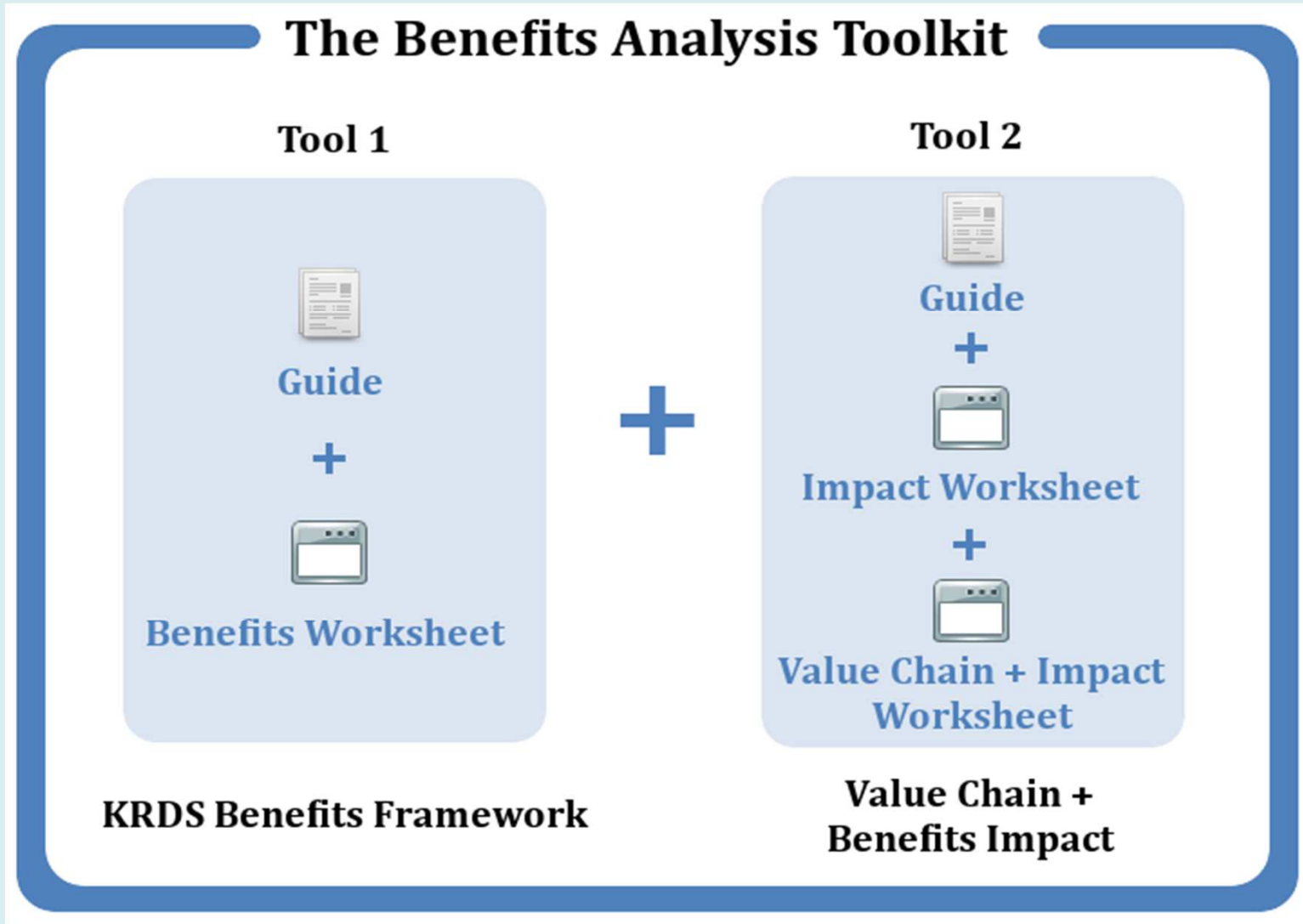# The KRDS Benefit Analysis Toolkit:
# Development and Application

Neil Beagrie (Charles Beagrie Limited), Monica Dukes (UKOLN/SageCite Project)),
Catherine Hardman (Archaeology Data Service), Dipak Kalra (CHIME, UCL),
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IDCC Bristol December 2011

