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UK DATA ARCHIVE STRATEGIC PLAN, 2010-2015

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WE ARE SUPPORTED BY THE **UNIVERSITY OF ESSEX**, THE **ECONOMIC AND SOCIAL RESEARCH COUNCIL**, AND THE **JOINT INFORMATION SYSTEMS COMMITTEE**

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Scope

This Strategic Plan sets out the UK Data Archive's mission and its strategic goals for delivering its mission in 2010-15. It provides the basis of, and the evaluation criteria for, the UK Data Archive's business plans which are shorter term and which are reviewed annually.

The UK Data Archive Strategic Plan is intended for UK Data Archive staff, as well as external bodies, including: the University of Essex, ESRC, JISC and other stakeholders; data creators; data users; and data subjects. It is intended to promote the Archive's status as an internationally trusted repository for data. The UK Data Archive's Strategic Plan is aligned with, but not identical to, the strategic plans of the Economic and Social Data Service (ESDS) and other services hosted by the UK Data Archive.

The UK Data Archive mission

The UK Data Archive is a leading centre of expertise in data archiving in the UK. It holds the largest collection of digital data in the social sciences and humanities in the UK and makes them available to the higher and further education sector and beyond for research, teaching and learning. Its mission is to maintain its leading role by continuously improving the quality and breadth of its data products and services in response to user needs and technological changes. To this end it collaborates with national and international organisations to develop new data standards and tools. It also aims to build bridges between data creators and data users across different sectors and disciplines.

Strategic Challenges for the UK Data Archive

The issues facing the UK Data Archive as it pursues its mission fall under the following broad categories:

- Leadership and governance
- Planning and resources
- Management and administration
- Data selection, acquisition, ingest and preservation
- Data access

Leadership and Governance

It is a priority to clarify and formalise the UK Data Archive's status within the University of Essex to ensure a sound footing for long-term planning. During the early stages of the plan a joint Management Board, including the Faculty of Social Sciences and the Research and Enterprise Office, will be created to monitor the UK Data Archive budget and other activities. The main purpose of this Management Board will be to make the UK Data Archive more accountable to its stakeholders and ensure that their investment is maximised.

Need to build on DSA and Place of Deposit certification

The UK Data Archive will demonstrate its commitment to international standards. It shall champion the Data Seal of Approval as starting point for trusted digital data repositories, and will work towards conformity and compliance to other relevant standards in the digital curation arena. Most of the UK Data Archive technical infrastructure complies with the OAIS reference model and exceeds the DSA standards, but there is scope for improvement in some areas of workflow and this improvement is a priority.

The UK Data Archive is approved by The National Archives (TNA) as a Place of Deposit for public records and acquiring such collections is a priority. In order to take in such collections new modes of licensing may be required.

Need to make effective use of the Strategic Plan

The Strategic Plan shall be used as a road map for the development of UK Data Archive activities over the next five years, though the precise circumstances under which these are achieved will be dependent on funding of core services. All activities carried out at the Archive will relate to at least one of the five strategic goals set out in section 3. Exactly how the Archive operates will be governed by the Policy Group (PG), which makes key decisions and sets overall policy, as set out in the Organisational Structure. PG relies on Strategy Group (SG) to devise strategies which accord with policy. SG in turn oversees the work of Task Teams (TTs) which implement these strategies, either within a fixed time scale or on an ongoing basis. Mechanisms will be further developed to ensure effective communication between these three levels of internal governance.

Planning and Resources

Need to maintain and diversify funding streams

By far the largest funder of the UK Data Archive services in 2010-11 is the ESRC which accounts for almost all planned expenditure. Whilst this demonstrates confidence in the UK Data Archive's ability to deliver, it does create a potential over-reliance on a dominant funding stream. Any initiative which enables the Archive to enrich its funding base is therefore welcome. In the short to medium term the highest priority is to ensure that the Archive can sustain its existing services and this will be impossible without continuing support from ESRC and JISC.

