JISC Project Plan

Project Information			
Project Identifier			
Project Title	The Value and Impact of the British Atmospheric Data Centre (BADC)		
Project Hashtag			
Start Date	5 July 2012	**End Date**	31 July 2013
Lead Institution	The Science and Technology Facilities Council (STFC)		
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Partner Institutions	Charles Beagrie Limited, The Centre for Strategic Economic Studies		
Project Webpage URL	http://www.beagrie.com/BADC.php/		
Programme Name	JISC Research Data Management Programme		
Programme Manager	Simon Hodson		

Document Information			
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Project Role(s)	Research Partner		
Date	19/09/2012	**Filename**	BADC Project Plan.doc
URL	http://www.beagrie.com/BADC_project_plan.pdf		
Access	This report is for general dissemination		

Document History		
Version	**Date**	**Comments**
0.1	08/08/2012	First draft
0.2	14/08/2012	Reviewed by all partners and updated with NERC funding confirmed.
0.3	19/09/2012	Public release (pdf)

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1. Project Overview

1.1 Project Summary

JISC, the Research Councils and other funders together with HEIs are investing substantial resources in projects and services for research data. It is a high priority area for funders and institutions, and there is strong interest in establishing the value and sustainability of this investment.

Although a number of studies have looked at methods of determining cost benefit and broad indicators of value, there remain significant challenges in establishing baseline data for measuring this in any quantitative way and there is still only a relatively small number of socio-economic studies focussing specifically on the impact of data services or research data infrastructure.

Currently John Houghton and Charles Beagrie Ltd are working on a study for JISC on the value and impact of the Archaeology Data Service and have also recently completed a study for ESRC on the economic impact of the Economic and Social Research Data Service (ESDS). Effectively this has applied and adapted methodologies to Social Science disciplines (ESDS) and to a Humanities discipline (ADS).

The partners have selected the British Atmospheric Data Centre (BADC) asa science research community and data repository that is very different from that of either ESDS or ADS, so that the work builds on existing studies and is complementary. The study is being funded by JISC and the Natural Environment Research Council (NERC).

1.2 Objectives

The project partners will extend testing and development of the economic and survey collection methods to the BADC data centre, thus further refining the economic methods used in ESDS and being used in ADS, testing and proving them in a different disciplinary area.

1.3 Anticipated Outputs and Outcomes

Output / Outcome Type *(e.g. report, publication, software, knowledge built)*	**Brief Description**
A project workplan	Detailing the project, outcomes, methods and schedule.
An interim report to JISC on methodology to be applied	Interim report on economic methods to be applied.
A user and depositor community survey	Online survey for collection of study data from BADC users and depositors.
A final report and synthesis	An independent report prepared by Charles Beagrie Ltd. and Prof. John Houghton on the outcomes of the study incorporating a synthesis of lessons learnt from this and the ADS and ESDS studies.

1.4 Overall Approach

The approach will be to survey and analyse perceptions of the value of digital collections held by the British Atmospheric Data Centre and how those perceptions of value can be measured. We propose that the perceptions of all relevant stakeholders will be explored via online surveys and selective interviews. The perception of value will include qualitative as well as quantitative measures and economic as well as non-economic factors.

As part of this work, taking steps to assess and quantify the economic value and impact of those collections with the ultimate objective of improving their prospects for sustainability. This will use a range of economic approaches including welfare economics, contingent valuation and macro modelling and draw on baseline data gathered through desk research (e.g. BADC user statistics), the online surveys and interviews.

Information on the more direct benefits and impacts will be derived partly from interview and survey responses from the producers and users of BADC data and services; and will also draw on previous cost work at BADC and elsewhere, and internal BADC reports and statistics. This will include exploration of the costs and cost savings involved in BADC data and services, the value to depositors and users, and impacts on the wider user and research communities.

