DATA MANAGEMENT PLAN FOR OYSTER PROJECT

GENERAL

Data Set	**Partner Legal Name**	**WP**	**Researcher's name**	**email**
No:				

Please choose from available lists or add options if applicable. | *NOTES*

1. DATA SUMMARY

Purpose of the Data	Purpose	Objectives	*State the purpose of the data collection/generation, indicating the relation with the objectives of the project. Add additional objectives if necessary.*
Dataset is:			***Fixed**: never change after being collected or generated. **Growing**: new data may be added, but the old data is never changed or deleted. **Revisable**: new data may be added, and old data may be changed or deleted.*
Quantity		in MB/GB	*of each experiment*
		in MB/GB	*overall*
			In case not just digital archiving is required, indicated quantities of other form of storage.
Data Security & Storage			*(i.e. Office computer, Hard Drive, Tape back-up system, Institute network drive, Institute Central Data storage, private Cloud storage ...), briefly describing the data security policy applied.*
Data Value (long term)			*Describe to whom the data could be useful.*
			Estimate potential value of long-term re-use of the data.
Data Management Responsibilities			*Identify responsibilities for data management of this dataset (within your research group and institute, and within the project if applicable).*

SAMPLE (not for simulation Data)						
This section refers to the samples used						
Materials used		*Sample dimensions (1 inch diam. - 5mm thick). Surface flat and polished. Sample embedding on sample-holder (hot glue or acrylic glue). Optical sample surface alignment with reference sample (SiO2) surface.*		*State if the described Material is used for callibration of equipment (Yes/No)*	*Instrument, which is callibrated with the material*	*Standard CSM tests on reference sample*
	Description of Material	User case (sample specifications)	Quantity	Callibration (yes/no) - Instrument-Standards used		

METHOD

This section refers to the Methodologies followed

Data Origin	**Define and describe the origin/source of your data. Data can be gathered from different sources.**	
Observational		*Data captured in real time - often not reproducible i.e. sensor readings, images, telemetries, sample data...*
Experimental		*Data from lab equipment, often reproducible, but with high costs - i.e. chromatograms, magnetic fields readings...*
Simulation		*Data generated by computational models where model and metadata are equally important to output data - i.e. climate models, economic models, materials models,...*
Method	**Define and describe the scientific method used for this Dataset.**	
Physics/Chemistry of Interaction		*Example: Detection of the surface by the tip (stiffness triggering value based) - Penetration of the tip inside the sample using prescribed load function - Hold of the maximum load (or the load for the prescribed depth - unloading of the tip by steps - tip removal from the sample.*
Discipline		*e.g. Characterisation - Nanoindentation*
Equipment		*e.g. Nanoindenter, PC*
Equipment setup		*Example: Optical alignment of the sample. Method selection and Input parameters for the test (Sample Poisson's Ratio, Prescribed Depth or Load, number of test, locations of the tests, Engage options).*

RAW DATA

This section refers to raw Data coming direct from instruments etc.

Type and Format of Data	Form	Format	Describe the type of data used or generated within the project, specifying the form and format of the data.
Text			*Form: Field or laboratory notes, survey responses .. Format: in plain text, (txt), HTML, XLM, PDF/A ...*
Numeric			*Tables, row counts, measurements - in .XLSX, .CSV ...*
Audiovisual			*Images, sound recordings, video - in .JPEG, .JPG, .PNG, .TIFF, AIFF, WAVE, .MP3, .MP4...*
Simulated			*Please state the model, model type and computer code - and specify data output type and format.*
Materials used			
model			
model type			
computer code			
data type			
format			
Discipline specific information	discipline	format	*e.g.: CIF in chemistry ... (specify discipline and format)*
Instrument specific	equipment	format	*Equipment output (specify equipment and format).*
Reused-Data (rd)			*Indicate if you re-use existing data (generated outside the Oyster project). If so, explain how.*

DATA ANALYSIS

This section refers to Data coming from raw data analysis.

