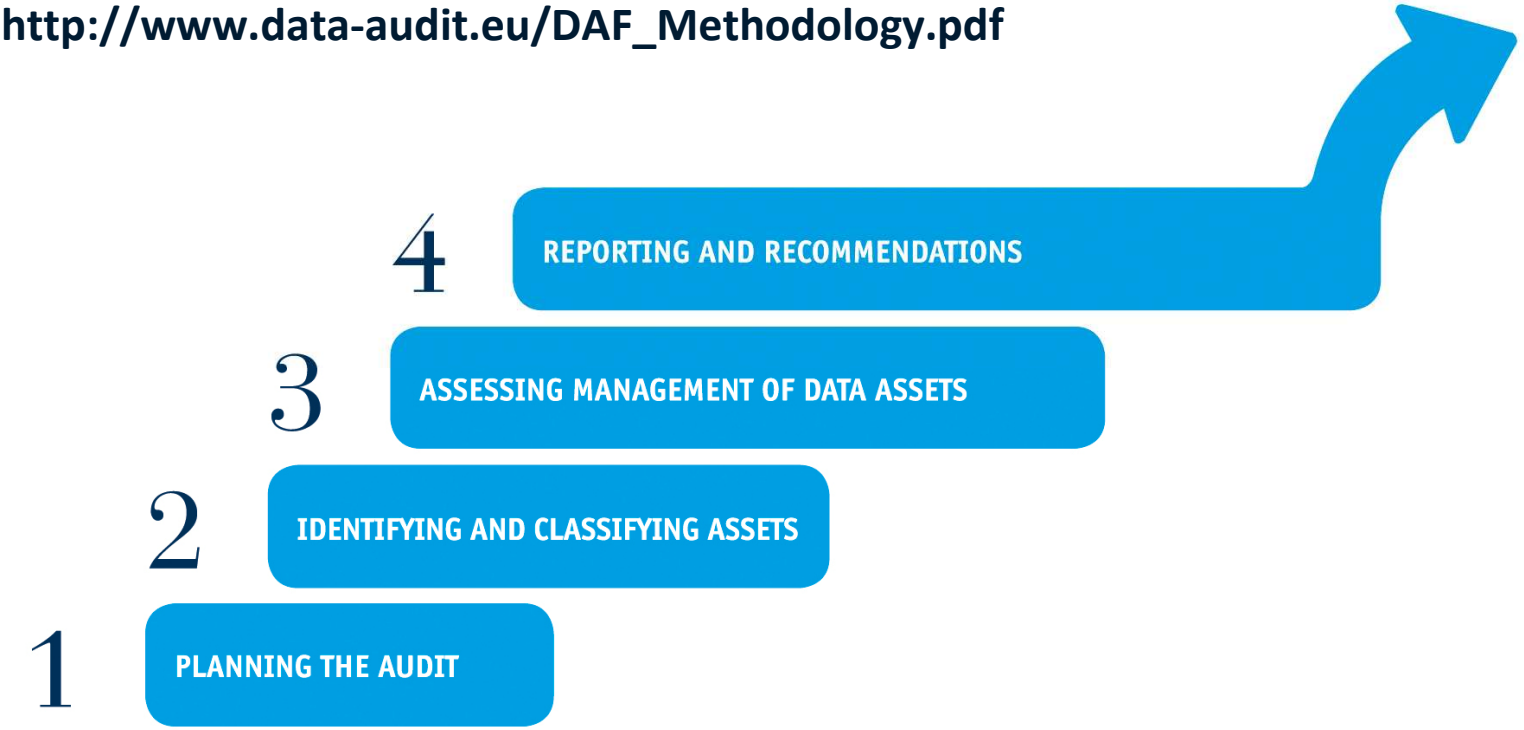
- What is the scope of the Framework?
- Is it applied at department or institutional level
- What is a ‘data asset’?
- Who should do the audit?

