ENABLE·H2

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Project full title: ENABLEH2 – ENABLing cryogEnic Hydrogen-based CO2-free air transport

ENABLEH2

D6.2 - Data management plan

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10.04.2019	Coordinator	V. Sethi, CU	Yes	12.04.2019
10.04.2019	Project Office	A. Yenokyan, ARTTIC	No	10.04.2019

Abstract:
The aim of this deliverable is to provide a plan describing the management of data generated in the project, and how it will be procured and accessed. It is a living document that will be updated as required during the project and relates to all tasks.

Due Date   28.02.2019 (M6)

Actual submission date   12.04.2019 (M8)

Project start date: 01.09.2018   Project duration: 36 months

Dissemination level
PU   Public

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1 Executive summary

ENABELH2 is a Research and Innovation action (RIA) project funded by the European Union's Horizon 2020 Framework Programme for Research and Innovation. The project aims to demonstrate that liquid hydrogen (LH_2) offers a viable route for long-term sustainability of civil aviation with unrivalled environmental benefits, over the complete life cycle, relative to carbon-based fuels. To achieve the project goals, the ENABLEH2 partners need to share and use data. The ENABLEH2 Data management plan (EH2-DMP) describes the planned activities for producing, collecting and / or processing research data as part of the ENABLEH2 project work. The purpose of the EH2-DMP is to define how the project will address specific issues, such as confidentiality of commercial or industrial information, data protection, and data sharing within the consortium. It should be noted that the EH2-DMP is a living document, which will be updated as the ENABLEH2 project progresses and when significant changes occur. This document will be reviewed before issuing the first periodic report (M18) as well as before issuing the final report (M36) to determine if any modifications are needed regarding licensing and management of any new data that may be made available during the course of the project.

2 Introduction

As climate concerns become progressively more urgent, there is a need for technologies in all sectors to reduce the impact of human activities on the environment. Examples include the electrification of road transport and a rapid increase in exploitation of renewable energy resources. Aviation accounts for approximately 2.1% of global carbon dioxide (CO_2) emissions[1].In the EU, aviation's share of the total CO_2 emissions is slightly higher and amounts to 3.6% for year 2016[2].

With the anticipated growth in air traffic, emissions in 2050 are expected to be seven to ten times higher than in 1990, according to International Civil Aviation Organisation (ICAO) projections. In addition, the aviation sector continues to grow and aircraft orders for commercial aircraft manufacturers are at an all-time high. The sustained growth in aviation drives competition between traditional (i.e. Europe and USA) and emerging nations, such as Brazil, Canada, China, India, the Gulf States and Russia. In this globally increasing aviation market, Europe must preserve its leadership position to ensure continued success, technological advancement, and economic contributions of its aviation industry by investing in key enabling innovation, research and technology supported by adequate policies and frameworks.

According to the recent European Commission (EC) Communication[3] [4] dramatic and disruptive changes to sub-systems technologies, propulsion systems and aircraft morphologies are required to face these environmental and economic challenges and to achieve the commonly agreed goals. Flightpath 2050, Europe's vision for aviation, targets consequently 75% CO_2 and 90% NO_X emissions reductions for the aviation sector, relative to year 2000 technologies. The ENABLEH2 project aims to revitalise enthusiasm in the use of LH$_2$ for civil aviation and will research technologies that have the greatest potential to meet (and in some cases even exceed) these ambitious Flightpath 2050 targets.

The research work within ENABLEH2 will be undertaken by industrial and academic partners and will be supported by key stakeholders from a dedicated Industrial Advisory Board (IAB). Therefore, an efficient data management needs to be set up to ensure a successful collaboration, as it relies on efficient data collection, processing and data sharing between partners and IAB members. It is important to note that all ENABLEH2 partners have clear internal procedures to manage data and policies to ensure data protection and security that provide the standards which will be followed during the project. The ENABLEH2 project has also adopted the Horizon 2020 guidelines for Data Management. This EH2-DMP endeavours, as far as feasible given the constraints posed by the nature of the data (i.e. confidentiality), to follow the principles described in the guidelines. The principles are FAIR, that is data must be findable, accessible, interoperable and re-usable. Data management will follow the principles to make all data available "as open as possible, as closed as necessary" to allow a balance between open access to research data and protection of confidential data enabling commercial exploitation.

