

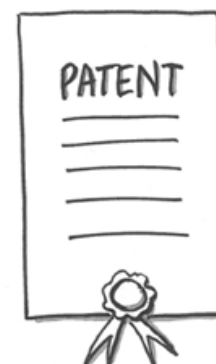
Contracted Work

Some groups collect large amounts of data for public authorities or industrial partners for payment. Data are not primarily used for research. Details on how to collect, analyze and deliver the data are regulated in contracts or formal agreements. Thus, there are external requirements for structured data management planning. Good Manufacturing Practices (GMPs) or Standard Operating Procedures (SOPs) may have to be followed. Sometimes, agreements on usage and sharing of data can also be made more informally based on good personal relations and trust.

Contracted work can be divided into two categories:

Innovation

Contracts with industrial collaborators usually contain Non-Disclosure Agreements (NDAs). Sensitive data imply major issues regarding IT security, access control and sharing and publishing data. When innovation results in patents, the underlying data are liable to embargo periods.



Co-financed research often involves industrial PhDs. Agreements with external partners normally contain details on when and how to publish results. Companies typically review and approve manuscripts before publication. Researchers are frequently facing situations, where they have to find a good balance between commercial and scientific interests. Any restrictions to free access to data are in potential conflict with the requirement for research to be reproducible as stated in the Code of Conduct for Research Integrity. Unlike for data generated at the research institution, data from companies belong to the respective company. However, researchers usually get the right to use them and in some cases, a co-ownership of the data is arranged.

Public Consultancy

In particular departments that emerged from former governmental research institutions have traditional obligations to provide data to Ministries and other national and international authorities. They have to maintain databases on very specific topics, which are of general interest for the public and can be used in many different contexts. Some of these repositories contain data collected over a period of many decades. In most cases, there are specific formats and standards for documentation and metadata. In a few special cases, data sets are also externally reviewed as part of quality control. Other deliverables can be periodic reports. The data from commissioned research are typically owned by the customer.



Data acquisition and quality control is a main task and needs to be planned and funded carefully and clear responsibilities have to be assigned. Sometimes, the collection of data is performed by subcontractors or other external partners, as in the case of surveys. The data often contain personal information, where regulations from the Danish Data Protection Agency apply. Due to sensitivity, some data may only be stored and accessed at the partner institution. One example is clinical data from hospitals. Sensitive data may only be published after anonymization, for instance by aggregation or by generating constructed

data that reflect the real properties. Another possibility to share sensitive data is to publish the metadata, while the complete datasets are only available upon request.