- What information should be collected?
- How should this information be collected?

Data Audit Framework

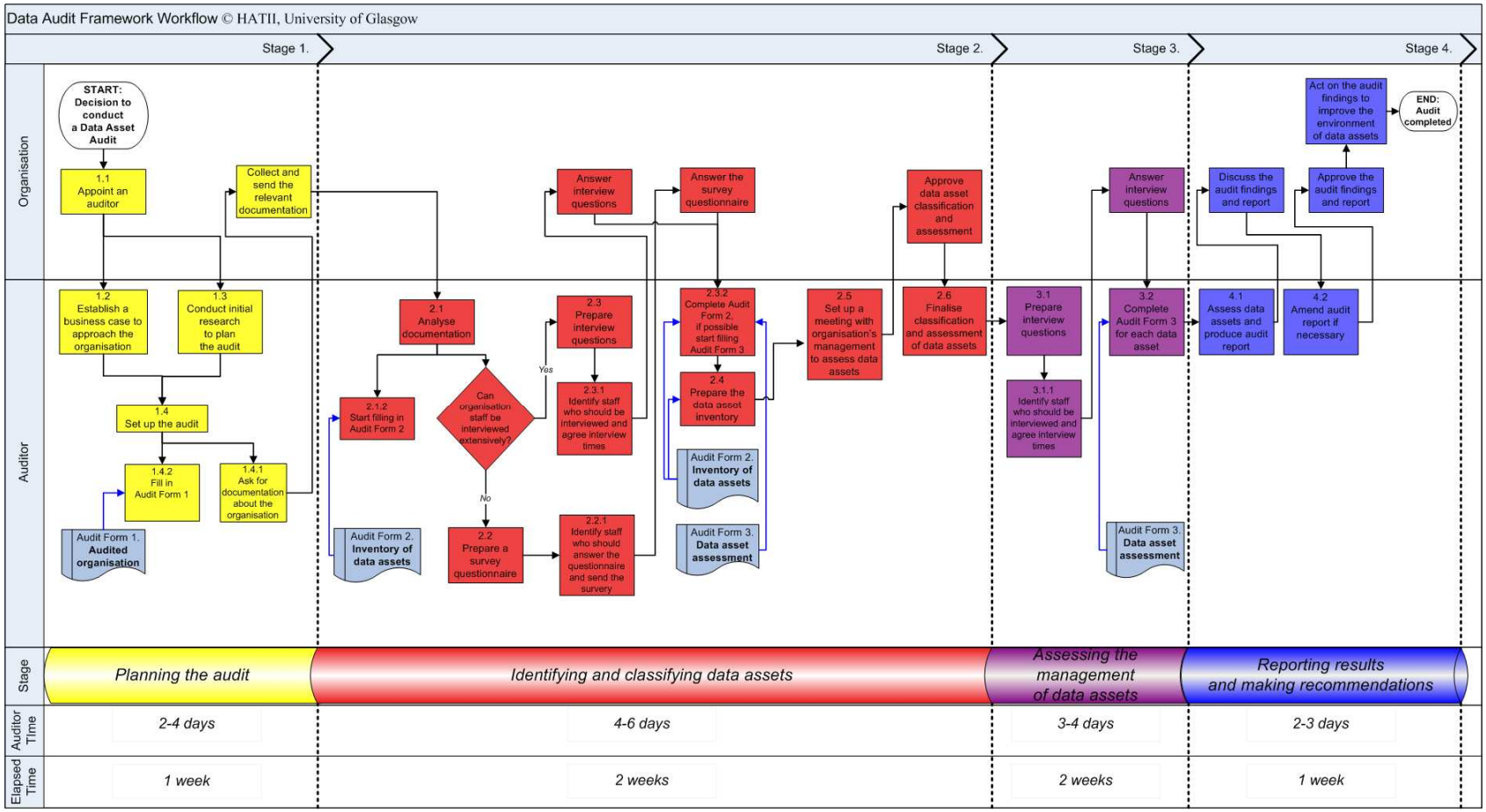
Methodology

http://www.data-audit.eu/DAF_Methodology.pdf



Data Audit Framework

Workflow and tasks



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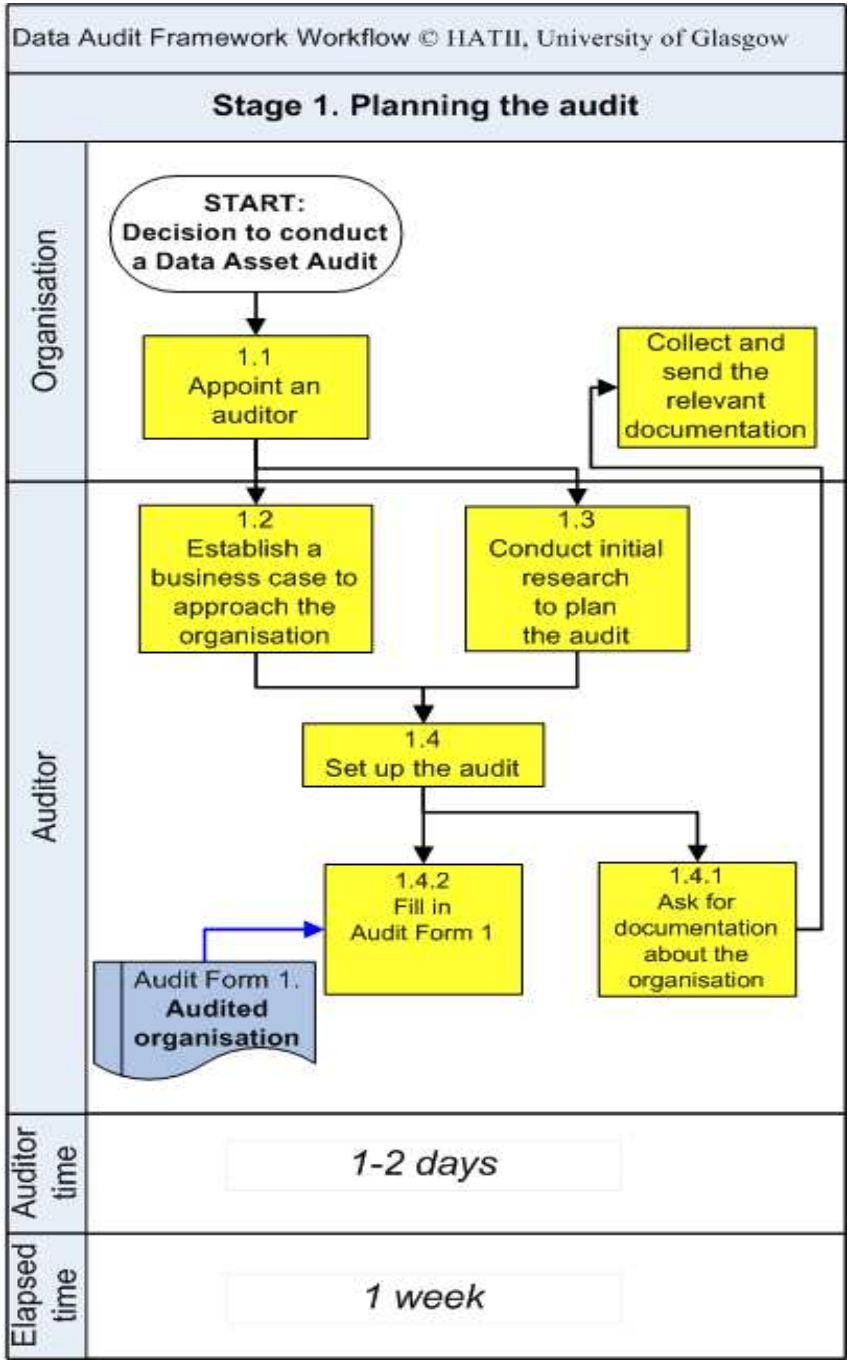
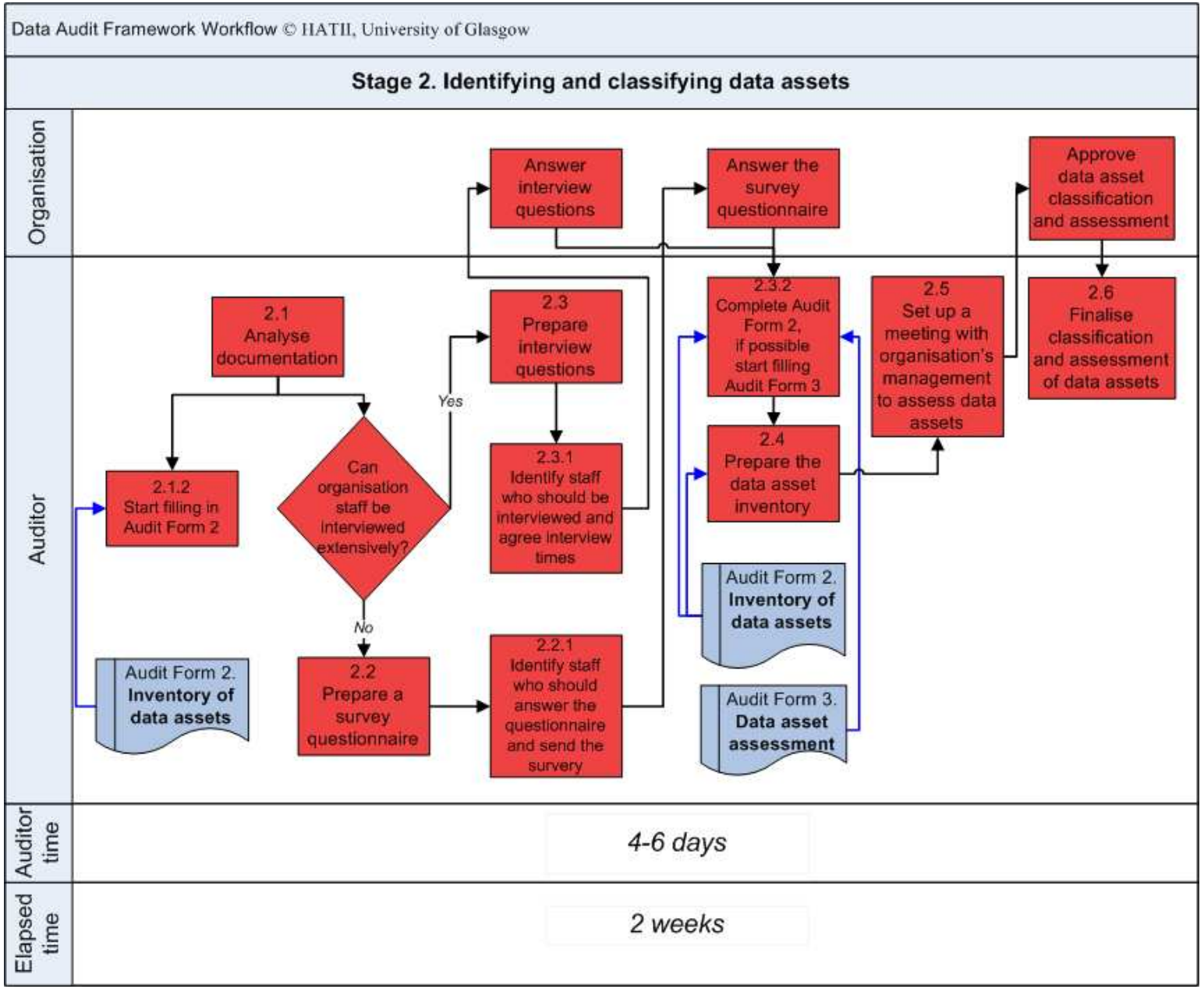