Therefore, the EH2-DMP will highlight the basic principles supporting data management within the project. The EH2-DMP will also be related to the D5.1 "ENABLEH2 Communication plan" and will aim to achieve the strategy set-out in that plan in order to disseminate and exploit the result of the project and ensure sustainable impact.

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[1] CO_2 Emissions from Fuel Combustion 2014, IEA

[2] European Aviation Environmental Report 2019, European Environment Agency (EEA), European Union, Aviation Safety Agency (EASA), Eurocontrol, 2018.

[3] Europe on the Move, COM (2017) 283 final, European Commission

[4] Towards Clean, Competitive and Connected Mobility: The Contribution of Transport Research and Innovation to the Mobility Package, SWD (2017) 223 final, European Commission

3 ENABLEH2 Data summary

3.1 Data types, formats and size

Beneficiary	Data types, formats and size generated / collected during the project
CU	Standard text and mixed document files (.docx, .pptx, & .pdf) Matlab (.m), spreadsheet (.xlsx) and text (.txt) files – numerical data describing aircraft performance and lower order NOx correlations(<20GB) ANSYS Workbench (.wbpj), FLUENT (cas, .dat, .pdf), STAR-CCM+ (.sim) files – numerical data on hydrogen micromix combustion (<20TB) CAD file (CATPart,.SLDPRT) – CAD models of experimental rig and injector design (<20GB) Spreadsheet (.xlsx) – measurement data of hydrogen micromix combustion, simulation post processing results (<20GB)
CHALMERS	Text and images in standard processable data formats, e.g. .doc(x), .ppt(x), .txt, .jp(e)g, .ai, .psd, <5gig, post script files Matlab .m, mat, fortran and Python .py. Textfiles in .txt. CAD files (Parasolid .x_t,.SLDPRT, SLDASM etc) ~10GB ANSYS Workbench (.wbpj), CFX, Static & dynamic Structural (cas, .dat, .pdf), STAR-CCM+ (.sim) files – fluid and structural simulations on compressor and turbine test facilities (~100GB) Facility control software -LabView Project & files (lvproj, .vi) Experimental results in.csv, vtk and .xlsx, pdf and .png. ~(10-20GB)
LSBU	Standard text and mixed document files (docx, pptx, & pdf) Spreadsheet files (.xlsx) – numerical data of environmental and flammability parameters. Image & video files (e.g. png, jpg, avi) (10s of MB per file) FLACS data files (up to several GB per file)
GKN	Office type documents (excel, word, powerpoint). Optionally Gasturb simulation files. Rig aerodynamics (geometry, CFD results) will be in ANSYS supported formats.
SAFRAN	Standard text, architecture layouts and mixed document files (vsdx.docx, .pptx, .pdf) Matlab (.m), spreadsheet (.xlsx), and AMESim (.ame) - numerical data describing systems/thermal management paramenters (<20GB) Spreadsheet (.xlsx) and text (.txt) files – Pacelab project (plewbproj) – Pacelab library module (plkdeoconcept), and, numerical data on hydrogen micromix combustion (<20GB) AVBP files (hdf5) and Matlab files (.m) – numerical data on hydrogen micromix combustion (<20TB)
EHA	Text and images in standard processable data formats, e.g. .doc(x), .ppt(x), .txt, .jp(e)g, .ai, .psd, up to 5MB
HEATHROW	Text and images in standard processable data formats, e.g. .doc(x), .ppt(x), .txt, .jp(e)g, .ai, .psd, up to 1 GB total
ARTTIC	Text and images in standard processable data formats, e.g. .doc(x), .ppt(x), .txt, .jp(e)g, .ai, .psd, up to 1 GB total