Need to keep pace with user expectations and technology

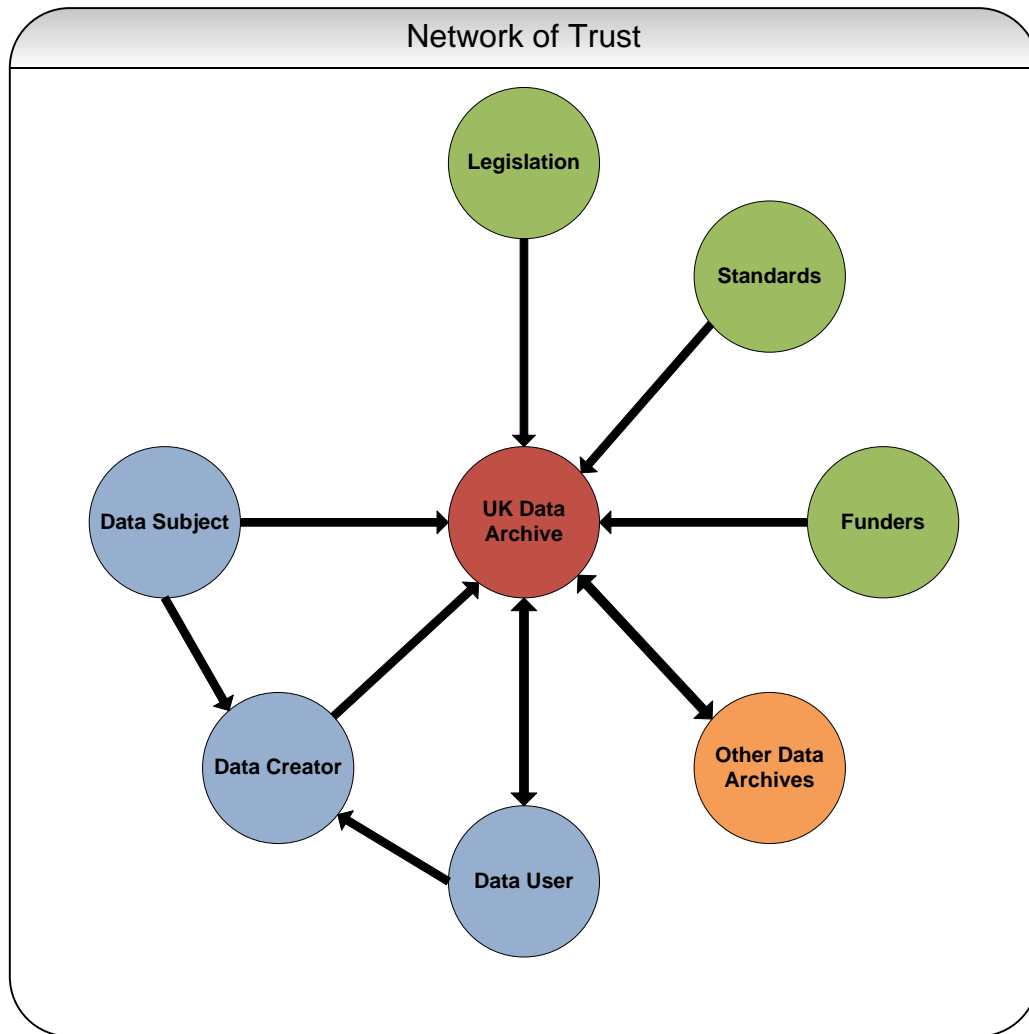
The most valuable assets of a data archive are clearly the data it holds, but these are of little value without the provision of specialised services for their curation and use. These services must be delivered by highly skilled staff and the UK Data Archive is justly proud of its strengths in this area. Continued investment in this staff will be required if the Archive is to keep pace with changes in technology, user composition, and the expectations of those users. Priorities for professional development relate to technical platforms and standards and to the need for researchers to be trained to use data more effectively.

In-house development of these training skills can help the UK Data Archive to spread knowledge of data management and archival best practice regionally, nationally and internationally. Archive staff may also benefit from engagement in teaching and this may soon begin within the UK Data Archive's History Data Service.

