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Strengthening Data Security

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Background

High-profile UK government data losses:

- Statistics and Registration Services Act 2007
  - criminal penalties for disclosure of confidential information
  - protect personal data, restore public confidence
  - established UK Statistics Authority
- Data Handling Procedures in Government (Hannigan Report), 2008
- Mandatory Minimum Measures for data handling
- UKDA – strong data security and confidentiality practices, but time to respond

Holistic approach

Examined practice in all areas of UKDA business:

- Confidentiality – advising data creators
- Security in internal data handling and storage – human and technological procedures
- Security in secondary data use – advising and educating users

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Data creators: government

- UKDA works to balance disclosure risk with sufficient detail for effective research
- ONS release all data via Microdata Release Panel, tested and access-controlled – Special Licence, End User Licence
- Some government departments may still need guidance: UKDA/ESDS helping to enable ONS advice to them

SL vs. EUL vs. SDS

- EUL – standard access for majority of UKDA users:
  - No data below GOR, demographic data banded/aggregated
  - Users already agree in EUL not to try to identify individuals.
- SL – registered EUL users gain Approved Researcher (AR) status
  - Finer level of geographic detail (UA, NUTS2 and 3), more detailed demographics.
- SL does bring administrative burden – hold two versions of data, process AR applications
- UKDA launches Secure Data Service (SDS) October 2009 – further levels of security and user training for more disclosive data

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Data creators: researchers

- UKDA works to balance disclosure risk with sufficient detail for effective research
- Smaller-scale academic projects may not have benefit of govt resources or background knowledge
- Individual advice on data edits – quantitative and qualitative
- Data management training for researchers
- Every dataset is individual, but internal guidelines written into procedures to ensure standardisation where possible across UKDA advice.

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Data handling

- Internal procedures scrutinised: handling and storage of dataset files and associated admin materials, human/technological
- Data security procedures; Confidentiality Agreement
- UKDA Security Plan, UKDA Preservation Policy
- Respect staff professionalism and existing good practice
- Maintain internal standards and promote external confidence
- Regular update according to developments in govt/techno/digital preservation standards

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Data users

- Strengthen existing guide to data handling and security
- Effective sanctions and breach policy
- Represent data users' interests, encourage data creators to release data with sufficient detail for useful analysis
- Encourage dialogue between data creators and users
- Train users in data security: workshops, SDS

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Technological solutions

- Maintain technical infrastructure to international standards (ISO 27001 in particular)
- Update regularly with advances and standards
- Systems testing and security plan – SQL injection, cross-site scripting etc.,
- Breaches procedures (and for SDS too)
- Technological solutions to data access – security-controlled remote access software (SDS)

Further information

Confidentiality and data security (quantitative/qualitative)
http://www.data-archive.ac.uk/sharing/confidential.asp

Guidance for users
http://www.esds.ac.uk/news/publications/microDataHandlingandSecurity.pdf

Workshops
http://www.data-archive.ac.uk/news/newsdetail.asp?id=2230

ONS advice on Statistics and Registration Services Act 2007
http://www.ons.gov.uk/about-statistics/ons-independence/the-statistics-act/index.html

Government Mandatory Minimum Measures
http://www.cabinetoffice.gov.uk/media/cabinetoffice/csia/assets/dhr/cross_gov080625.pdf