3.2 Re-use of existing data

Beneficiary	Data re-used in ENABLEH2 and description of how re-use is implemented
CU	Existing publicly available published data will be used with reference. Existing models and data from CU will be used. Existing data from project partners and IAB members will be used internally at CU with controlled access. Original data will be stored on internal servers of the partners. Towards the end of the project, final datasets will be deposited on Cranfield University's CORD

	(Cranfield Online Research Data) repository, which uses the figshare platform. This assigns a DOI and licence to each dataset to ensure it is findable, citable, and reusable. On CORD, data will be securely preserved for at least 10 years after project end. The repository is in place and costs will be covered from overheads according to local policies.
Chalmers	Existing publicly available published data will be used with reference. Existing models, methods and data from Chalmers will be used. Starting modelling from old ULTIMATE engine files (.txt), the intercooler TECSIM model.
LSBU	Existing publicly available published data. To be used with referencing. Some use of mixed media files from industrial and project partners & IAB members – Controlled access and use internally at LSBU. No publishing of commercially sensitive information, or data from other entities without express permission. Original data produced on safety work (where there is no commercial sensitivity) will be published in international journals. Open access versions of these papers will be available on the LSBU open-access document repository (in line with publishing allowance). Direct measurement and modelling data can also, following publication, be made open access on this repository. The document repository is already in existence and a standard service offered to all researchers as part of the UK University responsibility to meet requirements for the Research Excellence Framework
GKN	Baseline data for aircraft & fuel tank public data, e.g. Boeing or Airbus public ACAPS documents etc. which has been collected over significant time.
Safran	Baseline aircraft from public data Existing publicly available published data will be used with reference. Data on Hydrogen Micromix Combustor (geometry, initial files, measurements…) from CU.
EHA	Text and images in standard processable data formats, e.g. .doc(x), .ppt(x), .txt, .jp(e)g, .ai, .psd, up to 5MB total
Heathrow	Existing publicly available published data will be used with reference.
ARTTIC	Text and images from project work plan, and from (scientific as well as general interest) publications arising from the project

3.3 Origin of data

Beneficiary	Origin of data used / generated in ENABLEH2
CU	Consortium members, Industrial Advisory board, public databases, our own measurements, calculations and simulations
Chalmers	Consortium members, Industrial Advisory board, public databases, our own measurements, calculations and simulations
LSBU	Consortium members, Industrial Advisory board, public databases, our own measurements
GKN	Consortium members, Industrial Advisory board, public databases, internal expert calculations
Safran	Consortium members, public databases, internal expert calculations
EHA	Consortium members, Industrial Advisory board, public databases
Heathrow	Consortium members, Industrial Advisory board, public databases, our own calculations
ARTTIC	Consortium members, Industrial Advisory board, public databases

3.4 Data utility

Beneficiary	For whom might the data be useful during and after the project?
CU	The aircraft performance and hydrogen combustion NOx correlations data produced will be useful for partners working on work packages 1, 2, 3, 4 and 5. This will be shared through the project SharePoint, which is a web-based collaborative platform (refer to Section 5.5). This will also be useful to members of the Network+Community to explore future collaboration and development options. Non-commercially sensitive data produced on research activities will be useful to any researchers working in aviation and hydrogen combustion.
Chalmers	Research organizations and companies involved in heat management, compressor simulations and design as well as design work for cryogenic hydrogen. Non-commercially sensitive data produced on research activities will be useful to any researchers working in aviation and hydrogen combustion.
LSBU	The safety data produced will be useful for partners working on work packages 1, 2, 3 and 4. This will be shared through the project Sharepoint. Non-commercially sensitive data produced on research activities will be useful to any researchers working in aviation and flammable gas use and safety.
GKN	We expect the data will be useful to industry and government for assessment of development potential of LH_2 and LNG propulsion. Data can be used for further academic studies on macro (energy system) and micro scale (engine and aircraft components).
Safran	Data would be used as baseline to provide aircraft models, aircraft sizing analysis and integrated performance results (T1.2 and T1.3) Numerical calculations on hydrogen micromix combustor will allow evaluating the potential of LH_2 propulsion at a "combustion chamber" level, the gain and the feasibility of such a chamber in comparison with kerosene.
EHA	EHA members Consortium members for exploitation, members of the Network+Community to explore future collaboration and development options
Heathrow	Consortium members for exploitation, members of the Network+Community to explore future collaboration and development options
ARTTIC	Consortium members for exploitation, members of the Network+Community to explore future collaboration and development options