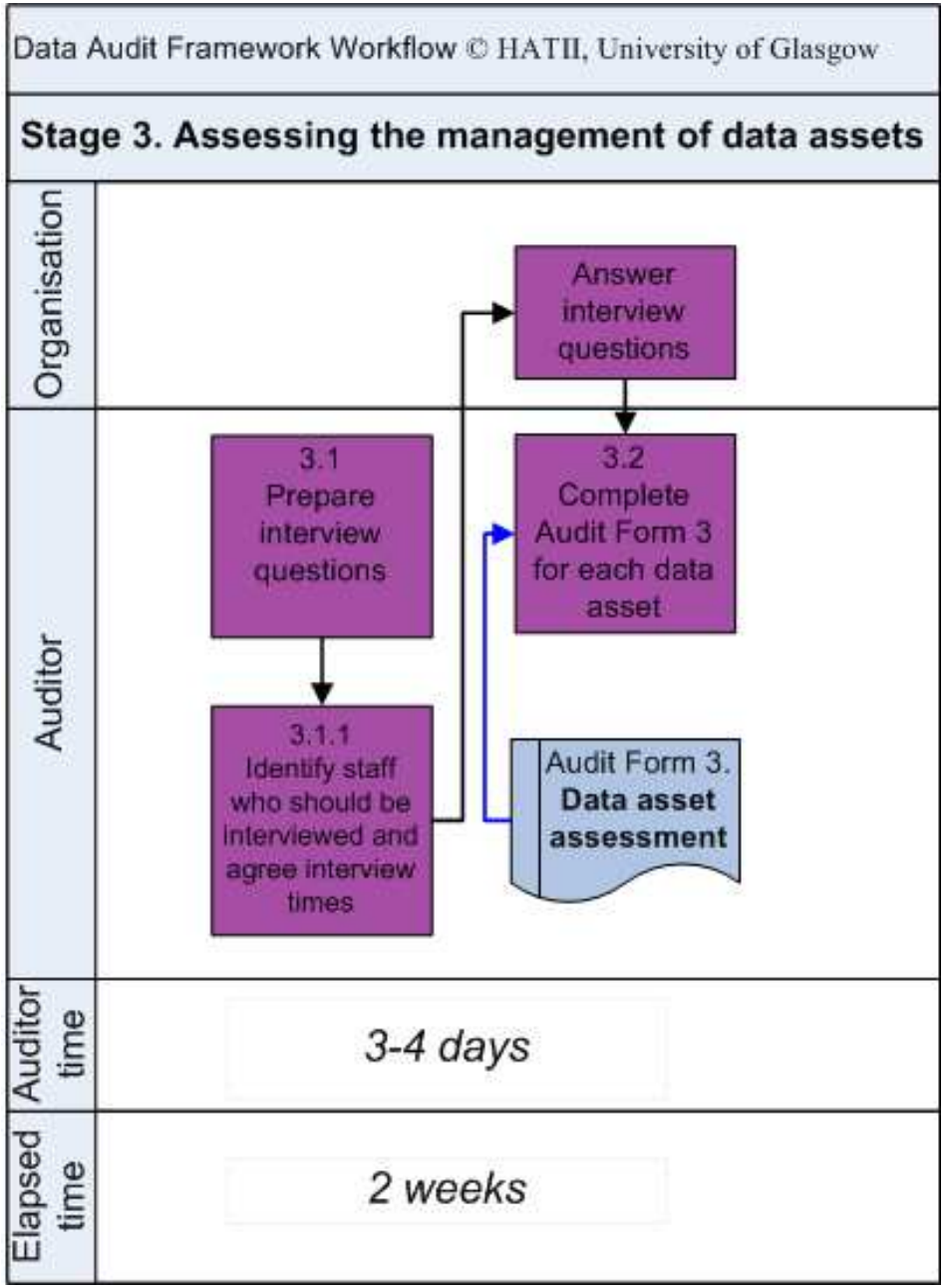
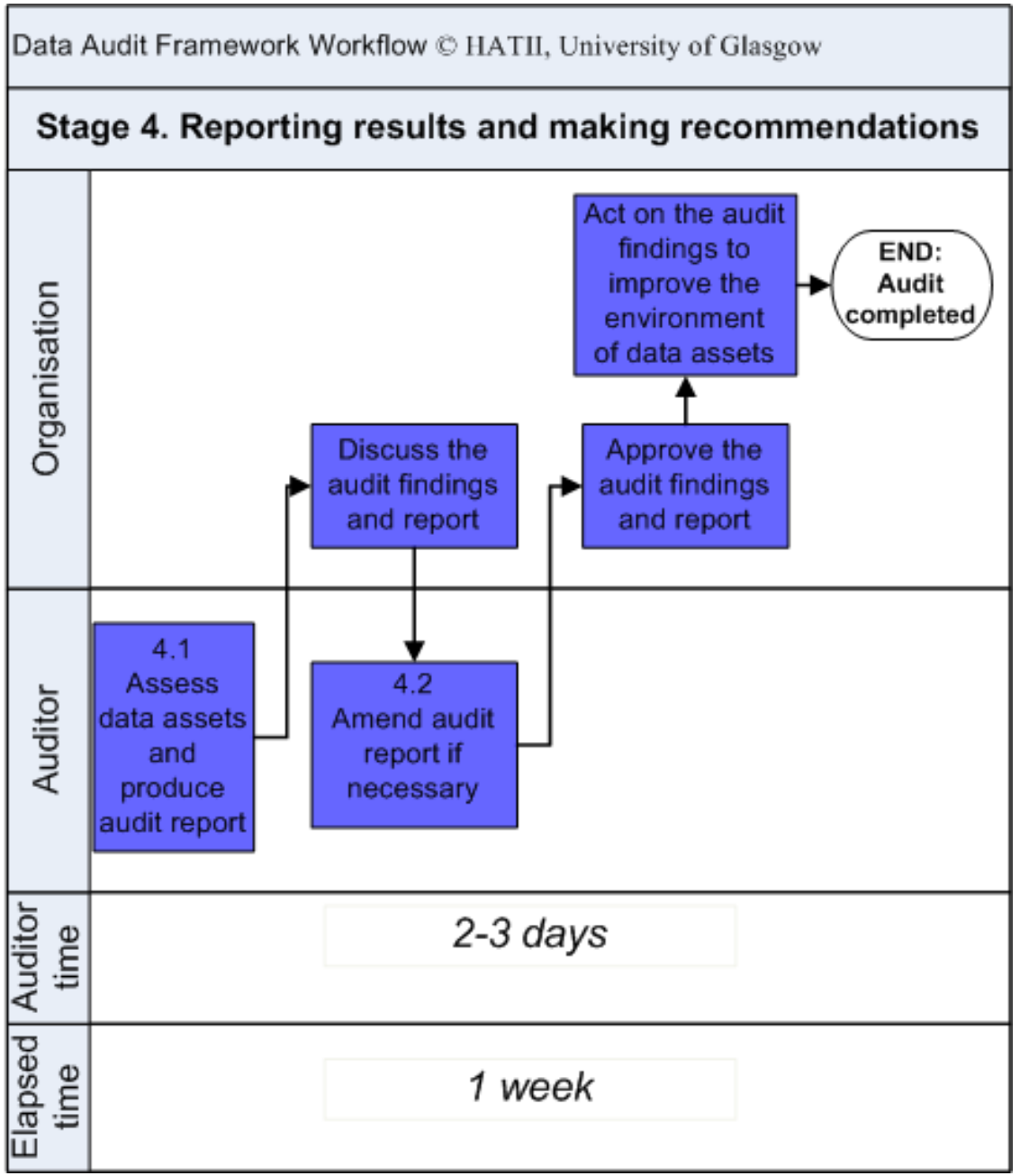