The ESDS has a specific remit to spread awareness of some of the UK Data Archive collections, for example to social science undergraduates, postgraduates, government departments and the cultural sector. Where this extends beyond the established research community it can contribute to the University's knowledge transfer targets. It is important to distinguish between data users and service users and within these groups there may be scope to diversify, for example to include more family historians, health specialists and geographers, each designated community of users to have specific and agreed access rights.

Need to develop collaborations

The UK Data Archive is now a trusted repository with proven longevity of digital curation, data preservation and expertise in data management. It is respected and trusted largely because it has always been open and transparent in its dealings with its stakeholders. It sits at the centre of a network of trust as shown on the diagram below, with bodies concerned with the Archive holdings (data creators, subjects and users) on one side and with bodies concerned with its operations (funders and regulators) on the other.



The UK Data Archive is also in important trust relationships with other data archives around the world, principally through IASSIST globally and through CESSDA (in all incarnations) for the European countries. Carefully constructed collaborations with other archives can yield real benefits for the UK Data Archive. The Director of the UK Data Archive and the Directors of ICPSR in the USA and of ASSDA in Australia are already exploring ways in which the three organisations can benefit from a genuine sharing of resources, e.g. working through the Alliance for Data Archiving Technologies (ADAT) and other such international collaborations. These collaborations will be pursued as they fit into the goals of the strategic plan.

The University of Essex is pursuing a policy of regional partnership and this may present opportunities for the UK Data Archive, especially in view of the Government Policy for Archive Services: Archives for the 21st century. The University has a specific target of five 'global alliances' to tackle major problems facing the world and this also may present opportunities for the UK Data Archive.

Need to demonstrate impact

Increasingly, publicly-funded organisations are being called on to demonstrate wise use of their investments. There is, for example, a significant emphasis on the measurement of 'real economic and social benefits' in the ESRC Strategic Plan 2009-14. This in turn will require the demonstration of impact by all services managed by the UK Data Archive. JISC is also emphasising impact in its strategic investments.

Management and Administration

Need to consolidate the UK Data Archive brand

An organisation's development can be seriously hampered by a confused identity and a clear and trusted brand can deliver far more than an attractive website. The new UK Data Archive brand was launched in June 2010 and is based on a thorough review by external consultants of what the UK Data Archive does and what it aspires to do.

While outside the strict scope of this Plan, there is also a perception that ESDS is a confused brand, mainly by virtue of its fragmentation into various sub-services, and this should be reviewed.

Need to establish a more effective organisational structure

As part of a wider process of establishing a framework of policies within the UK Data Archive, some changes will be made to the organisational and management structure. For example, recent creation of the Research Data Management Support Services (RDMSS) section and the planning surrounding a more comprehensive 'communications' section, based on the existing Outreach and Training section will form part of internal changes. There are also possibilities for other changes internally to make most effective use of staff resources and changing skill sets caused by strategic priorities and staff turnover.

Need to establish a more effective intranet and records management system

There is no doubt that the UK Data Archive internal processes would be more efficient if a well specified and well managed intranet and a fully integrated records management system were in place and functioning properly. These are priorities.

Data Selection, Acquisition, Ingest and Preservation

Need to develop the collection and tools for its throughput

Data collections held at the UK Data Archive will continue to require highly skilled management to remain useful. The collection itself will continue to grow but a planned approach to this growth is essential if quality is not to be compromised. It is therefore a priority to carry out a systematic review of the acquisitions policy and an assessment of what kinds of data will interest future users and of what other repositories are collecting or plan to collect. In respect of ESDS, this review has already become with the establishment in 2010 of the Collections Development Committee.

Survey data continue to be as valuable as ever, while observational and transactional data are increasing in value, largely due to changing technology. Changes in the breadth of the UK Data Archive remit, mentioned above, will also impact on the data collected. Every shift in emphasis within the collection will require a shift in the tools required for its management in the data life cycle. For example, ingest of psychometric or medical data will require important disclosure restrictions.

Need to improve quality and usefulness of Submission Information Packages

With an increasing emphasis through the data archiving world on the importance of the OAIS model, there is a suite of technical improvements which can be made to the UK Data Archive Submission Information Packages (SIPs). For example, there needs to be improved quality of data and more metadata in the SIP. As part of the increased alignment of UK Data Archive processes with the OAIS model, further work also needs to be carried out on formats and mechanisms for creating Archival Information Packages (AIP).