4 ENABLEH2 Data collection

Producing and using scientific data are key activities to achieve the objectives of ENABLEH2. This report describes the data management activities associated with the production of deliverables and scientific publications during the project.

At this early stage of the project, datasets are still under investigation or—for the most part—not yet produced, and therefore details on how they will be used will be reviewed and updated in the planned revisions of the EH2-DMP, which will be aligned to the Periodic Reporting timeframe (M18 and M36).

The Data collection will be assured in accordance with the ENABLEH2 Grant Agreement and the Open Research Data Pilot following its principle "as open possible, as closed necessary". It will be based on the FAIR (findable, accessible, interoperable and re-usable) criteria.

4.1 Making data findable, including provisions for metadata

The existing and generated data will be made findable by data type, format, reference and their correct re-use. The data will have its origin from the internal measurements, calculations and simulations of the Consortium members but also from the Industrial Advisory Board and public databases. Data will be hosted and made findable through dedicated repositories from partner organisations.

The dedicated platform Community Management Tool (CMT) created and controlled by ARTTIC will contain open and confidential data produced within ENABLEH2. This online platform will be used by the project Consortium and the Industrial Advisory Board (IAB) for fruitful collaboration, knowledge sharing and mutual interaction. The data will be accessible by the ENABLEH2 Network+Community including the project partners and the IAB. This data will be made findable through an organised structure with specific sections sorted by topics where the data can be shared, discussed and used to amplify the research work. This CMT tool will be completely secured and the accessibility monitored by ARTTIC. In addition to the CMT tool, the produced open access Data within ENABLEH2 will be available on the project website and findable with description and keywords via the meta tag data system of the website. This will also enhance the possibilities for re-using the data. ENABLEH2 Data will also be identifiable and locatable by means of a standard identification mechanism through the Digital Object Identifier (DOI) that will be included in the scientific publications.

Moreover, confidential metadata will be made findable through the knowledge portfolio of the project that includes all relevant background, foreground/results and IP that is used or produced by the ENABLEH2 consortium.

4.2 Making data openly accessible

The data produced and/or used in the project that will be made openly available (by default) are the scientific publications that will follow the open access rules of the European Commission (EC). These scientific papers will be hosted in open science repositories, such as Cranfield University's CORD (Cranfield Online Research Data) repository and the LSBU open-access document repository, and available for the public. Since some scientific publishers preserve a certain period to deliver value to subscribing customers before a manuscript becomes available for free to the public, an embargo period (of maximum 6 months) might be considered before the free access to the articles. Supplement data will also be made available through the publisher and/or repository depending on the corresponding guidelines.

Raw data of experiments and measurements will not be made generally accessible but made available upon request providing a justification and after signing a non-disclosure agreement (NDA) if applicable.

The ENABLEH2 website will also contain relevant information and links related to the produced data. Confidential data will be available on the ENABLEH2 Network+Community tool (CMT) in order to explore future collaboration and development options through an iterative communication process. Confidential data (e.g. deliverable reports) will furthermore be stored and archived in SharePoint, the

ENABLEH2 Collaborative Workspace, to ensure partners a full accessibility to information that is needed to carry out successfully the research work. To enable wider access to scientific facts and knowledge for researchers, innovators and the public across the European Union, the ENABLEH2 consortium is making a dedicated effort to ensure open access of its research work, as far as possible. Therefore, the majority of the project's deliverable reports (53%) are accessible to the public.

