NEEMO

Networking for Excellence in Electric Mobility Operations

D 1.2

Data Management Plan

Instrument	**H2020-WIDESPREAD-2018-03**
H2020 Grant Agreement number	**857484**
Start date	**01/12/2019**
Duration	**36 Months**
Webpage	**www.neemo-project.eu**

SUMMARY

Work package	**WP1**
Task	**T1.1**
Deliverable	**D1.2**
Deliverable Title	**Data Management Plan**
Due Month	**6**
Submitted Date	**21st July 2021**
Partner Responsible	**MCAST**
Person Responsible	**Brian Azzopardi**
Author(s)	**Somesh Bhattacharya, Brian Azzopardi**
Participating Beneficiaries	**MCAST, ANEL, AIT, CEA**
Document Version	**2**
Reviewed by	**Bin Hu, Antoine Guerin de Montgareuil, Eleftherios Loizou, Renata Mikalauskiene, Brian Azzopardi, Alexandre Mignonac**
The number of Pages inc. cover	**13**
Dissemination Level	**PU**

Dissemination Level

PU = Public

PP = Restricted to other programme participants (including the EC)

RE = Restricted to a group specified by the consortium (including the EC)

CO = Confidential, only for members of the consortium (including the EC)

History of changes

Version	Date	Change	Page
2	21.07.2021	This version was updated in the context of Guidelines on FAIR Data Management in Horizon 2020. New sections on FAIR data included.	all

CONTENTS

Introduction

The H2020 NEEMO project aims to have open access to data, where possible. Data generation and provision is an integral part of the project, and the generated information aims to enhance new knowledge in the development and implementation of NEEMO. This deliverable explains how the project coordinator ensures data protection and what kind of data is available to the public under the aegis of the NEEMO project. Malta College of Arts, Science and Technology (MCAST), as a project coordinator and host institution of NEEMO project, share the responsibility with project partners for data collection, storage, protection, retention and destruction according to the European Union and national legislation.

The objectives of the NEEMO project are:

O1: To enhance and increase the research output of MCAST Energy (in quality and quantity).

O2: To increase the success of MCAST Energy in grant applications and recruitment of excellent personnel.

O3: To strengthen and develop long-term relations between MCAST Energy, partners, networks and stakeholders.

O4: To increase the international standing of the MCAST Energy, acting as island state model, in Electric Mobility research and policies related to integrating technologies, modes and operations.

The General Data Protection Regulation (GDPR) is legally binding for all Member States, without the need to be ratified by Member State parliaments. It is a crucial document used as a basis for the discussions and recommendations in this deliverable.

Each NEEMO partner is bound by their institutional, professional, and national code for research ethics. In general, activities across the work packages are designed to ensure integrity, quality and transparency. Project partners and participants will be informed about the purpose, methods, and intended purpose of any data collection. In addition, participants will be informed about their participation contributes to the overall project objectives and how potential risks arising from their participation may be mitigated to eliminate all threats of harm to project partners and participants.

This deliverable D1.2 Data Management Plan of the H2020-WIDESPREAD-2018-03-TWINNING NEEMO project forms part of WP1 Management and Task 1.1. This document follows the guidelines on FAIR Data Management in Horizon 2020 and its template for Data Management Plan.

Data Protection Officer

Malta College of Arts, Science and Technology (MCAST), as a host institution, confirm a Data Protection Officer (DPO) is appointed under the GDPR. dpo@mcast.edu.mt; +356 23987141

1. Data Summary

The NEEMO project is a Coordinated and Support Action (CSA) project where direct research time, including data collection and analysis under this Call Instrument H2020-WIDESPREAD-2018-03, are not supported. However, research outputs in the form of dissemination through research papers and other platforms are supported. Time dedicated to research is supported by individuals, external collaborations or entities' initiatives, while the NEEMO project directly supports time to disseminate these endeavours. Hence while most of the data collected in terms of registrations, contacts, presentations and feedback are directly support, some data may be available through NEEMO, such as mobility traces through collaborative endeavours. This section summarises the data which will be collected and generated over the entire duration of the project.