We propose to undertake this study in eight core work packages as follows:

WP 1 - Project initiation
WP 2 – Desktop research
WP 3 – Online survey
WP 4 – Data analysis
WP 5 – Report production
WP 6 – Project management
WP 7 – Subject interviews
WP 8 – Wider synthesis

The project team will be managed on a day to day basis by Neil Beagrie as the research partner. Overall responsibility for the project and budget rests with Sarah Callaghan of BADC who will be the project manager. She will be the point of contact for liaison on the study with JISC and NERC and for all contractual matters. We will utilise JISC's standard consortium agreement (modified for this study and its partners) as the basis for the project agreement between the partners.

Co-ordination. The team is geographically dispersed so the project will use the telephone and video conferencing, email and secure online document filestores and calendars maintained by Charles Beagrie Ltd for its project work.

The agreed project plan and milestones will provide the overall framework for monitoring the project.

We envisage data from three studies (ESDS, ADS, BADC) would be available for a wider synthesis by the closing stages. As far as possible from across the three studies, we would try to identify broader lessons, differences, and methodological issues and would suggest ways forward in the conduct of similar evaluations for UK HEIs and others. We would further integrate the more qualitative KRDS Benefits Framework and impact approaches with the methods for quantitative economic analysis developed in the 3 studies.

1.5 Anticipated Impact

Impact Area	Anticipated Impact Description
The BADC and sustainability	Clearer understanding of the economic value and impact of the BADC and therefore enhanced ability to plan for sustainability.
BADC stakeholders and the wider community	Clearer understanding of the economic value and impact of the BADC and therefore enhanced ability to plan for sustainability. This is anticipated to enhance the arguments for engaging in digital preservation presented to the scientific community
The wider Digital Preservation community	The lessons learnt and evaluation of research methodologies will be shared with the wider Digital Preservation community. We will critically evaluate our project and lessons learnt and formulate recommendations, advice and guidance to the wider JISC and research data communities
Maintain research excellence	As understanding of the value and impact improves sustainability it allows the BADC (and therefore its users) to maintain research excellence.

1.6 Stakeholder Analysis

Stakeholder	Interest / stake	Importance (H/M/L)
BADC Funders, STFC, NERC etc. and other Research Councils or organisations thinking of funding scientific data centres	Impact of research data management and services in science	H
BADC Depositors	Value and incentive to deposit	M
BADC Users; researchers working with research data	Impact of their research and research data management	H
National Data Services; MRC, DSS, UKDA etc	Demonstrating value to funders	M
JISC and HEIs	Support for research data management and research Assessing the economic costs and benefits of digital infrastructure	H
Digital Preservation and Data Curation Communities	Support of research strategy and demonstrating value to funders. Measuring impact of emerging services. Wider uptake of methods and approaches	M

1.7 Related Projects

Impact of the Archaeology Data Service (ADS): a study and methods for enhancing sustainability (current)
http://archaeologydataservice.ac.uk/research/impact
The project will analyse and survey perceptions of the value of digital collections held by the Archaeology Data Service and how those perceptions of value can be measured. As part of this work, John Houghton and Charles Beagrie Ltd will assess and quantify the economic impact of those collections with the ultimate objective of improving their prospects for sustainability, exploring a range of methods and sources of data including investigating data from 1996-2012 on the growth of collections and users at ADS and how value and return on investment grows with the collections.

Economic Evaluation of Research Data Infrastructure (Charles Beagrie Ltd and John Houghton/ESRC) (completed)
John Houghton and Charles Beagrie Ltd have completed a study for ESRC on the economic value and impact of the Economic and Social Research Data Service (ESDS). This work commenced in July 2011 and a draft final report was submitted in December 2011. The study methodology covers a wide range of econometric approaches. Online surveys of users and depositors supplemented by interviews and desk-research have been a critical component of baseline data collection. Initial results have been extremely promising and we believe lessons learnt and experimental approaches tested could have wider applicability for research data services and projects that could be explored in future projects.