4.3 Making data interoperable

Interoperability within the consortium

The data produced within ENABLEH2 will be fully interoperable within the Consortium as there is a direct link between the Work Packages (Figure 1). A number of results produced (or lessons learnt) within a work package will be used as input for the research work within another work package. The Project Scope and Organisation is explained more into details in Figure 2.
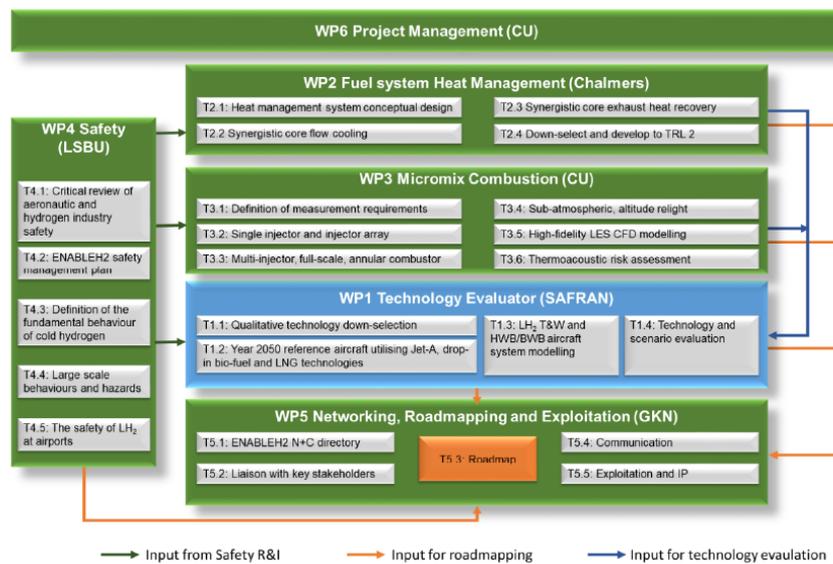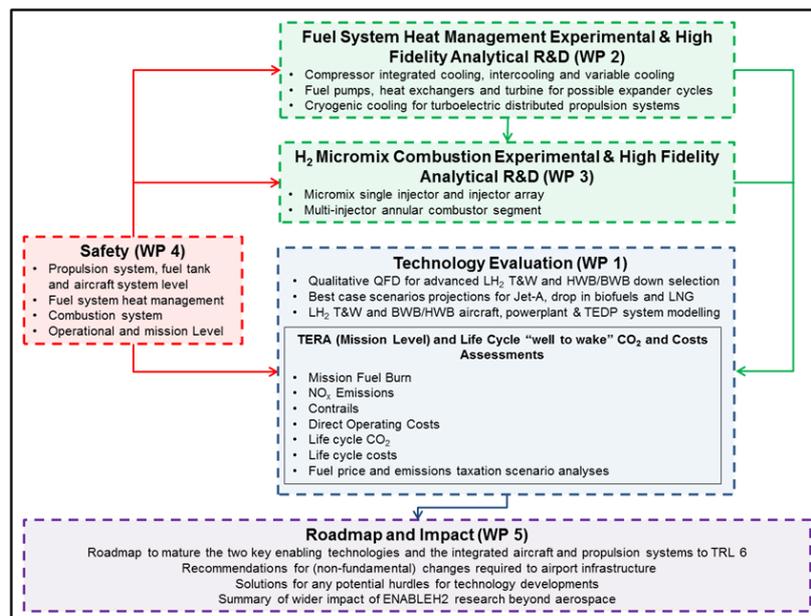

Figure 1: Work plan structure

Figure 2: ENABLEH2 Project Scope and Organisation

Interoperability between the consortium and the Industrial Advisory Board

The data will also be interoperable outside of the consortium and together with the ENABLEH2 Industry Advisory Board which will be fully involved in the project. The systematic process of 'Ideation – Refinement –Prioritisation – Evaluation is set up to connect the consortium and the members of the advisory board for the data exchange and re-use. Figure 3 gives a precise preview of how the interoperability of data will be assured.

