

I2S2 Cost/Benefit Analysis

Neil Beagrie

Charles Beagrie Limited

I2S2 Workshop

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Overview

- Context: JISC Managing Research Data (MRD) Programme
- I2S2 Benefits Case Studies
- Future Work – JISC 15/10 Benefits Project
- Conclusions and Further Information

Purpose of Assessment

- I2S2 part of JISC MRD Programme
- Across Programme JISC wanted projects to pull together evidence to:
 - build an evidence base to improve effectiveness of practical interventions and help target investment;
 - contribute towards making a case for sustaining the initiatives;
 - help secure support for future programmes and projects.

The JISC MRD Programme

- 8 research data infrastructure projects in assessment of changes and benefits;
- Using a case study approach to illustrate benefits.

Case Study Templates

RESEARCH DATA MANAGEMENT BENEFITS CASE STUDY TEMPLATE

1. BACKGROUND

Description: A short contextual narrative for the project and/or specific elements of it selected for the case study.

Checklist

- Specific details about the project staff, their position in the HEI and dates and locations of the activity.
- Information on the activity to make the case study intelligible to non-specialists;
- Where the project is carried out in collaboration with other HEIs/research institutes, or is part of a wider body of work that the benefits depend on, this is clearly acknowledged.

2. ESTABLISHED PRACTICE AND CHALLENGES

Description: A short contextual narrative for the existing practice, the challenges/how you are seeking to change it.

Checklist

- What is distinctive about the established practice/challenges/changes addressed by the project and will explain/provide context for the benefits from the project;
- Provide sub-headings that potentially can be replicated and link in narrative in the "Benefits from Project" section below.

3. BENEFITS FROM PROJECT

Description: A structured narrative of the benefits arising from the project and description of the metrics or indicators used to provide evidence for them.

Checklist

- Coherent sub-headings and narrative which explain clearly the relationship between the challenges the project is seek to address and the nature of the impact or benefits arising;

RESEARCH DATA MANAGEMENT BENEFITS CASE STUDY TEMPLATE

- Clear identification of who are the beneficiaries of the benefits;
- Clear identification of which groups/organisations have/will change something as a result of the project (This could include 'intermediary' organisations as well as 'end users' or audiences.);
- Focused and concise evidence, without generalised or overblown statements or unexplained references;
- The timescale for projects is quite short. Clearly identify those benefits which: (a) can be measured over the life of the project; (b) can be benchmarked now but can only be finally quantified post-project; (c) any future qualitative, more intangible/speculative benefits;
- Specific and appropriate sources of corroborating information are provided for the benefits and their indicators;
- Avoid indicators that lacked context or meaning, for example, numbers of hits on a website, without benchmarks or further contextual explanation;
- Do not use anecdotal evidence such as personal correspondence or quotes from individuals as evidence of impact in isolation: note it can offer a useful illustration of impact on individuals when used alongside other evidence;
- For case studies aiming for impact through engaging with researchers: evidence is provided about dissemination (such as audience or visitor numbers) as well as a clear explanation of the significance or benefits to the audiences; the activity goes beyond 'business as usual' engagement; attracts widespread interest and/or involved a programme of activity which was innovative; is sustainable or creates 'legacy' resources.

4. SUMMARY AND KEY POINTS

Description: A short summary and list of key points.

Checklist

- What conclusions are appropriate to the case study;
- What are your key "take-away" messages for readers?

Case Studies: what was produced?

The case studies include:

- The background to the project;
- The established practice/ changes/ challenges it is seeking to address;
- The benefits the project has/will deliver that address these challenges and how they can be measured or illustrated;
- Summary of the overall impact.

I2S2 Cost/Benefit Work

- I2S2 completed two cost benefit case studies for MRD programme;
- Also had a work package devoted to cost benefit work. This went further by:
 - Developing an extension of the KRDS Activity Model (I2S2 idealised research lifecycle model). Used for activity based costing and other key project work;
 - Developing two detailed benefits use cases to apply an impact and value-chain analysis tool.

I2S2 Benefits - Background

- **Project aims:**
 - Understand and identify requirements for a data-driven research infrastructure in the Structural Sciences;
 - Show how effective cross-institutional research data management can increase efficiency and improve the quality of research;
- **Based on two use cases:**
 - Prof Martin Dove, Earth Sciences, University of Cambridge – researcher perspective;
 - Dr Simon Coles, National Crystallography Service, Southampton – service perspective;
- **Methods used:**
 - I2S2 Research Activity Model and KRDS Benefits Taxonomy;
 - Charles Beagrie Ltd. Value Chain and Impact Analysis Tool;
 - Value and Impact elaborated for each perspective by Neil Beagrie working jointly with Martin Dove and Simon Coles.

I2S2 Some Key Benefits Identified

Impact and value for researcher:

- **research effectiveness** – reduced time latency for accessing results data and derived data (24hrs+ down to c. 5 mins);
- **disseminating research methods** – documented datasets accessible for remote training and learning by (many) new users;
- **enhanced research tools** – more quality datasets for developers testing and improving tools (software, algorithms, methodologies etc).

I2S2 Some Key Benefits Identified

Impact and value for central service:

- **research and facility efficiency** – time savings aggregated over many samples /experiments /researchers at facility;
- **visibility and security of datasets** – increased citation and effectiveness of research in the long-term;
- **less likelihood of errors** – in data exchange chain between researchers and various facilities (e.g. safety and administrative information).

KRDS/I2S2 Digital Preservation Benefit Analysis Tools Project

- New 6 month project (March to July 2011);
- User testing and enhancing of:
 - KRDS Benefits Framework;
 - Value Chain and Impact Analysis Tool first applied in I2S2 .
- Building on benefits analysis work in I2S2 and the wider MRD programme.

Conclusions

- Benefits case study approach proved valuable and was successfully applied across 8 MRD projects;
- I2S2 has illustrated a range of positive benefits that would accrue from full implementation;
- I2S2 Researcher and Service perceptions of benefits can be different but are complementary;
- Impact cannot always be measured within timeframe of a short project – where appropriate we have established benchmarks against which future progress can be measured.

Further Information

- I2S2 Activity Model & Benefit Use Cases available from project website:
<http://www.ukoln.ac.uk/projects/I2S2/>
- KRDS/I2S2 Digital Preservation Benefit Analysis Tools Project website: <http://beagrie.com/krds-i2s2.php>
- I2S2 benefit case studies will be available shortly. KRDS/I2S2 Benefits Tools Project dissemination event in London 12 July 2011 – registration late May.