# The Benefits Analysis Toolkit

# Toolkit & Components



The Benefits Analysis Toolkit

**Tool 1**

Guide

+

Benefits Worksheet

**KRDS Benefits Framework**

**Tool 2**

Guide

+

Impact Worksheet

+

Value Chain + Impact Worksheet

**Value Chain + Benefits Impact**

# The KRDS Benefits Framework

# The Framework

- Framework arranged on 3 dimensions with two sub-divisions each; Pick list of common generic benefits
- Individual benefits identified and assigned within this
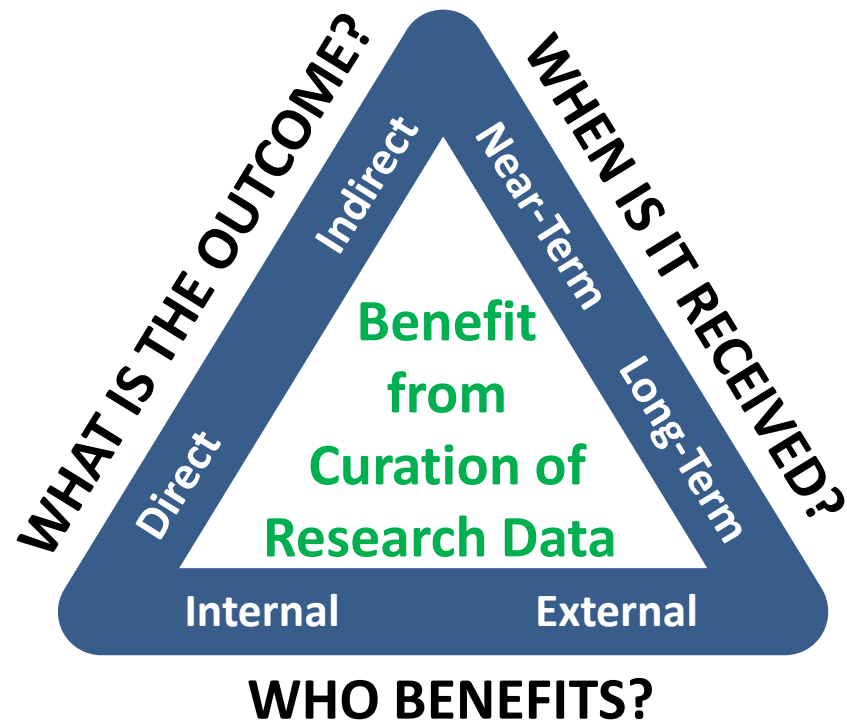
# Worksheet



## KRDS BENEFITS FRAMEWORK – WORKSHEET (V. 6.4 – JUNE 2011)

### Introduction

The Keeping Research Data Safe (KRDS) Benefits Framework is a tool for identifying, assessing, and communicating the benefits from investing resources in the curation/long-term preservation of research data. This Worksheet accompanies the Guide to the KRDS Benefits Framework, which provides guidance on its use.

**Pick List of Popular Generic Examples of Benefits for you to use/ delete/add to/ modify and expand as needed to help populate your Benefits Framework**

| | |
|---|---|
| New research opportunities | No re-creation of data |
| Input for future research | No loss of future research opportunities |
| Motivating new research | Secures value to future researchers & students |
| New research funding | Protecting returns on earlier investments |
| Increasing research productivity | Lower future preservation costs |
| Stimulating new networks/collaborations | Planned management from an early stage in the research life-cycle is ultimately more cost-effective than late intervention (providing proper selection of what to keep is done) |
| Knowledge transfer to other sectors | |
| Knowledge transfer to industry | |
| Commercialising research | Re-purposing data for new audiences |
| | Use by new audiences |
| Increasing skills base of researchers/ students/staff | Re-purposing methodologies |
| Increasing economic growth | Enhancement of research tools and software by testing on a range of well-curated datasets |
| Catalysing new companies and high skills employment | Scholarly communication/access to data |
| Verification of research/research integrity | Long-term re-use of well curated data |
| Fulfilling organisational mandate(s) | Short-term re-use of well curated data |
| Fulfil research grant obligations | Adds value over time as collection grows and |