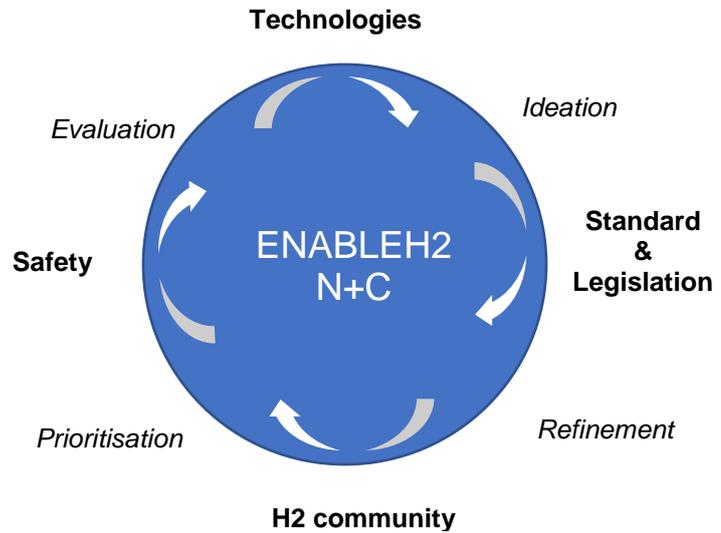| ENABLEH2 IAB |
| --- |
| Siemens Industry Software AB |
| International Airlines Group |
| Airbus France |
| Siemens CA |
| Rolls-Royce |
| Mitsubishi Hitachi Power Systems |
| SAFRAN Aircraft Engines |
| Dassault Aviation |
| Mitsubishi Hitachi Power Systems |
| IATA |
| Air Liquide |
| GKN Aerospace Services Limited |
| Abengoa Innovacion |
| Gexcon AS |
| Reaction Engines Ltd |

Figure 3: List of IAB and graphic of Interoperability and exchange between project partners and IAB members

The data available for the IAB members will be stored on the Network+Community tool (CMT) to guarantee fast and easy access to all users. Implications of data format and data volumes in terms of storage, backup and access are taken care of.

Interoperability between the consortium and third parties

The data will also be interoperable by external parties from the public. Through the numerous scientific papers, workshops and conferences planned in ENABLEH2, the Consortium will ensure the widest dissemination possible of its results and will allow a data exchange and interoperability between researchers, institutions, organisations, countries and all interested entities.

The data and metadata will use standard vocabulary to allow inter-disciplinary interoperability. In instances where "discipline specific" nomenclature or vocabulary is contained in the data, an effort will be made to provide clarification using more commonly used nomenclature or vocabulary.

4.4 Making data re-usable

The data in this project will be disseminated in scientific publications and their accompanying supplementary experimental data. Open access will be provided to ENABLEH2 publications. In case the publication itself cannot be made open access directly from the publisher, a final revised version of the manuscript containing all necessary experimental details will be made accessible via dedicated repositories. The data produced will be mainly data from experimental measurements, simulations and calculations, not excluding other types of data. In general, technologies researched and matured in ENABLEH2 will be realised in the medium to longer term and it is therefore important that the data is accessible and re-usable well after project completion.

As mentioned previously, data will be procured using established and sustainable repositories ensuring access to the data beyond the project lifetime. Original data will be stored on internal servers

of the partners and final datasets will be deposited to Cranfield University's CORD (Cranfield Online Research Data) repository, which uses the figshare platform. This assigns a DOI and licence to each dataset to ensure it is findable, citable, and reusable. If access restrictions are necessary to data, ENABLEH2 will aim to embargo access to files rather than withhold access in full. Publications will link to any underlying datasets they use, again via the CORD system. Also, on CORD, data will be securely preserved for at least 10 years after project end.

The ENABLEH2 project has robust rules and processes to govern Intellectual Property management described in the Grant Agreement (GA) and Consortium Agreement (CA). It will furthermore be detailed in the D5.1 "Detailed communication Plan" due in M9.