KRDS– Keeping Research Data Safe (Charles Beagrie Ltd and partner institutions./JISC) (completed)
http://www.jisc.ac.uk/publications/reports/2010/keepingresearchdatasafe2.aspx
The Keeping research data safe 2 (KRDS2) project has delivered a survey of cost information for digital preservation, collating and making available 13 survey responses for different cost datasets. The KRDS activity model was reviewed and its presentation and usability enhanced. Cost information for 4 organisations (the Archaeology Data Service; National Digital Archive of Datasets; UK Data Archive; and University of Oxford) was analysed in depth and presented in case studies and a benefits framework was produced and illustrated with two benefit case studies from the National Crystallography Service at Southampton University and the UK Data Archive at the University of Essex.

KRDS/I2S2 Digital Preservation Benefit Analysis Tools (Charles Beagrie Ltd and partner institutions/JISC) (completed)
http://beagrie.com/krds-i2s2.php

This project tested, reviewed and promoted combined use of the Keeping Research Data Safe (KRDS) Benefits Framework and the I2S2 Value Chain Analysis tools for assessing the benefits of digital preservation of research data. It extended their utility to and adoption within the JISC community by providing user review and guidance for the tools and creating an integrated toolset.

1.8 Constraints

Research Grant
There is limited grant funding available and this greatly constrains travel and potential dissemination and synthesis. This also constrains the depth and amount of interviewing that will be possible.

Repository Staff Costs
BADC staff involvement is being funded as an in-kind contribution to the project.

Programme Meetings
Only two days of programme meeting staff time for Neil Beagrie have been allowed for in the budget.

1.9 Assumptions

See 1.8 Constraints

BADC are permitted by data protection regulations to survey their user base.

BADC users will respond to requests for information via an on-line survey.

1.10 Risk Analysis

Risk Description	**Probability (P) 1 – 5 (1 = low 5 = high)**	**Severity (S) 1 – 5 (1 = low 5 = high)**	**Risk Score (PxS)**	**Detail of action to be taken** (mitigation / reduction / transfer / acceptance)
Staffing	1	5	5	No recruitment is required for this project
Low response to survey or requests for interviews	2	4	8	Good survey and interview design Work with BADC network to target and encourage participation. Note high level of participation by BADC users in RIN study of data centres
Lack of evidence of economic impact	2	5	10	Using a range of data sources and methods. Capturing wider non-economic perceptions of value

1.11 Technical Development

No technical development is involved

1.12 Standards

N/A

1.13 Intellectual Property Rights

As requested by JISC, the project partners will ensure that project outputs are made available free at the point of use to the UK HE/FE/Research community in perpetuity. We will ensure the consortium agreement between the

partners achieves this and the assignment to JISC or HEFCE as its representative of a royalty-free non-exclusive licence in perpetuity for the outputs.

2 Project Resources

2.1 Project Partners

The British Atmospheric Data Centre (BADC)
The STFC are the coordinating partner in the project, as well as the host institution for the data centre. Dr Sarah Callaghan is the project manager.

Charles Beagrie Ltd http://www.beagrie.com/
Neil Beagrie is responsible for the preparation and execution of the user value perception reports, survey and any interviews. Neil Beagrie will also prepare the project outputs and will have editorial control of the independent report.

Centre for Strategic Economic Studies (CSES) http://www.cfses.com/
Prof John Houghton is responsible for the detailed economic analysis of the BADC drawing on information supplied by both the BADC and Charles Beagrie. Prof. Houghton will also contribute to the main report and other dissemination outputs.

A Consortium agreement covering all partners will be signed by September 2012.

2.2 Project Management

The project team will be managed on a day to day basis by Dr Sarah Callaghan who will be the project manager. Sarah will be the point of contact for liaison on the study with JISC and for all contractual matters. We will utilise JISC"s standard consortium agreement (modified for this study and its partners) as the basis for the project agreement between the partners.

