

Brains project

Brain Images of Normal Subjects databank is being developed. It will hold initially data for normal subjects collected previously in several research studies: Bipolar controls, Psychiatry controls, CaliBrain, Amygdala studies, NIH DTI study, Normal Ageing Brain study, LBC 1936 and LBC 1921.

- Objective: building a normative brain imaging bank, that overcomes the limitations of current ones for studying the ageing brain [1].
- Fully searchable brain image repository.
- Large number of healthy older people with comprehensive metadata.
- Additional benefits: preservation of existing data that constitute a very valuable resource (£10m).

Risks of losing data

- Old storage media that decays.
- People involved in the data acquisition and clinical studies no longer available.
- Poor documentation and metadata.

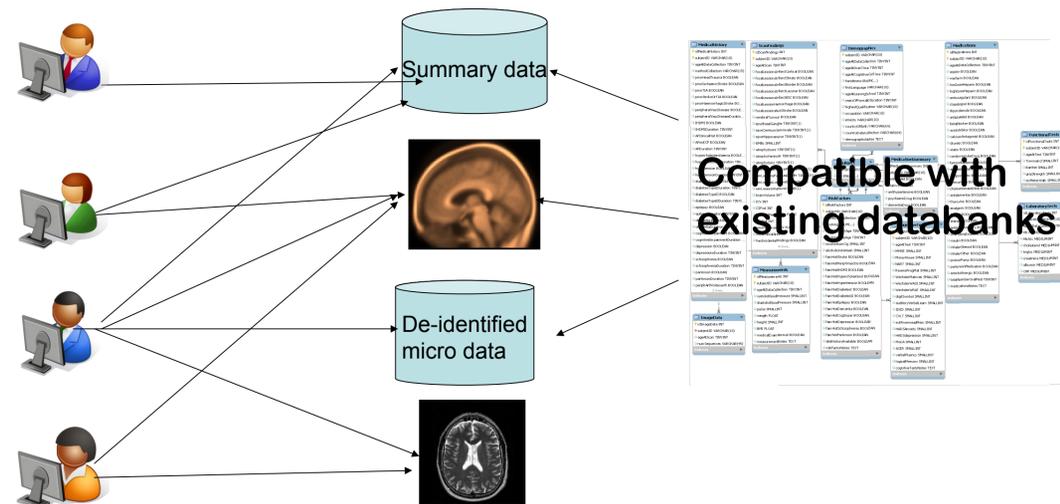
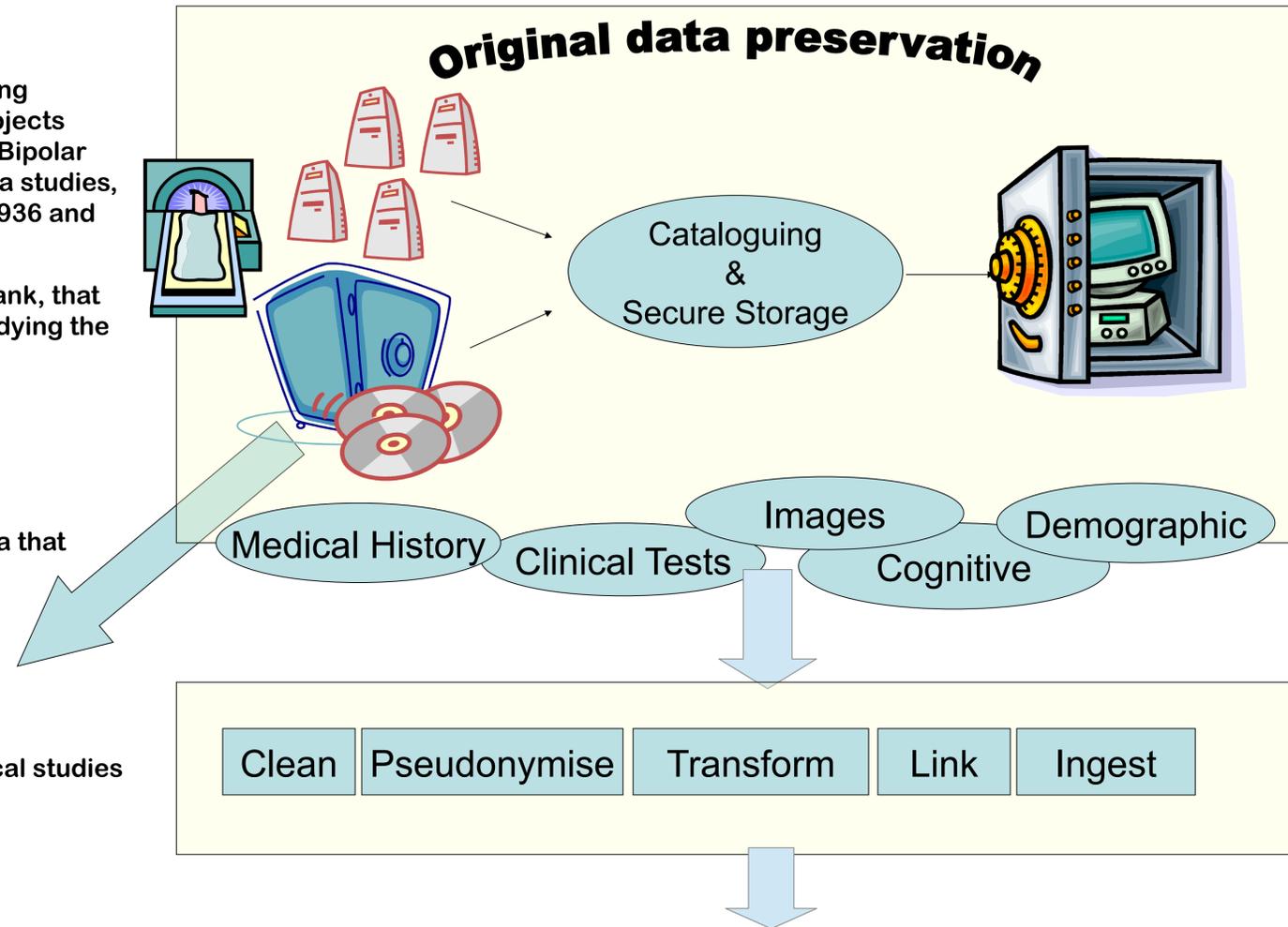
Data Sharing

Challenges for sharing data in neuroimaging [2].

- Ethical & legal. Information governance & data sharing.
- (Lack of) motivation.
- Technical.

Solutions:

- De-identification
- Different levels of access to data.
- Incentives for sharing data:
 - Greater access to a large collection of data.
 - Secure storage.
 - Flexible data embargo policies.



Achievements

- Long term secure storage of a valuable data collection.
- Backup.
- The cataloguing makes it easier to find the data.

Shortcomings for the databank

- The data is noisy.
- Poor provenance information.
- Important information for the databank missing in some datasets.

Recommendations for new studies

- Capture provenance information.
 - Link data to experimental methodology information.
- Define a minimal dataset required for inclusion of the data in BRAINS.
- Prepare a data management and curation plan before starting the data acquisition.

Future work

- Research data linkage risks.
- Collaboration with other databanks.
- User interface.

References:

1. D.A. Dickie et al "Do brain image databanks support understanding of normal ageing brain structure? A systematic review." Eur Rad 2011 22,7
2. J.B. Poline et al. "Data sharing in neuroimaging research" Front Neuroinform. 2012; 6: 9.

URL: <http://www.bric.ed.ac.uk/research/BRAINS.asp>
 Contact: david.rodriguez@ed.ac.uk