### Dimension 1: What are the outcomes?

| Direct Benefits | Indirect Benefits (e.g. costs avoided) |
|---|---|
| [insert here] | [insert here] |

### Dimension 2: When are the benefits received?

| Near-Term Benefits (up to 5 years) | Long-Term Benefits (5 years+) |
|---|---|
| [insert here] | [insert here] |

### Dimension 3: Who benefits?

| Internal Benefits | External Benefits |
|---|---|
| [insert here] | [insert here] |

# Example generic benefits

- Increasing research productivity
- Secures value to future researchers & students
- Increasing skills base of researchers/students/staff
- Verification of research/research integrity
- Availability of data underpinning published findings
- Stimulating new networks/collaborations
- New research opportunities
- Motivating new research
- Knowledge transfer to industry
- Commercialising research

# Value Chain & Impact Analysis Tool

# Value Chain & Impact Analysis Tool

| KRDS Lifecycle Phase ⓘ | KRDS Activity ⓘ | Generic Benefit ⓘ | Your Expres Benefit |
|---|---|---|---|
| Research (Pre-archive) ⓘ | Research (Pre-archive) | Increasing research productivity | |
| | | No loss of future research opportunities | |
| | | Input for future research | |
| | | Motivating new research | |
| | Outreach ⓘ | Stimulating new networks and collaborations | |
| | | New research opportunities | |
| | | Re-purposing and re-use of data | |