The type of data and its purpose of collection/generation, including its relation to the project's objectives, are listed in Table 1. It also includes a description of each dataset.

The data are collected in the following type/s and format/s as listed in Table 2. The origin of the data, expected size and usefulness are mapped with the implementation of the project as Workpackages (WPs). The driver simulator results, case studies, scenarios, cost-benefit analysis, and impact

Table 1: Data type description, purpose and relation to project objective/s

Data Type	Description	Purpose	Objective/s
Stakeholder contacts	The data contains the names and contact of the members of the NEEMO stakeholder group	This data is used to contact the stakeholders, organise interviews and workshops, and disseminate the results of the project	O2 | O3 | O4
Website subscriber contacts	The data will contain the names and emails of those who subscribe to the time-to-time updates of the NEEMO project website	To assist dissemination	O2 | O3 | O4
Stakeholders' opinions	Stakeholders' would likely present their opinions in conferences/ workshops/ schools about the future of electric mobility in Island scenarios	Stakeholders' insights will provide valuable feedback for the methods employed in the project	O2 | O3 | O4
Interview responses	Subjects enquired to an opinion about the electric mobility aspects, issues and future goals	Public insights will help in scenario development. The data, however, will be kept anonymous	O3 | O4
Driver simulator results	Subjects can take part in the experimental collection of the drive data of autonomous/ public vehicles	The data collected will be used for research on e-mobility and to study the driving and the associated charging patterns of electric vehicles (the subjects and their associated vehicle data will be kept anonymous)	O1 | O2 | O4
Case studies	Simulation models of use cases within the Island environment will be created using mathematical modelling	The created models will help in understanding the driving behaviour, and future projection about the infrastructure refurbishment in Island scenarios, taking into account the charging requirements	O1 | O2 | O4
Scenarios	Target scenarios will be developed availing inputs from stakeholders and the Project partners	To enable the study of impacts of different interventions	O1 | O2 | O4
Cost benefit analysis	A method for assessing cost benefits for the policy options and scenarios	To help stakeholders make decisions regarding policy implementations	O1 | O2 | O3 | O4
Impact assessment indicators	A list of potential impacts and their assessment will be generated through case studies	It will be used to identify the practical benefits availed from the collection of data	O1 | O2 | O4

Table 2: Data type, origin, format, expected size and usefulness

Data Type	Origin	Format	Size	Usefulness WPs
Stakeholder contacts	Secondary data	Csv, txt, xlsx	kB	1
Website subscriber contacts	Secondary data	Csv, txt, xlsx	kB	4
Stakeholders' opinions	Primary data	Docx, csv, wav	kB	1
Interview responses	Primary data	Docx, csv, wav	kB	4
Driver simulator results	Primary data involving human subjects	Docx, txt, xlsx	kB	1,2,3
Case studies	Primary and secondary data	Docx, xlsx	kB	1,4
Scenarios	Primary and secondary data	Docx, xlsx	kB	1,4
Cost benefit analysis	Primary and secondary data	Docx, xlsx	kB	1,2,3,4
Impact assessment indicators	Primary data	Docx, txt, xlsx	kB	1,2,3,4

assessment indicators data sets are disseminated in a clustered format under the findable, accessible, interoperable and reusable (FAIR) principle on the project webpage and another potential; repository.

2. FAIR data

This section refers to data generated/produced by the NEEMO project and research data to be findable, accessible, interoperable and reusable (FAIR) and ensure it is soundly managed. The generation of research data is outside the scope and not supported by NEEMO as a CSA project under the Instrument H2020-WIDESPREAD-2018-03. Nevertheless, some information is generated/produced, including related research data. Hence, NEEMO shall ensure an example leading to knowledge discovery and innovation and subsequent data and knowledge integration and reuse.