The team is geographically dispersed so the project will use the telephone and video conferencing, email and secure online document filestores and calendars maintained by the Charles Beagrie Ltd for its project work. Charles Beagrie Ltd has accounts with Powwownow for group teleconferences, Skype for video-conferencing and day-to-day calls, and Box.com for shared files. Project team conference calls will be held fortnightly in the first and final months of the project and as required during its middle phase, supplemented by face-to-face meetings when appropriate. All members of the team regularly use collaboration software and are very experienced in distributed team-working and project co-ordination.

2.3 Project Roles

Team Member Name	Role	Contact Details	Total days to be spent on the project
Dr Sarah Callaghan	Project manager	sarah.callaghan@stfc.ac.uk	12.5
Neil Beagrie	Project Partner	neil@beagrie.com	34
Daphne Charles	Project Partner	daphne@beagrie.com	17
John Houghton	Project Partner	john.houghton@pobox.com	32

2.4 Programme Support

Support may be required regarding funding further dissemination activities.

3 Detailed Project Planning

3.1 Evaluation Plan

Timing	Factor to Evaluate	Questions to Address	Method(s)	Measure of Success
Month 1	Project Plan	Does the project plan reflect the original proposal? Does the plan demonstrate a efficient and achievable route map for reaching the project goals?	Project plan submission	Acceptance by JISC
Throughout the project	Project Progress	Does project progress match with the schedule in the project plan	Formal reviews and feedback on our interim report and emerging findings and on drafts of the final report in the project's final stages.	Acceptance by JISC/Project Team
Throughout the project	Quality of outputs	Do the outputs fulfil the role intended, and are they of an appropriate quality?	Internal peer review and proof-reading of all draft outputs.	Acceptance by Project Team
Month 12	Project Completion	Has the project fulfilled its objectives?	Formal post-completion report	Acceptance by JISC/Project Team

3.2 Quality Assurance

We will incorporate three key review points in the project for discussion and feedback of the work with the BADC: discussion and agreement of the detailed project plan; an opportunity for face-to-face discussion of progress and emerging findings at a mid-project review; and consultation with BADC/JISC/NERC on the draft of the final report.

The agreed project plan and milestones will provide the overall framework for monitoring the project.

We will apply our standard Management and Quality Assurance procedures.

The deliverables from this activity will be regular project team teleconferences and meetings, an interim progress report to JISC, and a project completion report.

3.3 Communication and Dissemination Plan

<Explain how the project plans to share outcomes and learning with stakeholders and the community. Complete the table below for all important dissemination activities planned throughout the project. Guidance on creating a dissemination plan can be found at http://www.jisc.ac.uk/fundingopportunities/projectmanagement/planning/dissemination.aspx>

Timing	Dissemination Activity	Audience	Purpose	Key Message

TBA	JISC Programme Meeting	JISC Community	Sharing lessons learnt	Impact assessments
July 2013	Final report	all	Study outcomes	Impact of BADC

3.4 Exit and Embedding Plans

<Explain what will happen to project outputs/outcomes at the end of the project (including knowledge and learning). Focus on the work needed to ensure they are taken up by the community and any work needed for project closedown, e.g. preservation, maintenance, documentation. Guidance on creating an exit plan can be found at http://www.jisc.ac.uk/fundingopportunities/projectmanagement/planning/exit.aspx>

Project Outputs/Outcomes	Action for Take-up & Embedding	Action for Exit
Project Plan	Maintained by Charles Beagrie on project webpage. Publicised by partners.	Available via project webpage and part of external web-archive.
Final Report	Maintained by Charles Beagrie on project webpage. Publicised by partners.	Available via project webpage and part of external web-archive.

3.5 Sustainability Plans

<List any project outputs/outcomes that may have potential to live on after the project ends, why, how they might be taken forward, and any issues involved in making them sustainable in the long term. The JISC Sustainability Toolkit can be found at http://www.jisc.ac.uk/sustainabilitytoolkit

Project Outputs	Why Sustainable	Scenarios for Taking Forward	Issues to Address
N/A	N/A	N/A	N/A

Appendix 1 - Work Plan

We propose to undertake this study in eight core work packages as follows:

WP 1 - Project initiation

Staff allocation: Sarah Callaghan 2 days, Neil Beagrie 2 days, John Houghton 1 day

We would hold a project initiation meeting. This meeting may be preceded by email and/or telecon or video conferencing. The key outcomes of this meeting will be: confirming service documents to be included in the desktop review and access to copies for the project team; defining access to internal data and statistics; agreeing arrangements for the survey; and the agreeing the project plan.