Need to increase use of self-archiving

At present UKDA-store is an online self-archiving system for ESRC-funded data, but it could include all data collections which comply with the UK Data Archive Collections Development policy. This will require improved linkage between the UKDA-store and the main UK Data Archive catalogues. The Archive will evaluate all the means possible for transforming its self archiving facilities and in collaboration with others where appropriate. There is also a need to increase the rigor of ingest Quality Assurance.

Data Access

Need to shift emphasis to new modes of access

The UK Data Archive has long experience of the 'middle ground' of access to data and whilst this remains crucially important there is a move to extending the extremities of the spectrum of data users. There are now many novel approaches to data access, from totally open on the one hand and totally non-disclosive data on the other. Experience now being gained from delivering the Secure Data Service (SDS) is a key part of this move.

Need to integrate SDS and other services

Until a few years ago the ESDS was by far the dominant service provided by the UK Data Archive but more recently other services (RELU, Census, SDS etc) have reduced this dominance. All these services share many requirements and wherever possible it is beneficial to integrate them to avoid duplication of effort and to maximise synergies.

Need to reform registration process

Various improvements are required to the user authentication and information collection process. Further work is also planned for 2010-11 to make access more durable by using Persistent IDs using the Digital Object Identifier (DOI) system.

Need to develop new data delivery and visualisation tools

The internet continues to transform the delivery of the UK Data Archive's services and it is vital for continued delivery of these services that the Archive stays abreast of the latest developments in data delivery and visualisation technologies. For example, a review of the effectiveness of the Nesstar tools, now ten years old, is a priority.

Need to reform licensing system

A review is needed of the value of Creative Commons (CC) type licences to increase inputs and make material more accessible outside HE/FE. This process has begun with the application of CC licensing to the Archive's publications.

The Five UK Data Archive Strategic Goals: 2010-2015

To deliver its mission and meet its strategic challenges the UK Data Archive has set itself five strategic goals for 2010-2015. Associated with each strategic goal are a number of key objectives, subdivided by theme. The strategic goals are designed to consolidate the Archive's trusted repository status while maximising quality of service and impact of investment.

Promote Best Practice in Data Curation through Collaboration

In this plan curation is as defined "Digital curation is all about maintaining and adding value to a trusted body of digital information for future and current use; specifically, the active management and appraisal of data over the entire life cycle. Digital curation builds upon the underlying

concepts of digital preservation whilst emphasizing opportunities for added value and knowledge through annotation and continuing resource management. Preservation is a curation activity, although both are concerned with managing digital resources with no significant (or only controlled) changes over time." (ICPSR online glossary). To this definition we add the concept of archival standards where the authenticity, reliability and integrity of digital objects are kept in mind in this activity.

Key objectives: Theme 1 – curation

- support and collaborate with European social science data archives via relevant cross national initiatives, such as a cessda-ERIC
- reinforce the Archive's status as an internationally trusted repository for data and centre of excellence
 - achieve the Data Seal of Approval in 2010
 - prepare for internal audit and under ISO/NP 16363
- in partnership with other national and international organisations, assist in the development of standards and policies for best practice in data curation
 - continue to participate fully in DDI Alliance
 - continue to participate in International Committee of DSA
 - continue to participate in DPC's review committee for OAIS (ISO 14721)

Key objectives: Theme 2 – collaboration

- strengthen collaborations with other digital repositories and data organisations
 - continue to participate in DPC and provide support to other repositories
 - continue to work with European Statistical Institutes
- build stronger relationships with researchers and other data creators
 - continue to develop work on data management with ESRC investments and all other data creators