All knowledge (results) obtained will be reviewed, as Figure 1 for its exploitation potential by Management Committee. Suppose results are classified as being not potentially commercial. In that case, that is, requiring some form of IP protection. Material is deemed free to be disseminated by a range of means to various stakeholder groups as described in the communication section. IP Management and Exploitation, which is implemented by AIT and essentially aims at facilitating a transparent process, clarification of (co-)ownership of results, identifying whether the results are capable of industrial or commercial application or can be readily disseminated as scientific results, preparing IP documentation for evaluation by the Management Committee and Standard Operating Procedures (SOPs) for 1) publications, 2) conference participation, and 3) IPR activities. This knowledge dissemination is not a significant issue in the NEEMO project.
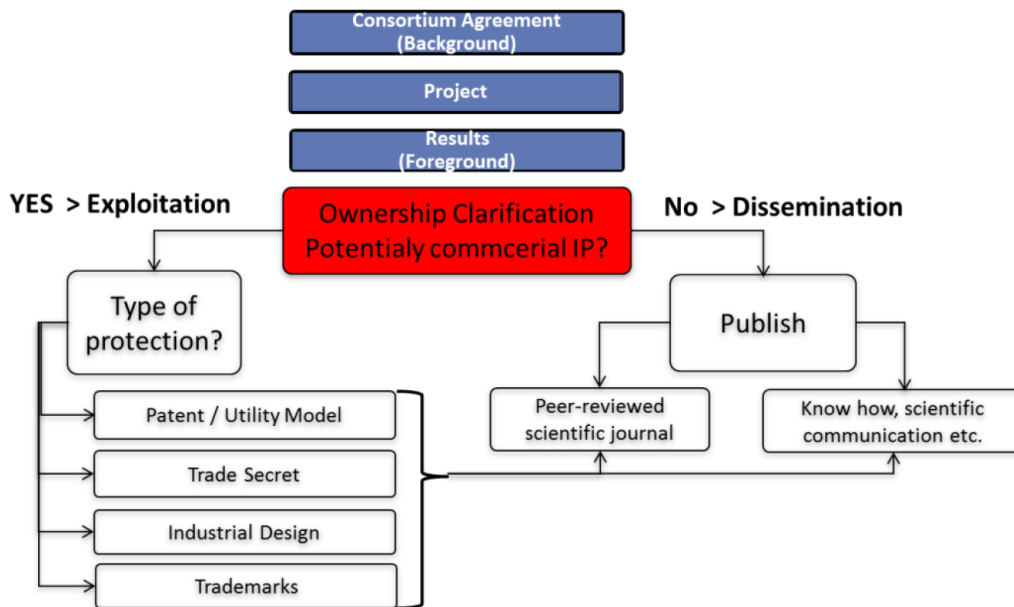

Figure 1: D&E procedure ©RTDS

2.1 Making data findable, including provisions for metadata

The activities employed by the various work packages vary and involve human participants through interviews, questionnaires, surveys, and participation will be only conducted based on informed consent. That is, participation will be free from any coercion and can be revoked at any time. The data stored is retained for a maximum period of 5 years after the project finish. This data retainment applies to those individuals involved in the activities defined for WP2, WP3 and WP4. Participants will be provided with information about the nature of the action, the conditions under which they are being asked to provide information, and how the findings will be presented. Data controllers, Project Manager, Project Coordinator, Work Package and Task leaders responsible for the activities where personal data is collected will ensure that data subjects can rectify, remove or block incorrect data about themselves.

The use of a standard data naming convention will be followed, and clear versioning will be established for the collected data.

Metadata includes Digital Object Identifiers (DOI) for published articles such as title abstract, author/s and keyword/s, shared on the NEEMO web page e-library section. Furthermore, publications are shared in the original repositories in golden open access and repositories such as Research Gate and Linked In.

Metadata clustered for mobility logged traces, including speed, distances, and altitudes through GPS logs, will also be shared on the e-library at the project end. After all dissemination, exploitations and commercial and personal sensitive data have been reviewed consortium. This type of data is outside the scope of NEEMO project, but it is expected that some data will be generated/produced.

2.2 Making data openly accessible

For some significant NEEMO scientific publications (example on the topic policy implication on the city and regional level), the 'golden' open access model will be chosen to guarantee immediate access to the publications and comply with the EC6 months' embargo deadline. In addition, it allows NEEMO authors to retain the copyright for their publications, as encouraged by the EC, and to use it for further dissemination activities into the scientific and industrial communities. Immediately after publication, the publication will be made accessible on Openaire.eu. NEEMO beneficiaries will also check if the publication's metadata is adequate for EU funded projects and aligns with other exploitation activities that are no infringement of IPR.