WP 2 – Desktop research

Staff allocation: Sarah Callaghan 4 days, Neil Beagrie 2 days, John Houghton 2 days, Daphne Charles Beagrie 4 days

Desk research will focus on:

- Analysis of existing literature and annual reports for the service;
- Collation and analysis of existing management and internal data collected by the service such as user statistics, and internal reports;

WP 3 – Online survey

Staff allocation: Sarah Callaghan 4 days, Neil Beagrie 5 days, John Houghton 5 days, Daphne Charles 2 days

We will prepare two draft survey questionnaires for users and depositors respectively and incorporate these questionnaires into online survey forms utilising Survey Monkey or a similar service. The draft questionnaires will be pre-tested on a sample group of users and their feedback used to refine the survey questionnaires. This pre-testing will be facilitated by the service.

To encourage good response rates we will alert service users in advance of the forthcoming surveys and offer Amazon vouchers in a draw for respondents.We will draft email invitations for participation in the surveys for circulation by the Service. A reminder of the surveys will be issued 7 days before closure to maximise completions.

WP 4 – Data analysis

Staff allocation: Neil Beagrie 6 days, John Houghton 10 days, Daphne Charles 2 days

Data Analysis will investigate and provide a preliminary synthesis on perceptions of value from the desk research and survey.

WP 5 – Report production

Staff allocation: Sarah Callaghan 2.5 days, Neil Beagrie 5 days, John Houghton 7 days, Daphne Charles 2 days

We propose that the final report will be concise with an executive summary for easy assimilation of key points. It will include evaluation of a data service that presents results in terms of the value of the service to its user community and the wider research community in that field, and a return on investment / cost-benefit analysis of providing the service. A draft report will be shared with the service/funder for feedback prior to finalisation of the report.

WP 6 – Project management

Staff allocation: Neil Beagrie 2 days, John Houghton 2 days

The project team will be managed on a day to day basis by Neil Beagrie a research partner. Sarah Callaghan will be the project manager. She will be the point of contact for liaison on the study with JISC and NERC and for all contractual matters. We will utilise JISC's standard consortium agreement (modified for this study and its partners) as the basis for the project agreement between the partners.

Co-ordination. The team is geographically dispersed so the project will use the telephone and video conferencing, email and secure online document filestores and calendars maintained by the Charles Beagrie Ltd for its project work.

The agreed project plan and milestones will provide the overall framework for monitoring the project.

WP 7 – Subject interviews

Staff allocation: Sarah Callaghan 2 days, Neil Beagrie 5 days, Daphne Charles 7 days

We will select and agree the interview list during the project initiation phase and conduct the interviews using a semi-structured interview questionnaire.

We envisage conducting 15 individual or group interviews by telephone covering key Repository stakeholders including funders, depositors, users in a range of different sectors, policy makers, and staff. Each interview will be written up, interviewee notes placed on a secure server for shared access by the project team and the interviews synthesised to summarise key issues to incorporate into the final report.

WP 8 – Wider synthesis

Staff allocation**: Neil Beagrie 5 days, John Houghton 5 days**

We envisage data from all 3 studies (ESDS, ADS, and the BADC) would be available for a wider synthesis by the closing stages of the study. As far as possible within the 10 days allocated, from across the three studies we would try to identify broader lessons, differences, and methodological issues and would suggest ways forward in the conduct of similar evaluations for UK HEIs and others. We would suggest how to further integrate the more qualitative KRDS Benefits Framework and impact approaches with the methods for quantitative economic analysis, developed in the 3 studies.