5   ENABLEH2 Data creation

For all data created as part of the ENABLEH2 research project, there is a clear filing structure (name of folders, versioning and quality assurance processes) supported by the ENABLEH2 Project Office (EPO) team from ARTTIC with guidelines detailed in D6.1 "Project Management Guidelines and Infrastructure". Clear procedures to systematically archive all ENABLEH2 documentation are in place.

5.1   Document coding

Filing code

Each document must be identified with a unique filing code, regardless of the document title, file names and referencing conventions that each partner might use in local archives.

For deliverables, the file name must start with ENABLEH2 and contain the following elements as a minimum:

ENABLEH2_Dnumber_Short-Title_ReleaseNumber

Example: ENABLEH2_D6.1_Mgmt-Plan_R1.0.pdf

For all other project documents, the file name must start with ENABLEH2 and contain the following elements as a minimum:

ENABLEH2_Type_Title_ReleaseNumber

Example: ENABLEH2_AGD_KOM_R1.0.doc

Where:

- ENABLEH2: the project acronym
- AGD: Type of document. In this case it is the Agenda (see document type further down)
- KOM: title of the document. In this case, it is to specify that the Agenda is related to the kick-off meeting
- Rx: the release number (e.g. R1, R2, R3)

Document type

For each type of document, the use of the following codes will facilitate the identification of the document type:

- AGD   Agenda
- DEL   Deliverable
- DEC   Dissemination, exploitation, communication document
- ECM   Engineering Communication Memo
- MOM   Minutes of the meeting
- NT   Note
- MS   Milestone
- PPT   PowerPoint Template

5.2   Document archives

The data created by the ENABLEH2 consortium will be stored and shared among participants and IAB members via the Network+Community tool and among partners via the online platform "ENABLEH2 collaborative workspace" provided by ARTTIC and based on MS SharePoint Foundation.

The ENABLEH2 collaborative workspace serves as the project archive by storing copies of all officially distributed documents:

- Contracts (such as Grant Agreement, Consortium Agreement)
- Deliverables
- Working documents
- Meeting documents
- Periodic reports (contractual and internal)
- Financial statements

The ENABLEH2 Project Office (EPO) administers the project archive and keeps track of all official releases of documents produced by the partners. The partners are responsible for sending electronic copies of the documents to EPO or uploading the document directly on SharePoint.

5.3 Intellectual Property rules and processes

The Grant Agreement (GA) terms and conditions provide an initial framework for partners regarding IP rules to observe in the project and those are complemented by the Consortium Agreement (CA) Articles 8 and 9. These Articles respectively cover the results ownership and dissemination as well as access rights.

Below is an overview of basic **IPR principles** that will apply to the project for its duration thereby enabling effective and efficient collaboration whilst ensuring that the interest of all parties' are preserved.

5.3.1 Generated results

Generated results are owned by the Party that generates them. Joint ownership is governed by Grant Agreement Article 26.2 with the following additions:

- The joint owners must agree (in writing) on the allocation and terms of exercise of their joint ownership ('joint ownership agreement'), to ensure compliance with their obligations under this Agreement.
- Unless otherwise agreed, each joint owner may grant non-exclusive licences to third parties to exploit jointly-owned results (without any right to sub-license), if the other joint owners are given:

  a) at least 45 calendar days advance notice; and
  b) fair and reasonable compensation.

Each beneficiary may grant licences to its generated results (or otherwise give the right to exploit them), if:

(a) this does not impede the access rights under Article 31 and
(b) not applicable.

In addition to Points (a) and (b), exclusive licences for results may be granted only if all the other beneficiaries concerned have waived their access rights (see Article 31.1 of the GA). This does not change the dissemination obligations in Article 29 or the security obligations in Article 37 of the GA which still apply.

As far as dissemination / publication is concerned, a beneficiary that intends to disseminate its results must give advance notice to the other beneficiaries of — unless agreed otherwise — of at least 45 days, together with sufficient information on the results it will disseminate. Partners are encouraged and contractually committed to disseminate project results over the project duration as long as this

does not adversely harm the protection or use of the results. The dissemination guidelines are explained in the Grant Agreement (GA), in the Consortium Agreement (CA) as well as in D6.1 "Project Management Guidelines and Infrastructure". Moreover, it will be detailed in D5.1 "Detailed Communication Plan" due in M9.