2.3 Making data interoperable

NEEMO data mainly collected for reporting and analytics of the project is exchanged and shared between beneficiaries on the Microsoft Platform and downloadable shared datasheet files. The data is primarily used for internal and external reporting on the project.

NEEMO published-related data follow the DOI standards and IEEE keywords.

NEEMO research-related data such as mobility traces are saved in .csv files, easily reused by most Matrix-based operating software.

2.4 Increase data reuse (through clarifying licences)

NEEMO publications are the 'golden' open access model that will be chosen to guarantee immediate access to the publications and comply with the EC6 months' embargo deadline.

NEEMO research-related data such as mobility traces are embargoed for the project's duration and/or until the complete publication of analytics to give time to publish or seek patents. This decision is taken at Consortium Level. This data is then released for reuse by third parties and remains on the project e-library for the next seven years after the project ends.

Quality assurance on the data to be published is provided through the International Scientific Committee members. Among other matters, the process includes (i) handles duplicates and inconsistencies in the data, (ii) designs key metrics to control data quality and (iii) advises on and implements data governance procedures.

3. Allocation of resources

The costs for making data FAIR in the NEEMO project are within the Management Tasks WP and it supporting structures of committees, software and hardware. The NEEMO project covers all expenses, and in Open Access, credit is provided to the project.

Individuals whose Personal Data is processed will be treated fairly and openly, and transparently. Personal Data of individuals will be processed only for those administrative, operational, accounting, and monitoring purposes necessary for the safe and reliable implementation of the NEEMO project without prejudice to individual rights under the relevant laws. NEEMO project members will ensure that:

- Processing of Personal Data will be adequate, relevant and not excessive to the purposes for which they are processed.
- Personal Data will be treated accurate and kept up to date.
- Personal Data processed for feedback and results purposes will always be anonymised and confidential unless the individual would give explicit and signed consent to publish personal data.
- Appropriate technical and organisational measures will be taken against accidental loss or destruction of Personal Data.
- Personal Data (name and contact details) will be retained but not published.

Individuals can report suspected breaches of these principles first to NEEMO Project Manager and then NEEMO Project Coordinator, and then to Data Protection Officer (DPO). NEEMO members will be responded to suspected breaches of Personal Data Protection established under these principles promptly and effectively and took the appropriate action where a violation is found to have occurred.

The individuals whose personal data is being collected and processed will have the right to:

- obtain a copy of their Personal Data being stored by the NEEMO partner without undue delay;
- request that any Personal Data relating to them which is shown to be incomplete or inaccurate be rectified;
- request that on compelling legitimate grounds processing of their Personal Data should cease;
- know the contact details of the Project Manager, Project Coordinator and Data Protection Officer to which the individual should direct requests to their rights above.

NEEMO partners dealing with personnel data derived from interviews, questionnaires or surveys will record the following elements, which will always be confidential:

- Name and contact details of the participant.
- Description of Personal Data processed.
- Purpose or purposes of the processing of Personal Data.

Personal Data will never be transferred to individuals or organisations outside the NEEMO consortium unless there is an appropriately enforced legal request.

4. Data security

The Project Coordinator will ensure that data will be stored securely during the project, and provisions will be made to ensure that the data will be secured safely beyond the lifetime of this project. Confidential information such as personal data on individuals recorded in interviews, questionnaires or surveys (contact data) will be never become accessible for the general public. It will be securely stored to prevent breaches of confidentiality. The nature of the activities conducted in the overall project does not engage in areas where 'incidental findings' have caused primary concern, namely medical ethics. Data will be anonymised where appropriate, and when personal data is recorded, it will always be confidential. Names of participants may be published following informed consent and approvals for testimonials.

The project objectives require the collection and analysis of public data that come from very different sources. Sometimes data are publicly available. Other data is inexistent or insufficiently detailed to implement NEEMO tasks. Therefore, the NEEMO project involves primary data collection such as interviews, questionnaires, surveys and data sources from the different project partners.

