Plan Overview

A Data Management Plan created using DMPonline

Title: Evaluation of aircraft configurations and sonic boom reduction devices for supersonic aircraft design.

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Copyright information:

Evaluation of aircraft configurations and sonic boom reduction devices for supersonic aircraft design.

Data Collection

What data will you collect or create?

Data and information from literature review will be collected in a .txt format.
Numerical data will be generated by means of computational simulations in order to assess sonic boom for several aircraft configurations, including non-conventional ones (1 GB - 2GB). They will be collected in a .csv format.

How will the data be collected or created?

Data from simulations will be collected in a structured folder structure: the principal folder will be named as "date-test#", then each subfolder will be named as the run case to which it refers ("CASE_#) and it will contain all the simulations output files. There will be also a resuming .csv file containing the ID matrix, in order to identify each case with the proper variable values, and all the simulations results of interests.

Documentation and Metadata

What documentation and metadata will accompany the data?

A README text file will accompany the data in order to be easily read and interpreted in the future, even by secondary users.
The README file will include basic details, like who created or contributed to the data, its title, date of creation and under what conditions it can be accessed. Furthermore, details on the methodology used, analytical and procedural information, definitions of variables, vocabularies, units of measurement, any assumptions made, and the format and file type of the data will be highlighted too.
Data will use CORD metadata

Ethics and Legal Compliance

How will you manage any ethical issues?

The research will obtain CURES approval.
No personal data will be collected.
Data won't need to be anonymised.

How will you manage copyright and Intellectual Property Rights (IPR) issues?

The copyright will be under the Cranfield University and all published work will be open access.

Storage and Backup

How will the data be stored and backed up during the research?

Data will be saved on a restricted-access drive on the University network which is automatically backed up by Cranfield IT, on a daily basis to multiple data centres.

How will you manage access and security?

No external access will need to be managed.
No risk assessment will be required.

Selection and Preservation

Which data are of long-term value and should be retained, shared, and/or preserved?

Sonic Boom simulations results and Sonic Boom prediction model, along with the software that implements the formulation will be preserved after the project ends.
10 years preservation will be guaranteed by CORD.

What is the long-term preservation plan for the dataset?

Data will be retained securely in Cranfield's institutional data repository, CORD, which uses the figshare platform and preserves data for at least 10 years after project end, with datasets assigned a DOI for long-term accessibility, in accordance with Cranfield's Management of Research Data Policy.

Data Sharing

How will you share the data?

Sonic Boom predictive model and code module will be shared after the project.
It will be addressed to other researchers and teachers for further research and projects.
The timeframe for making the data available is three years.

Are any restrictions on data sharing required?

No restrictions on the resulting data are required.
Dataset containing them could be shared in order to be reused for further and future research.

Responsibilities and Resources

Who will be responsible for data management?

The author itself will be responsible for data management on most of the aspects (data creation,processing, metadata creation).
University IT will be responsible for backups, since institutional network storage will be used.
Supervisors will be responsible for ensuring the data management plan will be reviewed and revised.

What resources will you require to deliver your plan?

software and hardware resources, made already available by Cranfield University, will be required.