# Combining Use of the Tools

# KRDS Benefit Framework and Value Chain: a use case for archaeology

Catherine Hardman

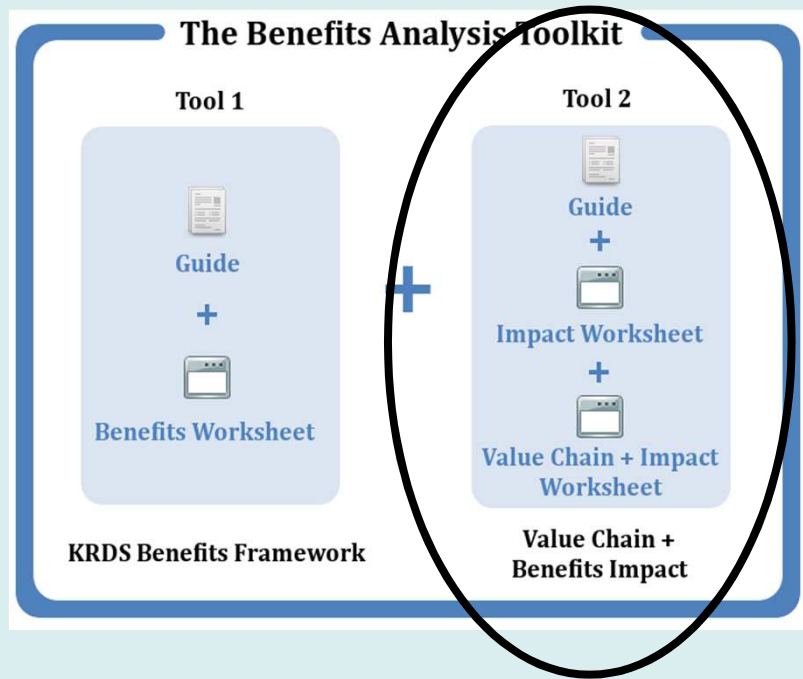Archaeology Data Service

http://archaeologydataservice.ac.uk

# How we can foresee use of the Benefits Framework
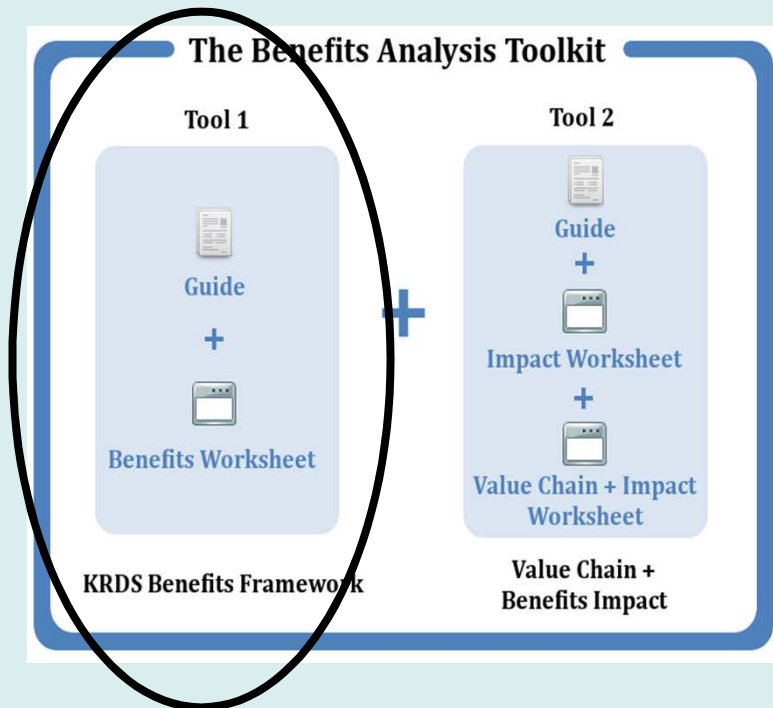


**As a repository we often have to help justify the costs/effort associated with digital preservation.**

**The benefits worksheet (and associated guide) helps explain the benefits in structured and meaningful fashion.**

http://archaeologydataservice.ac.uk

# How we can foresee use of the Value Chain



The Benefits Analysis Toolkit

Tool 1

Guide
+
Benefits Worksheet

KRDS Benefits Framework

Tool 2

Guide
+
Impact Worksheet
+
Value Chain + Impact Worksheet

Value Chain + Benefits Impact

- The issue of 'value' in archaeology is key

- Difficult to quantify the meaning of value in different subject areas

http://archaeologydataservice.ac.uk

# ADS thoughts

- A light touch in helping persuade projects or funders of the benefits of preservation in a structured and clear way…

- Or a deeper insight into project planning decisions when dealing with finite resources.

# Application of the Benefits Analysis Tools for MRC population health studies

- – Professor Dipak Kalra

- – Centre for Health Informatics and Multi-professional Education(CHIME)

- – University College London

# Worked example: Re-purposing and re-use of data

- **Localised expression:** Lower costs of data collection and curation, faster route to usable data
- **Action:** Agree shared use of pre-existing data held by another study to avoid new data collection
- **KRDS Outcome type:** Indirect benefit, in 1 year
- **Stakeholders:** Internal: PIs, academics, data managers
- **Quantitative benefit:** Cost saving, shorter time to publications
- **Qualitative benefit:** ~
- **Weighting:** 4

# Conclusions

- The Benefits Framework and the Impact Tool can accommodate the kinds of benefit from good data curation practice and from data sharing in MRC population health studies

- Detailing the active steps to realise each benefit, when the result might be realised and who benefits seem to be useful ingredients for putting forward a case for funding or for prioritising resource utilisation with a study

- Whilst initial population might be done by one person, completing the spreadsheet and working out weightings might be nicely undertaken in a team workshop

# SageCite Project

## Monica Duke
### m.duke@ukoln.ac.uk
### http://blogs.ukoln.ac.uk/sagecite/

# What we have learnt

- The benefits framework was easy to apply and helped articulate benefits
- An intermediary may be required to facilitate the process
- Digital Management background and motivation matters
- Terminology matters

# KRDS BENEFITS FRAMEWORK, VALUE-CHAIN AND BENEFIT ANALYSIS TOOLS: UK DATA ARCHIVE CASE STUDY

## MATTHEW WOOLLARD

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**UNIVERSITY OF ESSEX**

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# IMPLEMENTATION TIPS

- Start with the Benefits Framework Worksheet and move on to the Value-Chain/Benefits Impact Worksheet(s)
  - easier to expand than reduce
- Use a customised spreadsheet to sort and configure
- Remember
  - quantitative impact of benefits must be measurable
  - qualitative impact of benefits can become case studies [note these can be powerful, but should be used in collaboration with quantitative evidence].
  - impact weight is subjective – best developed as a team

# Further Information

Information Leaflet + Abstract

Benefits Tools Webpage
http://beagrie.com/krds-i2s2.php