Type and Format of Data	Form	Format		Describe the type of data used or generated within the project, specifying the form and format of the data.
Text				*Form: Field or laboratory notes, survey responses .. Format: in plain text, (txt), HTML, XLM, PDF/A ...*
Numeric				*Tables, row counts, measurements - in .XLSX, .CSV ...*
Audiovisual				*Images, sound recordings, video - in .JPEG, .JPG, .PNG, .TIFF, AIFF, WAVE, .MP3, .MP4...*
Simulated				*Please state the model, model type and computer code - and specify data output type and format.*
model				
model type				
computer code				
data type				
format				
Discipline specific information	discipline	format		*e.g.: CIF in chemistry ... (specify discipline and format)*
Instrument specific	equipment	format		*Equipment output (specify equipment and format).*
Reused-Data (rd)				*Indicate if you re-use existing data (generated outside the Oyster project). If so, explain how.*

Data Analysis		*Describe the Method (e.g. Application of Oliver Pharr method, Liner Regression etc.)*	*Describe the purpose and the elaborated Data (properties found etc.) (e.g. Check of the surface detection, check of the Load curve for Elastic Modulus and Hardness calculation)*	*e.g. Origin, Excel, Weka*	*Describe Data Analysis methodologies used. In the "Method" section choose the appropriate Data Analysis field. If simple Analysis was done, then choose Analysis/Ecxel. In any case, in the "Description" section please give further information regarding models used (Desicion Trees, SVM, K-NN etc.) or other any relevant information (e.g. Statistical Analysis --> ANOVA, Machine Learning --> SVM model). If any software (Origin, Weka etc.) was used , please state.*
	Method	**Description**	**Purpose**	**Software**	

DATA ANALYSIS

This section refers to Data compiled from Data Analysis

2 FAIR DATA

2.1 FAIR DATA - Making data findable

	Discoverability of data (metadata provision)			*Explain how data are documented and if metadata are provided, listing the information made available/discoverable.*
	Identifiability of data (refer to standard id mechanisms)			*Indicate how data are made identifiable, if a standard permanent identifier assignation scheme is used (i.e. ARK, DOI, PURL, URN, MODA ...)*
	Naming conventions used			*Describe the system used to name and structure electronic files and folders. Refer also to any file renaming procedure or tools used.*
	Search keywords approach			*Indicate the approach to keywords generation, indexing and tagging. (For materials modelling the MODA provide this answer.)*
	Standards or procedures for metadata creation applied			*Some references: MODA, EMMO (European Materials Modelling Ontology), Dublin Core Metadata Initiative, DataCite Metadata Schema, Open Archives Initiative Object Reuse and Exchange, ISAtools ...* *If there are no standards in your discipline, describe what type of metadata will be created and how.*

2.2 **Fair data** Making data openly accessible

	Data openly available			*Indicate ownership of the data, if it is openly available or can be made openly available.*
	Data kept closed			*Indicate if data access is restricted, to what users, and explain the reasons.*
	How data will be made available			*Indicate how you intend to make data available.*
	Methods or software (SW) tools for data access			*Indicate methods and SW tools needed to access the data. Clarify if the relevant software (e.g. in open source code) is included in the data set.*
	SW documentation and other information needed			*Indicate any specific SW documentation that is needed to access the data, or additional information that is needed to understand the data (i.e. abbreviations, supplementary notes).*
	Repository for deposit of data, metadata, documentation and code			*Indicate the (open or private) repositories in which the data, metadata, documentation and code are stored and/or those in which they will be stored in the future.*
	Access restrictions			*Indicate if there are limitations and restrictions to access the data, and if they are linked to a specific timeframe. Explain how access will be provided after these restrictions are lifted.*
	Data interoperability assessment			*Assess the level of interoperability of the dataset.* *Indicate data and metadata vocabularies, standards and methodologies followed to facilitate interoperability.* *Indicate if open standards are used, and (if you know) the range of utilization of proprietary SW and methodologies used to generate and manage the data.*

2.3 **Fair data** Making data interoperable

	Standard vocabulary or mapping to commonly used ontologies			*Refer to commonly used ontologies to map the dataset, considering also the use of existing common platforms and tools – e.g.: EMMO, BFO, MatONTO, Materials Ontology..*
	Data licensing for wide reuse			*If applicable, define data licensing approach for the dataset wide reuse. Indicate the chosen licenses tools.*

2.4 FAIR DATA – Increase data re-use (through clarifying licenses)

	Timing of data availability for re-use (incl. indications on embargo)			*If applicable, define the timeframe for making data available for re-use. Indicate any embargo period if required.*
	Data usability by Third Parties (after the end of the project)			*Indicate any limitation to the use of the data by Third Parties, after the end of the project.*
	Restrictions to data re-use			*Indicate and explain any restriction to the re-use of data (i.e. confidentiality agreements, other issues).*
	Quality assurance process			*Explain how quality of the data is assured, how the consistency and quality of data collection is controlled and documented.*
	Length of time of data re-usability			*Indicate the time limit for the data re-usability, if any.*