The data generated in the project will be systematically managed. As a safer alternative to the intranet, NEEMO will provide a well-protected password-protected virtual workspace, where delicate IP data will be exchanged and stored. All hard drives and servers used by the partners for the storage of digital data will be backed up regularly, and data generated will be periodically stored in offline systems to avoid loss of data. Where possible, electronic lab books and certified data management software is used. The main achievements will be summarised in periodic reports sent to the project coordinator and compiled in the requested reporting periods.

Each beneficiary is responsible for documenting research progress and collaborations through laboratory books, minutes of the meeting, memos, email correspondence, test reports, and annual working plans with sufficient detail to identify the significant contribution to the creation of results that is to internationally recognised standards and good practice. The documentation activities begin with implementing guidelines and procedures, includes supporting the consortium in defining IP strategies, refining appropriate business models, planning managing stakeholder communications and relations and last but not least, preparing the training and demonstration activities/programmes consisting of presentations, manuals, blueprints, guidelines. The relevant data for such will be stored in an extra folder on the Virtual E-Workspace.

5.   Ethics Aspects

All project activities are designed, undertaken and reviewed as part of the consortium to ensure integrity, quality and transparency. The NEEMO Management Committee will take the lead responsibility to ensure that the ongoing activities are conducted at the highest integrity, quality, and transparency level. Each work package is embedded within institutional ethics frameworks and committees. The ethics framework that applies to the Project Coordinator, The Malta College of Arts, Science and Technology, will apply where these bodies do not exist.

The NEEMO consortium is aware of the requirements of the General Data Protection Regulation (GDPR). Data protection is a core research topic of the project. NEEMO will ensure that for any human data it processes, compliance with the GDPR is guaranteed.

The Project Coordinator will ensure that NEEMO related activities follow ethical guidelines.

- Concerns regarding the ethical conduct of activities conducted under the NEEMO project should be raised, in the first instance, with the NEEMO Project Manager.

- The annual Management Committee meetings will devote time to considering emerging activities ethics issues that are foreseen at the outset of the research.

- Unethical behaviour will not be tolerated and will be raised as part of consortium meetings.

- Depending on the severity, failure to comply may lead to the exclusion from the consortium, following the internal principles defined in the Consortium Agreement. The process of such investigation will be guided by the principles of integrity, fairness, uniformity, confidentiality and no detriment. All members of the NEEMO consortium are committed to cooperate and support such investigations. They are also committed to consent to the conclusions of such processes and to take appropriate actions subject to proper appeal processes.

- Project members will seek opportunities to train in ethics-related project activities as part of their activities in the NEEMO consortium. Such opportunities will be encouraged as part of career development opportunities.

- All individuals participating in surveys, questionnaires, and interviews will be fully informed about the purpose, method and intended usage, their contribution to the project activities, and what risks, if any, may arise from participation.

- Confidentiality of information supplied by participants and the anonymity of respondents shall always be ensured. The dignity and autonomy of individuals will always be respected.

- Individuals will participate voluntarily, without any form of coercion.

- All activities will be conducted under the principle of informed consent; individual participants will not contribute without their knowledge and consent. Individual participants will have the right to withdraw at any time.

- Personal Data processing shall not generally involve vulnerable individuals who are not able to give informed consent.

- NEEMO activities will be conducted under the principle of 'informed consent' and under conditions of non-attributability of information to protect the participant's anonymity. The requirements are explicitly set out in the information participant sheet or public event notification. The right to comment does not affect project members' rights to interpret and analyse.

- No financial inducements will be offered for individuals on activities participation.

Summary

This deliverable presents a detailed aspect of the data collection and how it will be used for the project's entire duration of the project NEEMO. The types of data collected for the project will be many and varied. As shown in section 2 (Table 1), nine different types of data will be collected, ranging from personal data to drive data. It was also emphasised in the deliverable how stakeholders' related data will be imperative for successfully running the NEEMO project. The storage and ethics measures were formulated in section 3, where it was emphasised that data protection and individual privacy protection are significant for the NEEMO project.