

Managing data in collaborative research: findings from 5 case studies

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Background and method

In a challenging financial climate, universities are increasingly turning to research partnerships with public, private and voluntary sector organisations to generate income. But how is information and data managed in these partnerships? Though crucial to research collaborations, as both an input and a product, the value of research data is under-recognised in most partnerships. Moreover, external organisations are often nervous about sharing pre-existing proprietary data with their university partners, and want to protect any commercial interest in the outputs of the partnership.

The RIN therefore undertook five case studies to understand how research information and data are handled in collaborative partnerships between universities and public, private and voluntary sector bodies. This poster highlights the most important findings from that research, and suggests some ways to support better data and information management in collaborative projects.

Figure 1: Participating cases

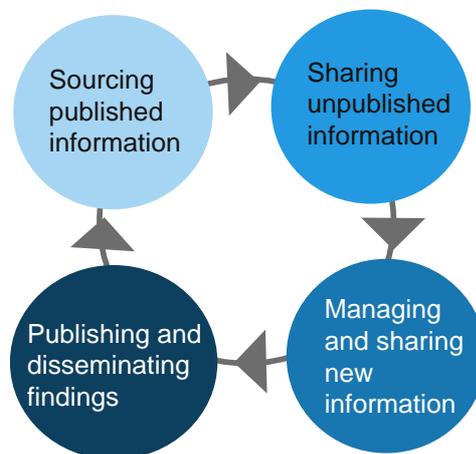
	Discipline	Aim	Partners
Intelligent Care	Technology	Developing a monitoring system for older people living in residential dwellings	1 commercial 1 university
UK Reactics	Engineering	Exploring the potential commercial applications of novel auxetic materials (materials which expand when stretched)	6 commercial 3 universities
PRISMA	Health and social care	European priorities for research and measurement in end-of-life care	7 public and third sector bodies 4 universities
Structural Genomics Consortium (Oxford)	Structural biology	Pre-competitive mapping of protein structures to support new drug discovery	11 funders: charitable, public and pharmaceutical companies 3 universities
Locating Communications Heritage	Arts / Digital Technology	Developing a platform which enables mobile phone users to access a history of IT and communications	1 university 1 third sector 2 commercial

Findings

- Information search depends upon academic researchers.
- Academics don't always adhere to copyright restrictions when sharing published information.
- Little use of library or information services in universities or larger firms.
- But opportunities exist for library services to support information search.
- Little awareness of sources for published data, such as repositories.

- In most cases, all partners will agree a dissemination strategy.
- Strategies were bespoke, to reflect the needs of individual partners.
- They usually contain compromises which limit very wide dissemination of collaborative research.
- Data was rarely included in these strategies, unless data sharing was a specific project aim.
- Changes in funding and greater pressure for open access might help increase dissemination.

Figure 2: Collaborative research life cycle



- Commercial researchers are very nervous about sharing internal data.
- Non-disclosure agreements and trust are equally important in ensuring sensitive information is shared.
- In general, commercial partners tend to be cautious, while academics are more open.
- Changes to the funding environment may make academics and voluntary/third sector partners more reluctant to share.
- Reluctance to share data didn't necessarily affect research outcomes, and work-arounds were often found.

- Researchers aren't motivated to plan data management.
- Specialist tools and repositories could help researchers improve data collecting, sharing and reuse.
- But researchers lack experience and find repositories confusing.
- Many researchers (academic and commercial) are nervous about external platforms and are concerned about disclosure.
- Those researchers who do use repositories and have seen the benefit can influence their colleagues to experiment.
- Better information about implications of using repositories would help.

Figure 3: Factors influencing information sharing in collaborative research

Contrasting needs and cultures	Intended outcomes	Size and location	Previous collaborative experience	Funder involvement	Balance of formal and informal
Academic desire for openness contrasts with commercial protectiveness. The latter is usually prioritised. Affects data sharing, publication and tacit knowledge sharing.	Commercial product or wide dissemination? Affects how carefully communication and sharing is considered at initial stages.	Size and location determine ease of information sharing particularly tacit knowledge. Secondments can help.	Experience helped bridge cultural barriers and establish a common language, promoting greater openness.	Can have a significant impact on information management, especially where partners lacked previous experience.	Formal ensures information delivered on time to right people (with rights); informal allows quick exchange of knowledge, especially tacit, and builds trust and openness.