Partners will also create favourable conditions for project implementation. This is particularly relevant for access rights which partners should be able to grant for partners to perform their Work Package activities. Access rights should be granted on a non-exclusive basis. Partners have listed the background information for which they grant access rights in the CA.

5.3.2 Knowledge Portfolio

Based on the Consortium Agreement (CA), an ENABLEH2 Knowledge Portfolio will be developed In M12, identifying and recording all relevant background, foreground/results and IP that is used or produced by the ENABLEH2 consortium. Throughout the project, the Knowledge Portfolio will be updated and amended with additional background (if required) and foreground/ results. It will be made available for all project partners. An Innovation Management Team (IMT) will be formed in order to monitor the IP generated within the project and ensure the highest potential exploitation of the ENABLEH2 results.

5.3.3 Non-Disclosure Agreement for IAB members

Moreover, regular communication and interaction actions will be done with key stakeholders forming the Industrial Advisory Board (IAB) and information on project results will be shared with the latter. To protect IP rights of the consortium and the confidentially of the project results, a Non-Disclosure Agreement (NDA) will be signed by each member of the IAB. The ENABLEH2 Network+Community tool will be secured through passwords and confidential information will only be accessible by IAB members having signed the NDA.

5.3.4 ENABLEH2 Project Office support

To fulfil the IP requirements, the EPO team from ARTTIC will support the Consortium to:

- Identify background through the knowledge portfolio: collect, update and maintain the list of the major background IPR required.
- Advise and support on protection (patents, copyright, etc.) upon request.
- Maintain the CA and prepare corresponding decisions of the consortium, in particular, related to the modifications of the background and in the unlikely events of termination of participation and entry of new partners.
- Distribute the publications, following up the approval process, and record decisions on SharePoint.

5.4 Data protection

The ENABLEH2 project is fully implemented within the EU General Data Protection Regulation (GDPR) which entered in application on the 25th May 2018 and replaced the Data Protection Directive 95/46/EC. A special care is taken for dissemination activities, e.g. the ENABLEH2 public website.

5.5 Responsibility and Resources

All summary and report data created as a result of the ENABLEH2 project is managed by EPO using the secured online platform SharePoint and accessible to all partners. It will also be made available for a defined period of time after closure of the project.

The platform is hosted at a professional hosting company in France, i.e. the project data is stored in the EU, an important aspect for some highly competitive research and innovation projects.

All original data (e.g. measurement data) generated as a result by the individual partners of the ENABELH2 consortium will be managed and preserved by the partner generating it. All partners have respective policies and infrastructures in place.

5.6 Data security

All ENABELH2 partners are aware of their responsibility for making sure the necessary provisions are in place within their organisations to ensure data security (including data recovery, secure storage and transfer of sensitive data). Storage and backup for all ENABLEH2 project documentation is ensured via SharePoint set-up by EPO, which has the appropriate back-up systems in place. Further, SharePoint is protected by password and 128-bit encryption. Finally, the data will partly be shared on the secured Community Management tool (CMT) for the IAB members involved in the project.

5.7 Ethical aspects

There are no ethical issues identified for ENABLEH2.

6 Glossary

Abbreviation	Description
CA	Consortium Agreement
CMT	Community Management Tool
CORD	Cranfield Online Research Data
DEL	Deliverable
DoA	Description of Action
DOI	Digital Object Identifier
EC	European commission
EH2-DMP	ENABLEH2 Data Management Plan
EPO	ENABLEH2 Project Office
GA	Grant Agreement
GDPR	General Data Protection Regulation
IAB	Industrial Advisory Board
ICAO	International Civil Aviation Organisation
IMT	Innovation Management Team
IP	Intellectual property
IPR	Intellectual property rights
NDA	Non-Disclosure Agreement
RIA	Research and Innovation action
WP	Work package