Data Audit Framework Workflow © HATII, University of Glasgow
Stage 1. Planning the audit
Organisation
Auditor
Auditor time
Elapsed time
START: Decision to conduct a Data Asset Audit
1.1 Appoint an auditor
Collect and send the relevant documentation
1.2 Establish a business case to approach the organisation
1.3 Conduct initial research to plan the audit
1.4 Set up the audit
1.4.2 Fill in Audit Form 1
1.4.1 Ask for documentation about the organisation
Audit Form 1. Audited organisation
1-2 days
1 week


Data Audit Framework Workflow © HATII, University of Glasgow
Stage 2. Identifying and classifying data assets
Organisation
Auditor
Auditor time
Elapsed time
Answer interview questions
Answer the survey questionnaire
Approve data asset classification and assessment
2.1 Analyse documentation
2.3 Prepare interview questions
2.3.2 Complete Audit Form 2, if possible start filling Audit Form 3
2.5 Set up a meeting with organisation's management to assess data assets
2.6 Finalise classification and assessment of data assets
2.1.2 Start filling in Audit Form 2
Can organisation staff be interviewed extensively?
Yes
No
2.3.1 Identify staff who should be interviewed and agree interview times
2.4 Prepare the data asset inventory
Audit Form 2. Inventory of data assets
Audit Form 2. Inventory of data assets
2.2 Prepare a survey questionnaire
2.2.1 Identify staff who should answer the questionnaire and send the survery
Audit Form 3. Data asset assessment
4-6 days
2 weeks


Data Audit Framework Workflow © HATII, University of Glasgow
Stage 3. Assessing the management of data assets
Organisation
Auditor
Auditor time
Elapsed time
Answer interview questions
3.1 Prepare interview questions
3.2 Complete Audit Form 3 for each data asset
3.1.1 Identify staff who should be interviewed and agree interview times
Audit Form 3. Data asset assessment
3-4 days
2 weeks


Data Audit Framework Workflow © HATII, University of Glasgow
Stage 4. Reporting results and making recommendations
Organisation
Auditor
Auditor time
Elapsed time
4.1 Assess data assets and produce audit report
Discuss the audit findings and report
4.2 Amend audit report if necessary
Approve the audit findings and report
Act on the audit findings to improve the environment of data assets
END: Audit completed
2-3 days
1 week

Data Audit Framework

Inventory of data assets

- Name of the data asset
- Description
- Asset manager (responsibility)
- Reference (location)
- Classification
- Comments (general and on classification)

Data Audit Framework

Detailed assessment

- ID
- Data creator(s)
- Title
- Description
- Subject
- Date
- Purpose
- Source
- Updating frequency
- Type
- Format
- Rights and restrictions
- Usage frequency
- Relation
- Back-up and archiving policy
- Management to date

Data Audit Framework

Testing the method

- Glasgow University Archaeological Research Division (GUARD)
- Innovative Design and Manufacturing Research Centre (IdMRC) at University of Bath
- School of GeoSciences at University of Edinburgh

Data Audit Framework

Lessons learned

- Ensure appropriate timing
- Plan well in advance
- Adopt the most appropriate method
- Scope the work carefully
- Collect additional information early on

Data Audit Framework

Redevelopment

- Identifying and classifying now one stage
- Differentiation made between man hours and elapsed time
- Guidance added on scoping / granularity
- Element names changed

Data Audit Framework

Broader significance?

the loss was entirely avoidable

officials ignored repeated warnings about serious flaws in data security

woefully inadequate processes for handling data

criminally careless government departments

a “muddle through" culture

slack practices

horrendous carelessness with highly sensitive information