Improve Access to and Use of Data

Key objectives: Theme 1 – access

- increase open access to data while maintaining appropriate access control over more sensitive data via user authentication, registration and licensing
 - contribute to the design of ESRC and other research council's data policies and investigate applicability of widening access to the UK Data Archive collections
 - continue to develop SDS and provide appropriate access to disclosive data
 - upgrade existing authentication tools through ESDS and Census.ac.uk and relevant international initiatives
 - assess benefits of registration and authentication
 - investigate necessity of authentication tools and re-examine UK Data Archive registration policy
 - re-negotiate and re-design licences to provide greater access to data
- provide more information to all actors in data access process
- develop a single point of access to the UK Data Archive collections
- make user registration and licensing as straightforward as possible without compromising data security

Key objectives: Theme 2 – use

- encourage the use of UK Data Archive data collections for top quality research
 - ensure that every institution with a top social science RAE rating attends at least

- o one training day on use of the UK Data Archive collections
- o lobby to provide incentives to researchers to create high quality data collections
- promote the social and economic impacts of research based on UK Data Archive collections
 - o carry out research examining the most meaningful ways to assess the impact of research based on UK Data Archive collections

Raise Standards in Data Management and Security

Key objectives: Theme 1 – data management

- strengthen relationships with data creators, providing ‘best practice’ advice in research data management
 - o work with ESRC to ensure higher quality of large scale data creation
 - o develop guides to good practice in data management

Key objectives: Theme 2 – data security

- ensure relevant data security at all times
 - o achieve certification against ISO 27001 and maintain continuous audit through life of SDS
- maintain the trust of data subjects by ensuring that relevant ethical and legal guidelines are followed and confidentiality is protected
 - o through training ensure that all staff are more aware of the issues relating to data confidentiality
 - o through outreach and training ensure that data subjects understand that their confidentiality will be respected and data will be properly anonymised unless they specifically agree otherwise

Drive Archival Innovation

Key objectives: Theme 1 – collections

- broaden the range of subject areas and data formats in the Archive collection
 - o conduct gap analysis of existing collection in relation to user needs by reference to RIN/JISC, ESRC user surveys and the ESDS Collections Development Committee
 - o continue to develop internal processes for ingest of non survey-based formats
- promote the use and re-use of the Archive data collection through the development of teaching and learning resources and user training
 - o deliver at least two cross-service best practice workshops every twelve months of which one to be a ‘open day’

Key objectives: Theme 2 – tools

- develop and implement next-generation tools for improved resource discovery and data access and visualisation
 - o subsequent to work to improve current DDI 2-based ESDS resource discovery, develop a new cross-service and extra-service search tool
 - o overhaul of UKDA collection search, providing researchers with the elements they need for data linking and visualisation
- improve internal workflows with enhanced tools for ingest, query tracking, security and preservation
 - o re-specify all internal workflows to enable use of file format registries, internal query tracking and preservation metadata

- o create new tools for the collection, presentation and analysis of collection use statistics as the basis for strategic planning

Demonstrate Excellence in Accountability and Operations

Key objectives: Theme 1 – governance

- demonstrate effective and transparent governance arrangements
 - o establish fully-functioning records management system and publish all key procedural documents
 - o establish externally chaired Archive consultative committee to advise on strategic direction
- consolidate the UK Data Archive's position within the University of Essex
 - o continue to attend Social Science Faculty Steering Group
 - o contribute at least two articles every twelve months to *Wyvern*
 - o agree Operational Level Agreements with all key University service providers (i.e. Estates, ISS, REO, HR)

Key objectives: Theme 2 – funding and continuity

- demonstrate value for money to all stakeholders
 - o continue to research the costs and benefits of data archiving
 - o publish cross-service Milestones
 - o publish Annual Report (starting with 2010-11 academic year) including financial accounts and demonstrating performance
 - o research costs to funders of providing current services without UK Data Archive provision
- sustain funding sufficient to deliver the Archive key strategic goals
 - o continue to diversify services to reduce over-dependency on single funding sources
- formulate strategic business continuity plan

Key objectives: Theme 3 – staff

- encourage skills development for all staff, including engagement in operational research where desirable
 - o conduct training needs analysis across the Archive, including need for research experience
- provide continuous professional development to staff and nurture career progression
 - o continue to develop training and other PD opportunities linked to annual review process
- maintain a just and positive work environment for all staff
 - o conduct employee satisfaction survey