

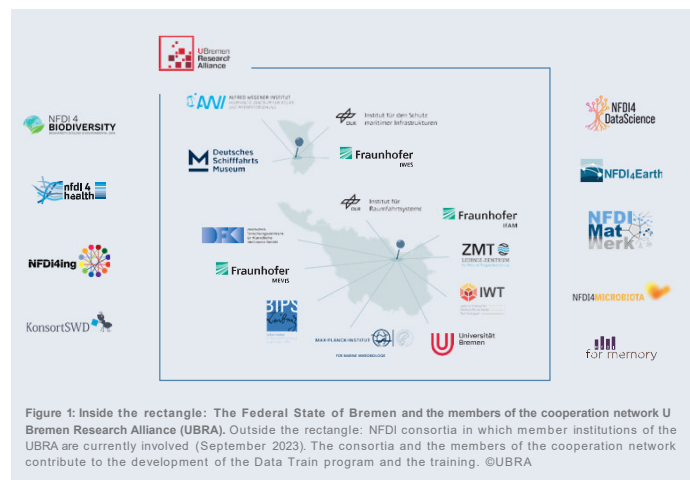
# Data Train – The Cross-disciplinary Training in Research Data Management and Data Science

U Bremen Research Alliance

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Dealing with data and innovative technologies are key competencies of our time. To meet the massive demand in science and economy, the cross-discipline training program 'Data Train - Training in Research Data Management and Data Science' of the U Bremen Research Alliance (UBRA) teaches competencies in data literacy, i. e. in research data management (RDM) and data science, for doctoral researchers. The program is associated with the German National Research Data Infrastructure (NFDI) (Fig. 1).



## The Curriculum

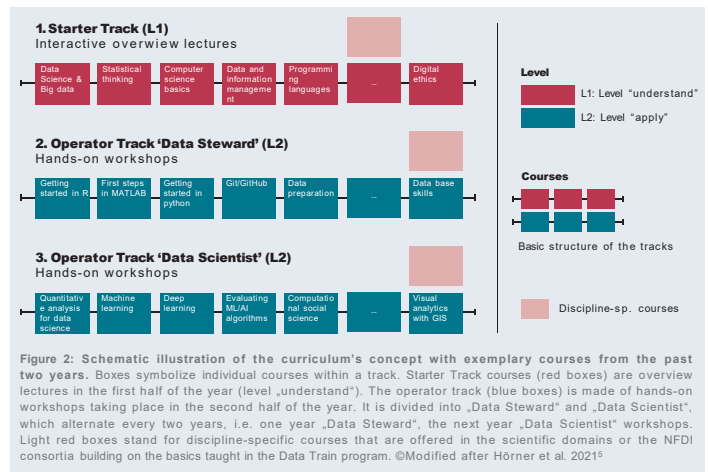
A team of enthusiastic lecturers from member institutions of the UBRA (Fig. 1) voluntarily created a flexible and cross-disciplinary curriculum, with lectures tailored towards data analysis, data science and RDM. The training is targeted at doctoral researchers and open to all interested in strengthening their data skills, if capacities are available (Fig. 2).

## STARTER TRACK

In the 'Starter Track', thematic overview lectures provide a general knowledge of important topics in research data management, data science and various questions all about data. This track is held online or in hybrid format and is thus open to everyone.

## OPERATOR TRACK 'DATA STEWARD'

In this track, essential competencies for the efficient handling of data in accordance with the FAIR data principles (i. e. data should be Findable, Accessible, Interoperable and Reusable) are taught. The track includes hands-on workshops on programming languages, data management plans, reproducibility, data preparation, data provisioning, and database skills.



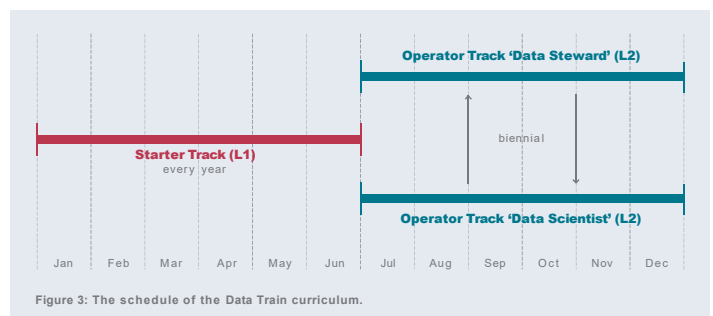
## OPERATOR TRACK 'DATA SCIENTIST'

Participants learn methods from mathematics, statistics, artificial intelligence, and computer science basics for data analysis as well as data visualization skills. Data science is about extracting information and gaining knowledge from data using computational analysis methods such as statistical techniques, but also artificial intelligence (e. g. machine learning, deep learning).

Doctoral researchers can complete the entire tracks or attend only individual lectures/workshops. Participation is confirmed after completion of the respective track by a 'Certificate of Participation' listing all attended courses.

## The Schedule

The Starter Track takes place in the first half of the year. The two operator tracks take place in the second half of the year alternating every two years, i. e. 'Data Steward' in one year, 'Data Scientist' in the other year (Figs. 2 and 3).



## The Data Stories

Data Stories are inspiring talks about data management and data science in the private sector and in academia. The invited speakers shed light on the importance of data skills with regard to their respective fields of work and discuss current challenges. Whenever possible, the events end with an opportunity to network and socialize with colleagues from other disciplines and the 'storytellers'. The Data Stories are open to everyone.

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